

ERIN MILLS - DUNDAS SOUTH (SPRINGBANK MEADOWS PARK & AREA)

Region of Peel	NAI Area # 3199, 4403	Credit Valley Conservation Authority
City of Mississauga	Size: 37 hectares	Watershed: Credit River
Con 1 SDS, Lots 28-29; Range 3 CIR, Lots 13- 14	Ownership: 54% private, 46% public (City of Mississauga, Region of Peel)	Subwatershed: Loyalist Creek; Lake Ontario West Tributaries

General Summary

This large area is the site of the former North Sheridan Landfill which was closed in 1980. It is comprised primarily of cultural meadow with some restoration plantings. This area is situated in a built-up urban area near the intersection of QEW and Erin Mills Parkway and is bordered on all sides by development.

In spite of extensive past disturbance, this site still supports rare species and Species At Risk. The area is located near enough to the Lake Ontario shoreline to serve as an important migratory stopover site for birds and possibly butterflies. This area provides breeding habitat for area-sensitive grassland bird species.

NAI ELC surveyors and ornithologists inventoried vegetation communities and breeding birds and made incidental observations of other fauna over 100% of this area (Table 1). Although the NAI only had access to 60% of the area, vegetation communities on the private property overlapped with areas to which we had access and community boundaries were extrapolated to cover the whole area, which was visible from our access points. Breeding bird observations were made by sight and sound and could easily be made accurately from the distance of accessible properties. A CVC consultant inventoried migrant birds in spring 2009. Additional incidental observations were contributed by other observers. With respect to the NAI core inventories (vegetation communities, plants, breeding birds), this area is considered data-complete for vegetation community and breeding birds but a full botanical inventory remains as a data gap. No fish inventories were performed.

Table 1: NAI Field Visits

Visit Date	Inventory Type
01 June 2009	Fauna
19 June 2009	ELC
26 June 2009	Fauna

Physical Features

This area is in the Iroquois Plain physiographic region; characterized by a gentle slope toward Lake Ontario and a thin layer of sandy and silty sand soils. The shoreline of glacial Lake Iroquois was higher than the current Lake Ontario shoreline and this area was once an old lake bottom.

Water from this area drains into two different subwatersheds. Water from the west half of this area drains into Loyalist Creek. Loyalist Creek joins the Credit River a few hundred metres from the north end of this area. Water from the eastern half of the site drains directly into several small tributaries of Lake Ontario. The lake Ontario shoreline is within 2 km of this site.

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Human History

This area is the site of a former sand and gravel pit and following that, the North Sheridan Landfill which was closed in 1980. After the landfill closed it was covered with clean fill and almost all of the area is now a naturalizing meadow. Three small ponds were dug and have naturalized into a shallow marsh surrounded by planted trees and shrubs. Methane gas given off by buried waste is piped to a centralised location on the property where it is burned off. Since the early 1990's, community groups with assistance from the City of Mississauga and Region of Peel, have planted native trees, shrubs and herbs to naturalize the area. Deep-rooted trees have not fared well, possibly due to methane gas production, and are now planted on berms where they have a better chance of survival (McGlone, 2009; McIlveen, 2009).

The eastern portion of this area is the public Springbank Meadows Park, used for passive recreation such as walking. This area is bordered on the southeast by the QEW, on the south by North Sheridan Way, by a small stretch of Mississauga Rd at the northern tip and by Springbank Rd. on the northeast side. Surrounding land uses are predominantly single-unit residential and a small industrial area.

Vegetation Communities

The general community types present are cultural meadow (98%) and plantation (2%).

A total of two vegetation communities of two different types were mapped over the part of this area to which the NAI ELC crew had access (Table 2). The man-made ponds are too small to be mapped as separate communities and are included in the meadow and plantation communities.

Table 2: ELC Vegetation Communities

Map reference *	Vegetation type	Size in hectares	% of natural area
CUM1-1	Mineral Cultural Meadow Ecosite	36.62	98.47
CUP1-A	Restoration Deciduous Plantation	0.57	1.53
	TOTAL AREA INVENTORIED	37.19	

* Note: The map reference code refers to the vegetation type shown on mapping for this area and also to the Appendix list of species typically encountered in this vegetation type.

Species Presence

Vascular Plants

A total of 120 vascular plant species are recorded for this area as incidental observations, of which 51 (42%) are native. This area has a high percentage of non-native species. One species is regionally rare (Table 4).

Four Species At Risk have been planted on site, Spiked Blazing Star (*Liatrix spicata*), Compass Plant (*Silphium laciniatum* var. *laciniatum*), Cup-plant (*Silphium perfoliatum* var. *perfoliatum*) and Ironweed (*Vernonia gigantea* ssp. *gigantea*).

Breeding Birds

A total of 53 species of birds occur here, of which 49 (92%) are native. Two of these species are believed to be migrants and another nine species are believed to be visitors. The remaining species observed here showed some level (possible, probable, confirmed) of breeding evidence. One of the migrants, Canada Warbler (*Wilsonia Canadensis*), is Threatened nationally and designated Special Concern provincially (Table 3). Three Species At Risk nest here. Bobolink (*Dolichonyx oryzivorus*) is Threatened nationally and provincially and both Barn Swallow (*Hirundo rustica*) and Eastern Meadowlark (*Sturnella magna*) are Threatened nationally.

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This site supports four species of colonial-nesting birds, namely Northern Rough-winged Swallow (*Stelgidopteryx serripennis*), Bank Swallow (*Riparia riparia*), Barn Swallow and Cliff Swallow (*Petrochelidon pyrrhonota*), two species of waterfowl, Wood Duck (*Aix sponsa*) and Mallard (*Anas platyrhynchos*) and at least two raptor species, Northern Harrier (*Circus cyaneus*) and Sharp-shinned Hawk (*Accipiter striatus*). The large expanse of grassland here provides interior habitat. Seven species of grassland birds are supported here, namely Bobolink, American Kestrel (*Falco sparver*), Eastern Meadowlark, Northern Harrier, Savannah Sparrow (*Passerculus sandwichensis*), Eastern Kingbird (*Tyrannus tyrannus*) and Willow Flycatcher (*Empidonax traillii*). Four of these (Bobolink, Eastern Meadowlark, Northern Harrier, Savannah Sparrow) are area-sensitive.

Fish

No fish inventories were conducted. The dug ponds were stocked with bass in the late 1990's but it is unknown if they persist (McIlveen, 2009).

Butterflies and Skippers

A total of 18 species of butterflies/skippers are recorded here as incidental observations, of which 15 (83%) are native. One of these species, Monarch (*Danaus plexippus*) is designated Special Concern both nationally and provincially (Table 3). Monarch is also provincially rare (S-rank S2N, S4B).

Dragonflies and Damselflies

Eight species of dragonflies/damselflies are recorded here as incidental observations, all of which are native. This was one of only two sites visited during NAI fieldwork of 2008 and 2009 where Black Saddlebags (*Tramea lacerata*) was observed.

Herpetofauna

Two frog/toad species are recorded here as incidental observations. Both are native. Two American Toads (*Bufo americanus*) were heard trilling (May 29, 2009) from the pond and are expected to breed on site (McIlveen, 2009).

Mammals

Five common, native mammal species were detected incidentally in this area.

Table 3: Designated Species At Risk

Scientific name	Common name	COSEWIC	COSSARO	S rank	G rank
Birds					
<i>Hirundo rustica</i>	Barn Swallow	THR		S5B	G5
<i>Dolichonyx oryzivorus</i>	Bobolink	THR	THR	S4B	G5
<i>Wilsonia canadensis</i>	Canada Warbler	THR	SC	S4B	G5
<i>Sturnella magna</i>	Eastern Meadowlark	THR		S5B	G5
Butterflies					
<i>Danaus plexippus</i>	Monarch	SC	SC	S2N,S4B	G5

Table 4: Regionally Rare Vascular Plant Species (Kaiser, 2001)

Scientific name	Common name	S rank	G rank
VASCULAR PLANTS			
<i>Penstemon digitalis</i>	Foxglove Beardtongue	S4S5	G5

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Site Condition and Disturbances

This site has been highly disturbed from aggregate extraction and the subsequent landfill operation. As would be expected for an isolated naturalising area in a built-up urban area, the vegetation is dominated by non-native species. Pond digging, berm creation, and ongoing restoration planting initiated in the early 1990's have resulted in a more varied landscape and increased the diversity of native plant species.

Wide trails criss-cross this area and sustain moderate passive recreational use.

Non-native species represent 62% of all plant species here with notable invasive species being Japanese Knotweed (*Polygonum cuspidatum*), Common Buckthorn (*Rhamnus cathartica*), Norway Maple (*Acer platanoides*), Manitoba Maple (*Acer negundo*), Narrow-leaved Cattail (*Typha angustifolia*), and Black Locust (*Robinia pseudo-acacia*).

This whole area has sustained earth displacement during aggregate extraction, landfill use, placement of methane pipes, application of fill, digging of ponds, and creation of berms. Soil coring did not reveal any evidence of soil layering.

There is intense extensive noise from nearby roads and highways and the methane burners located on site.

Ecological Features and Functions

With cultural meadow totalling well over 10 ha, this natural area has the potential to support and sustain biodiversity, healthy ecosystem functions and to provide long-term resilience for the natural system.

The northern tip of this area has a very narrow point of connectivity, across the intersection of the residential street with Mississauga Rd., with the natural treed ravine of the lower part of Loyalist Creek and in turn with the naturally vegetated wall of the Credit River valley corridor. The relatively close proximity of other areas of natural habitat creates above-average potential for wildlife movement between natural areas, species dispersal and recovery from disturbance, creating additional resilience for the ecosystem.

This area lies within 2 km of the Lake Ontario shoreline, and as well, is within 500 m of the lower part of the Credit River and thus supports the connectivity function of the Lake Ontario shoreline plus the Credit River and its tributaries by providing a natural habitat corridor that facilitates the cross-regional movement of wildlife along this corridor between major provincial corridors.

The proximity of this large habitat patch to the Lake Ontario shoreline makes it important as a stopover and staging area for birds and possibly butterflies during their spring and fall migrations.

This area supports five Species At Risk (one migrant bird species, three breeding bird species, one butterfly species). The site also supports a provincially rare butterfly species.

Extensive grasslands at this site offer interior habitat. Seven species of grassland birds occur here, of which four are area-sensitive.

This site supports four species of colonial-nesting birds, two waterfowl species and at least two raptor species.

The shallow ponds are important to wildlife as they provide a permanent water source at this otherwise dry site. These ponds support amphibian breeding.

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Based on the above features, this area should be evaluated to determine if significant wildlife habitat is present in accordance with the Provincial Policy Statement, Region of Peel Official Plan, and area municipal Official Plan.

This area provides 'green space' for local residents for walking and nature observation.

Opportunities

A small patch of the invasive Japanese Knotweed is growing along the edge of Springbank Rd. offering an opportunity to eradicate it from this area before it spreads and displaces more desirable native species. As there are few trees here overall, the removal of some of the invasive exotic species such as Norway Maple, Manitoba Maple and Black Locust, all of which produce copious amounts of seed, and their replacement with native species might be successful in reducing the long-term invasive of these problematic species.

The biological value of this area rests in part on its large size and location near the major regional corridors of the Credit River and the Lake Ontario shoreline. Every opportunity should be taken to ensure that this area remains cohesive (unfragmented) and its size is retained.

Restoration plantings of trees and shrubs are currently providing additional habitat structure and complexity to this area, increasing habitat variety. However retention of a large part of this area as grassland is encouraged, as it offers interior grassland habitat that provides for area-sensitive grassland bird species. To prevent grassland from undergoing succession to treed communities, occasional mowing could be used to inhibit growth of woody plants.

Data gaps exist here. Targeted surveys for butterflies and dragonflies/damselflies throughout their flying season would likely be productive.

Literature Cited

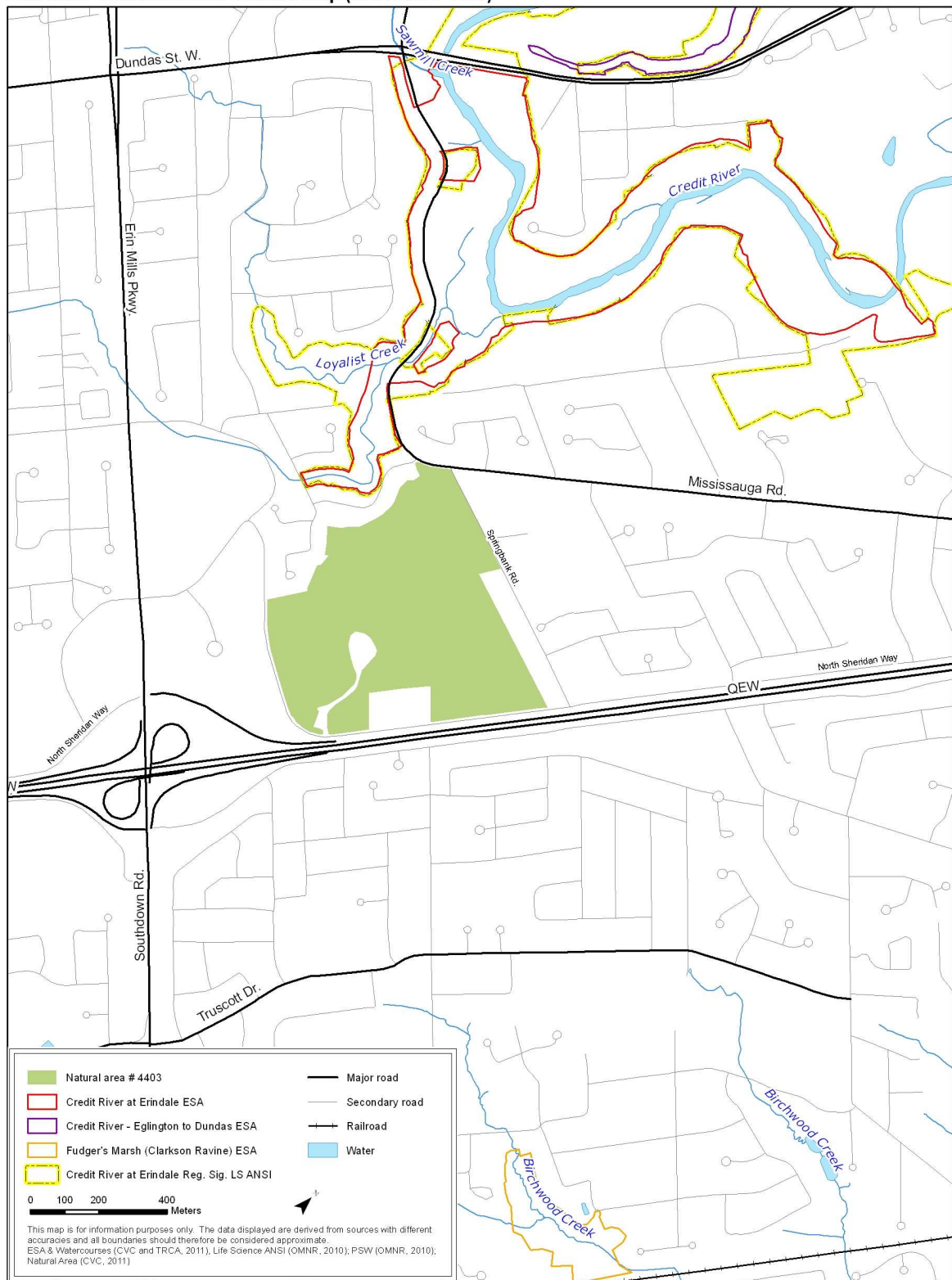
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Erin Mills - Dundas South Context Map (NAI Area # 4403)



ERIN MILLS - DUNDAS SOUTH (SPRINGBANK MEADOWS PARK & AREA)

Erin Mills - Dundas South Vegetation Communities Map (NAI Area # 3199, 4403)

