

# SHAWS CREEK – TOWNLINE (CALEDON LAKE AREA)

<b>Region of Peel</b>	<b>NAI Area # 9045, 9606, 9702, 9704</b>	<b>Credit Valley Conservation Authority</b>
<b>Town of Caledon</b>	<b>Size: 502 hectares</b>	<b>Watershed: Credit River</b>
<b>Con 4 WHS, Lots 26-31; Con 5 WHS, Lots 29-31</b>	<b>Ownership: 50% private, 50% public (Credit Valley Conservation, Peel Board of Education)</b>	<b>Subwatershed: Shaw's Creek</b>

**General Summary**

This is a very large natural area that essentially spreads across two concession blocks, including the unopened Mississauga Rd. allowance. Much of the area is treed wetland but there are treed uplands as well. The northern two thirds of the area form a cohesive block of relatively undisturbed natural communities. In the south part of the area, natural communities form a mosaic with plantation and cultural/successional communities and the area is fragmented by clearings for residences. Caledon Lake and the smaller Second Caledon Lake are found in the bottomland and are fringed by swamps, marshes and a fen-like area.

Community and species diversity is very high due to a diversity of substrate types including areas with a calcareous marl substrate, more acidic areas, organic soils and mineral soil types. Several Species At Risk as well as provincially and regionally rare species occur here. The large tracts of treed communities provide extensive interior forest habitat. Cold streams north of Caledon Lake support Brook Trout, an indication of the health and integrity of the cold water system. Groundwater seepage from upland areas feed into Caledon Lake and its associated creeks. The lakes and creeks are underlain by marl and provide a calcareous substrate that supports a number of regionally rare plants. The presence of an acidic, fen-like area in close proximity to areas underlain by calcareous marl is unusual.

NAI ELC surveyors, botanists and ornithologists inventoried vegetation communities, plants and breeding birds and made incidental observations of other fauna (Table 1), covering 17% of the natural area (determined by access permission). In 2004 and 2005, CVC ELC surveyors also inventoried some vegetation communities in this area. Complete coverage for all communities in the area that permission is available for has not yet been achieved. Additional incidental records were contributed by other observers. In 2007, bat and small mammal surveys were conducted. With respect to the NAI core inventories (vegetation communities, plants, breeding birds), this area is considered data-complete for plants and breeding birds only. Vegetation community coverage is a partial data gap. Fish inventories were conducted both within this natural area and from downstream sampling stations. As there are no barriers between the natural area and the downstream stations, fish data from these stations was extrapolated upstream and combined with the on-site data.

**Table 1: NAI & CVC Field Visits**

<b>Visit Date</b>	<b>Inventory Type</b>
08 Aug. 2000	Fish
26 July 2001	Fish
24 July 2002	Fish
09 July 2003	Fish
14 July 2004	Fish
28 June 2005	Fish
19 July 2005	Fish
20 July 2005	Fish
21 July 2005	Fish

04 July 2006	Fish
20 July 2006	Fish
29 June 2007	Fish
04 July 2007	Fish
01 Sept. 2007	Bats
02 Sept. 2007	Bats
09 Oct. 2007	Small Mammals
10 Oct. 2007	Small Mammals
11 Oct. 2007	Small Mammals

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12 Oct. 2007	Small Mammals
03 June 2008	Fauna
10 June 2008	Fauna
19 June 2008	Fauna
28 June 2008	Fauna
03 July 2008	Fauna
10 July 2008	Fauna
10 July 2008	Fish
15 July 2008	Fauna
03 June 2009	Flora
02 July 2009	Fish
08 July 2009	Fish

04 Aug. 2009	Flora
05 Aug. 2009	Flora
06 Aug. 2009	Flora
07 Aug. 2009	Flora
12 Aug. 2009	Flora
14 Aug. 2009	Flora
15 Sept. 2009	Flora
13 Sept. 2010	ELC
14 Sept. 2010	ELC
15 Sept. 2010	ELC
17 Sept. 2010	ELC
21 Sept. 2010	ELC

### Natural Feature Classifications and Planning Areas

This natural area is part of:

Life Science ANSI – provincially significant Caledon Lake Forests

Earth Science ANSI - regionally significant Caledon Lakes Area

ESA - Caledon Lake ESA

PSW – Caledon Lake Wetland Complex

Greenbelt Plan – Natural Heritage System

### Physical Features

The bedrock at this site is comprised of the Amabel/Lockport formation. This area is in the Hillsburgh Sandhills physiographic region; characterized by large, rolling hills of coarse glacial sediments that deeply bury the bedrock. Soil types here include peat, organic muck and marl deposits, as well as sandy loam and gravelly soils. The sandy loam soils support high rates of recharge to groundwater aquifers.

Caledon Lake and Second Caledon Lake are major aquatic features in this area. There are also several ponds left from a historical marl mining industry. Shaw’s Creek winds through this natural area and links the two lakes.

### Human History

This area may have been utilized by First Nations, as suggested by its large body of fresh water, abundant fish and game, and presence of Northern Wild Rice (*Zizania palustris*) (Scheinman, 2009).

European settlement was initiated in the mid-1830’s and the surrounding areas were farmed. A sawmill and associated dam were built by William Glassford south of this area on Shaw’s Creek, appearing on an 1859 map of the region. The east side of Caledon Lake (formerly known as Shaw’s Lake) was used recreationally by 1878 when a hotel was built near the lake. Most of the Caledon Lake area however, remained relatively undisturbed due to the abundant wetlands which made travel challenging and which could not be converted to farmland. The west end of Caledon Lake remained particularly isolated and plans to extend Mississauga Rd north to the town line were abandoned due to the impassable wetlands (*ibid*; Ecologistics Limited, 1979).

Upland parts of this area have been historically logged and grazed as evident by some younger forests of successional species and areas of limited ground-layer flora diversity. Marl extraction occurred as early as 1908 to the northwest of Caledon Lake, creating a series of ponds (Scheinman, 2009). The dredged channels in these ponds are visible on air photos.

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A large portion of this natural area is now owned by Credit Valley Conservation, although it is undeveloped. An outdoor education centre for schools is immediately adjacent to the natural area. Several trails are used for passive recreation and education.

This natural area is partially bordered by Shaw's Creek Rd. on the southwest corner and by Third Line W. on the northeast side, and Orangeville-Caledon Townline forms the border along the entire northwest side. Surrounding land use is agricultural, rural residential, rural estate and cottages (along the east shore of Caledon Lake).

## Vegetation Communities

The general community types present are coniferous forest (1%), deciduous forest (12%), mixed forest (3%), marsh (15%), coniferous swamp (13%), deciduous swamp (16%), mixed swamp (9%), thicket swamp (3%), open aquatic (11%), cultural meadow (1%), cultural savannah (1%), cultural woodland (3%) and plantation (10%).

A total of 20 vegetation communities of 12 different types were mapped for the 17% of the natural area that received coverage (Table 2). Six communities were only classified to ecosite level.

**Table 2: ELC Vegetation Communities**

Map reference *	Vegetation type	Size in hectares	% of natural area
FOD3-1	Dry-Fresh Poplar Deciduous Forest (3 communities)	7.59	1.51
FOD5-1	Dry-Fresh Sugar Maple Deciduous Forest (4 communities)	9.14	1.82
FOD5-2	Dry-Fresh Sugar Maple - Beech Deciduous Forest (2 communities)	18.52	3.69
FOD7	Fresh-Moist Lowland Deciduous Forest Ecosite (2 communities)	4.87	0.97
MAM3-5	Narrow-leaved Sedge Organic Meadow Marsh	19.99	3.99
SWD7-1	White Birch – Poplar Organic Deciduous Swamp	9.07	1.81
SWT2-1	Alder Mineral thicket Swamp	1.78	0.35
CUM1-1	Dry-Moist Old Field Meadow	2.00	0.40
CUM1	Mineral Cultural Meadow Ecosite	1.10	0.22
CUW1	Mineral Cultural Woodland Ecosite (2 communities)	6.64	1.32
CUP3-1	Red Pine Coniferous Plantation	0.50	0.10
CUP3	Coniferous Plantation Ecosite	3.96	0.79
	<b>TOTAL AREA INVENTORIED</b>	<b>85.16</b>	

\* 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

Plant species biodiversity is very high in this area. A total of 456 vascular plant species occur in this area, of which 387 (85%) are native. One species, Butternut (*Juglans cinerea*; S-rank S3?), is Endangered nationally and provincially, as well as being provincially rare (Table 3). Five saplings and six young Butternut trees were found. Two other plant species found here are provincially rare, Hybrid Baneberry (*Actaea x ludovici*; S-rank S1?) and Great St. John's-wort (*Hypericum ascyron*; S-rank S3?). Seventy-six plant species in this area are regionally rare (Table 4).

Seven species new to the Credit River watershed were identified during NAI fieldwork at this site. Most of these were also new to the Region of Peel. Narrow-spike Small-reedgrass (*Calamagrostis*

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*stricta* ssp. *inexpansa*) and Rush Aster (*Symphyotrichum boreale*) are new to the watershed. Autumnal Water-starwort (*Callitriche hermaphroditica*), Downy Willow-herb (*Epilobium strictum*), Bristly Black Currant (*Ribes lacustre*), Northern Mountain-ash (*Sorbus decora*) and Fernald's Manna Grass (*Torreyochloa pallida* var *fernaldii*) are all new to the watershed and the Region of Peel. Northern Mountain-ash may also be a range extension for this species in Ontario, being more abundant further north (Cecile, 2009).

Notable observations of species only known historically in the watershed include Marsh Muhly (*Muhlenbergia glomerata*, historic record from 1910), Hidden Spike-moss (*Selaginella eclipses*, historical record from 1945) and Painted Trillium (*Trillium undulatum*, historic record from 1947) (Cecile, 2009; Credit Valley Conservation, 2002).

## Breeding Birds

A total of 87 species of birds are recorded for this area, of which 85 (98%) are native. Five of these species are believed to be visitors, but the others were present during the breeding season and displayed some level (possible, probable, confirmed) of breeding evidence. This includes a record from a landowner of Bluebirds (*Sialia sialis*) using nesting boxes. Four of the species present here are Species At Risk (Table 3). Canada Warbler (*Wilsonia canadensis*) is Threatened nationally and Special Concern provincially, Bobolink (*Dolichonyx oryzivorus*) is Threatened nationally and provincially, Barn Swallow (*Hirundo rustica*) is Threatened nationally and Bald Eagle (*Haliaeetus leucocephalus*) is Special Concern provincially. Bald Eagle is also provincially rare (S-rank S1S2N, S4B)

This site supports four species of colonial-nesting birds, namely Great Blue Heron (*Ardea herodias*), Bank Swallow (*Riparia riparia*), Barn Swallow and Sedge Wren (*Cistothorus platensis*). The area also supports two species of waterfowl, Wood Duck (*Aix sponsa*) and Mallard (*Anas platyrhynchos*), and three species of wetland-nesting birds, Common Loon (*Gavia immer*), Virginia Rail (*Rallus limicola*) and Sedge Wren. Extensive interior forest exists at this site, supporting 11 species of area-sensitive forest interior birds, namely Hairy Woodpecker (*Picoides villosus*), Pileated Woodpecker (*Dryocopus pileatus*), Red-breasted Nuthatch (*Sitta canadensis*), Brown Creeper (*Certhia americana*), Winter Wren (*Troglodytes troglodytes*), Veery (*Catharus fuscescens*), Black-throated Green Warbler (*Dendroica virens*), Black-throated Blue Warbler (*Dendroica caerulescens*), Black-and-white Warbler (*Mniotilta varia*), Ovenbird (*Seiurus aurocapilla*) and Scarlet Tanager (*Piranga olivacea*). Open and successional habitat supports six species of grassland birds, namely Bobolink, Eastern Bluebird, Eastern Kingbird (*Tyrannus tyrannus*), Field Sparrow (*Spizella pusilla*), Willow Flycatcher (*Empidonax traillii*) and Sedge Wren; of which one (Bobolink) is area-sensitive. Four species of raptors may be breeding in this area, namely Sharp-shinned Hawk (*Accipiter striatus*), Cooper's Hawk (*Accipiter cooperii*), Osprey (*Pandion haliaetus*) and Broad-winged Hawk (*Buteo platypterus*).

## Fish

A total of 15 fish species were recorded, of which 14 (93%) are native. An additional species is recorded from historical (1982) CVC sampling. Iowa Darter (*Etheostoma exile*) occurs at this site, one of only a few locations where this species has been detected in the Credit River watershed. The waterways in this natural area support coldwater fish communities.

## Butterflies, Skippers and Moths

Butterfly, skipper and moth biodiversity is high at this area. A total of 33 species of butterflies, skippers and moths were recorded as incidental observations for this area, of which 31 (94%) are native. One species, Monarch (*Danaus plexippus*), is designated Special Concern both nationally and provincially. The Monarch is also provincially rare (S-rank S2N, S4B). This is also the only site during NAI fieldwork of 2008 and 2009 where Meadow Fritillary (*Boloria bellona*) and Mulberry Wing (*Poanes massasoit*) were observed and one of only two sites where Two-spotted Skipper (*Euphyes bimacula*) was observed. Two-spotted Skipper and Mulberry Wing are regionally rare in adjacent Halton Region (Dwyer, 2006).

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## Dragonflies and Damselflies

Dragonfly/damselfly biodiversity is high in this natural area. A total of 26 species of dragonflies/damselflies are recorded as incidental observations for this area, all of which are native. This is one of only two sites visited during NAI fieldwork over 2008 and 2009 where Hagen’s Bluet (*Enallagma hageni*) and Lyre-tipped Spreadwing (*Lestes unguiculatus*) were found; and one of only three sites where Prince Baskettail (*Epitheca princeps*) was found. Both Hagen’s Bluet and Prince Baskettail are regionally rare in adjacent Halton Region (Dwyer, 2006).

## Herpetofauna

Thirteen herpetofaunal species are recorded here as incidental observations, all of which are native. One species, Western Chorus Frog (*Pseudacris triseriata*), is Threatened nationally (Table 3). Eastern Snapping Turtle (*Chelydra serpentina*), a species of Special Concern nationally and provincially, is present. An Eastern Snapping Turtle was found dead on a road next to this natural area. A Midland Painted Turtle (*Chrysemys picta marginata*) was also found dead on a road next to this natural area. Four Northern Red-bellied Snakes (*Storeria occipitomaculata occipitomaculata*) were found under boards. Wood Frog (*Rana sylvatica*) juveniles were observed emerging from breeding pools. The remaining herpetofaunal species here consist of six additional frog/toad species, one additional snake species and one salamander species. Bullfrogs (*Rana catesbeiana*) are present here. Amphibian breeding occurs on site.

## Mammals

Thirty mammal species are recorded for this area, all of which are native. Bat acoustic inventories yielded seven species of bats within this area, including three bat species new to the Credit River watershed: Hoary Bat (*Lasiurus cinereus*), Eastern Pipistrelle (*Pipistrellus subflavus*) and Northern Long-eared Bat (*Myotis septentrionalis*). Two of these bat species, Eastern Pipistrelle (S-rank S3?) and Northern Long-eared Bat (S-rank S3?), are provincially rare. A small mammal inventory was also conducted with Ermine (*Mustela erminea*) and Northern Flying Squirrel (*Glaucomys sabrinus*) being notable observations (Reid, 2007).

**Table 3: Designated Species At Risk**

Scientific name	Common name	COSEWIC	COSSARO	S rank	G rank
<b>VASCULAR PLANTS</b>					
<i>Juglans cinerea</i>	Butternut	END	END	S3?	G4
<b>BIRDS</b>					
<i>Haliaeetus leucocephalus</i>	Bald Eagle		THR	S1S2N, S4B	G5
<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
<b>BUTTERFLIES</b>					
<i>Danaus plexippus</i>	Monarch	SC	SC	S2N,S4B	G5
<b>HERPETOFAUNA</b>					
<i>Chelydra serpentina</i>	Eastern Snapping Turtle	SC	SC	S3	G5T5
<i>Pseudacris triseriata</i>	Western Chorus Frog	THR		S4	G5

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

Scientific name	Common name	S rank	G rank
<b>VASCULAR PLANTS</b>			
<i>Acorus americanus</i>	American Sweetflag	S4	G5
<i>Agrostis scabra</i>	Ticklegrass	S5	G5
<i>Andromeda polifolia</i> ssp. <i>glaucophylla</i>	Bog Rosemary	S5	G5T5
<i>Aronia melanocarpa</i>	Black Chokeberry	S5	G5
<i>Betula pumila</i>	Swamp Birch	S5	G5
<i>Brachyelytrum erectum</i>	Bearded Shorthusk	S4S5	G5
<i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>	Narrow-spike Small-reedgrass	S5	G5T5
<i>Callitriche palustris</i>	Vernal Water-starwort	S5	G5
<i>Campanula aparinoides</i>	Marsh Bellflower	S5	G5
<i>Campanula rotundifolia</i>	American Harebell	S5	G5
<i>Carex aquatilis</i>	Water Sedge	S5	G5
<i>Carex brunnescens</i> ssp. <i>brunnescens</i>	Brownish Sedge subspecies	S5	G5T5
<i>Carex castanea</i>	Chestnut-colored Sedge	S5	G5
<i>Carex cryptolepis</i>	Northeastern Sedge	S4	G4
<i>Carex echinata</i> ssp. <i>echinata</i>	Little Prickly Sedge subspecies	S5	G5T5
<i>Carex lasiocarpa</i>	Slender Sedge	S5	G5
<i>Carex magellanica</i> ssp. <i>irrigua</i>	Boreal Bog Sedge	S5	G5T5
<i>Carex prairea</i>	Prairie Sedge	S5	G5?
<i>Carex trisperma</i> var. <i>trisperma</i>	Three-seed Sedge subspecies	S5	G5T5
<i>Carex vaginata</i>	Sheathed Sedge	S5	G5
<i>Ceratophyllum demersum</i>	Common Hornwort	S5	G5
<i>Chamaedaphne calyculata</i>	Leatherleaf	S5	G5
<i>Chrysosplenium americanum</i>	American Golden-saxifrage	S5	G5
<i>Cirsium muticum</i>	Swamp Thistle	S5	G5
<i>Cypripedium reginae</i>	Showy Lady's-slipper	S4	G4
<i>Decodon verticillatus</i>	Hairy Swamp Loosestrife	S5	G5
<i>Drosera rotundifolia</i>	Roundleaf Sundew	S5	G5
<i>Elymus riparius</i>	River Wild-rye	S4?	G5
<i>Elymus trachycaulus</i>	Slender Wheatgrass	S5	G5
<i>Epilobium coloratum</i>	Purple-leaf Willow-herb	S5	G5
<i>Epilobium strictum</i>	Downy Willow-herb	S5	G5?
<i>Equisetum sylvaticum</i>	Woodland Horsetail	S5	G5
<i>Galium labradoricum</i>	Northern Bog Bedstraw	S5	G5
<i>Gaultheria hispidula</i>	Creeping Snowberry	S5	G5
<i>Gentiana rubricaulis</i>	Closed Gentian	S4	G4?
<i>Geum rivale</i>	Purple Avens	S5	G5
<i>Glyceria borealis</i>	Small Floating Manna-grass	S5	G5
<i>Glyceria septentrionalis</i>	Floating Manna-grass	S4	G5
<i>Hydrophyllum canadense</i>	Blunt-leaf Waterleaf	S4	G5
<i>Lactuca biennis</i>	Tall Blue Lettuce	S5	G5
<i>Ledum groenlandicum</i>	Common Labrador Tea	S5	G5
<i>Lobelia kalmii</i>	Kalm's Lobelia	S5	G5
<i>Lonicera hirsuta</i>	Hairy Honeysuckle	S5	G4G5
<i>Lonicera oblongifolia</i>	Swamp Fly-honeysuckle	S4S5	G4
<i>Lonicera villosa</i>	Mountain Fly-honeysuckle	S5	G5
<i>Lycopodium annotinum</i>	Stiff Clubmoss	S5	G5

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<i>Lycopodium obscurum</i>	Tree Clubmoss	S4	G5
<i>Menyanthes trifoliata</i>	Bog Buckbean	S5	G5
<i>Muhlenbergia glomerata</i>	Marsh Muhly	S5	G5
<i>Myriophyllum sibiricum</i>	Common Water-milfoil	S5	G5
<i>Nemopanthus mucronatus</i>	Mountain Holly	S5	G5
<i>Orthilia secunda</i>	One-side Wintergreen	S5	G5
<i>Oryzopsis racemosa</i>	Black-fruit Mountain-ricegrass	S4	G5
<i>Oxalis acetosella</i> ssp. <i>montana</i>	Mountain Woodsorrel	S5	G5
<i>Parnassia glauca</i>	Carolina Grass-of-parnassus	S5	G5
<i>Phegopteris connectilis</i>	Northern Beech Fern	S5	G5
<i>Picea mariana</i>	Black Spruce	S5	G5
<i>Polygonum punctatum</i>	Dotted Smartweed	S5	G5
<i>Potamogeton foliosus</i>	Leafy Pondweed	S5	G5
<i>Potentilla fruticosa</i>	Shrubby Cinquefoil	S5	G5T5
<i>Ribes glandulosum</i>	Skunk Currant	S5	G5
<i>Ribes hudsonianum</i>	Northern Black Currant	S5	G5
<i>Ribes lacustre</i>	Bristly Black Currant	S5	G5
<i>Salix candida</i>	Hoary Willow	S5	G5
<i>Salix serissima</i>	Autumn Willow	S4	G4
<i>Sarracenia purpurea</i>	Northern Pitcher-plant	S5	G5
<i>Schoenoplectus acutus</i>	Hard-stem Bulrush	S5	G5
<i>Solidago patula</i>	Roundleaf Goldenrod	S5	G5
<i>Solidago uliginosa</i>	Bog Goldenrod	S5	G4G5
<i>Sorbus decora</i>	Northern Mountain-ash	S5	G4G5
<i>Symphotrichum boreale</i>	Rush Aster	S5	G5
<i>Symphotrichum urophyllum</i>	Arrow-leaved Aster	S4	G4G5
<i>Symplocarpus foetidus</i>	Skunk Cabbage	S5	G5
<i>Thelypteris noveboracensis</i>	New York Fern	S4S5	G5
<i>Torreyochloa pallida</i> var <i>fernaldii</i>	Fernald's Manna Grass	S4	G5?T4Q
<i>Trillium undulatum</i>	Painted Trillium	S5?	G5
<i>Utricularia minor</i>	Lesser Bladderwort	S5	G5
<i>Vaccinium angustifolium</i>	Late Lowbush Blueberry	S5	G5
<i>Vaccinium macrocarpon</i>	Large Cranberry	S4S5	G4
<i>Vaccinium myrtilloides</i>	Velvetleaf Blueberry	S5	G5
<i>Vaccinium oxycoccos</i>	Small Cranberry	S5	G5
<i>Viburnum cassinoides</i>	Northern Wild-raisin	S5	G5T5
<i>Viola macloskeyi</i> ssp. <i>pallens</i>	Smooth White Violet	S5	G5T5

### Site Condition and Disturbances

Abundant wetlands prevented this area from being heavily altered during 19<sup>th</sup> century settlement. It remains a large tract of intact natural area with minimal fragmentation and is in very good condition. Some upland areas are recovering from past logging and livestock grazing as evident from a low diversity of ground flora, successional tree species, scattered apple trees and more abundant alien species.

Non-native species are occasional and localized with the exception of culturally disturbed areas where they are abundant. Problematic invasive species include Garlic Mustard (*Alliaria petiolata*), Common Buckthorn (*Rhamnus cathartica*), Glossy Buckthorn (*Rhamnus frangula*), Purple Loosestrife (*Lythrum salicaria*) and Black Locust (*Robinia pseudo-acacia*).

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Other impacts include some garbage dumping in two deciduous forests and removed/trampled shoreline vegetation on the north-east side of Caledon Lake next to the cottages.

## **Ecological Features and Functions**

This area is part of the provincially significant Caledon Lake Forests Life Science ANSI as well as part of the regionally significant Caledon Lakes Area Earth Science ANSI. The area is also part of the Caledon Lake ESA and the provincially significant Caledon Lake Wetland Complex.

Credit Valley Conservation has a terrestrial monitoring plot in this area.

With forest communities greater than 4 ha and wetlands over 0.5 ha in size, 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 riparian areas provide a transitional zone between terrestrial and aquatic habitats, helping to maintain the water quality of the creeks and providing a movement corridor for plants and wildlife.

By containing a relatively high number of habitat types, this natural area has the potential for high biodiversity function, particularly for species that require more than one habitat type for their life needs. This natural area contains a regionally rare vegetation community (the fen noted by the botanist) and thus has the potential to support additional biodiversity above and beyond that found in common community types.

This area has excellent connectivity with other natural areas across the bordering roads. On the west side of the natural area there is more natural habitat across Shaw's Creek Rd. There are extensive natural areas across Orangeville Caledon Townline to the northwest and several large natural areas across Third Line W. Shaw's Creek flows southward through this area and crosses the upper portion of Mississauga Rd. into agricultural lands. The creek corridor is narrow here but this link broadens farther downstream. 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.

Shaw's Creek, a major tributary of the Credit River, runs through this area and thus supports the connectivity function of 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.

With two lakes, Shaw's Creek, associated streams, and diverse wetlands including a fen-like community, this site carries out important wetland functions. Caledon Lake acts as a reservoir for the Shaw's Creek system. Coldwater streams support Brook Trout.

This site contains seeps.

Eight Species At Risk (one plant species, four bird species, one butterfly species, one turtle species, one frog species) occur in this natural area.

Eight provincially rare species (three plant species, one bird species, two bat species, one butterfly species, one turtle species) occur in this area. Seventy-six species of regionally rare plants also occur here.

Extensive interior forest habitat exists in this natural area, supporting the breeding of 11 species of area-sensitive forest interior birds.



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Four species of colonial-nesting birds breed in this area, including a colony of Great Blue Herons. Two species of waterfowl occur here as well as three species of wetland-nesting birds, six species of grassland birds (one of which is area-sensitive) and four species of raptors.

This site supports Bullfrogs. The wetlands of this natural area provide amphibian breeding habitat. Breeding is confirmed for one frog species. Turtles may breed and nest in this natural area.

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.

## Opportunities

Existing linkages to adjacent natural areas, particularly to the north of this area are broad and should be maintained. Linkage to the south along Shaw's Creek is much narrower and the use of Shaw's Creek as a wildlife movement corridor could be improved by increasing the width of natural vegetation on either side of the creek.

The health of the Butternut trees present here could be assessed by a Butternut Assessor in order to determine whether any individuals are candidates for inclusion in the Butternut recovery program.

This natural area has five mature forest communities and they could be checked for old-growth forest characteristics.

The presence here of all seven bat species known from the Credit River watershed suggests the possibility of roosts in the area, warranting a search.

The vegetation community inventory should be completed where permission for access exists, thus addressing the outstanding NAI core inventories data gap for this area.

Two turtle species were found dead on the road during inventory work. Wildlife crossing road signage or other mitigation measures might be considered given the extensive wetlands that occur here near roads.

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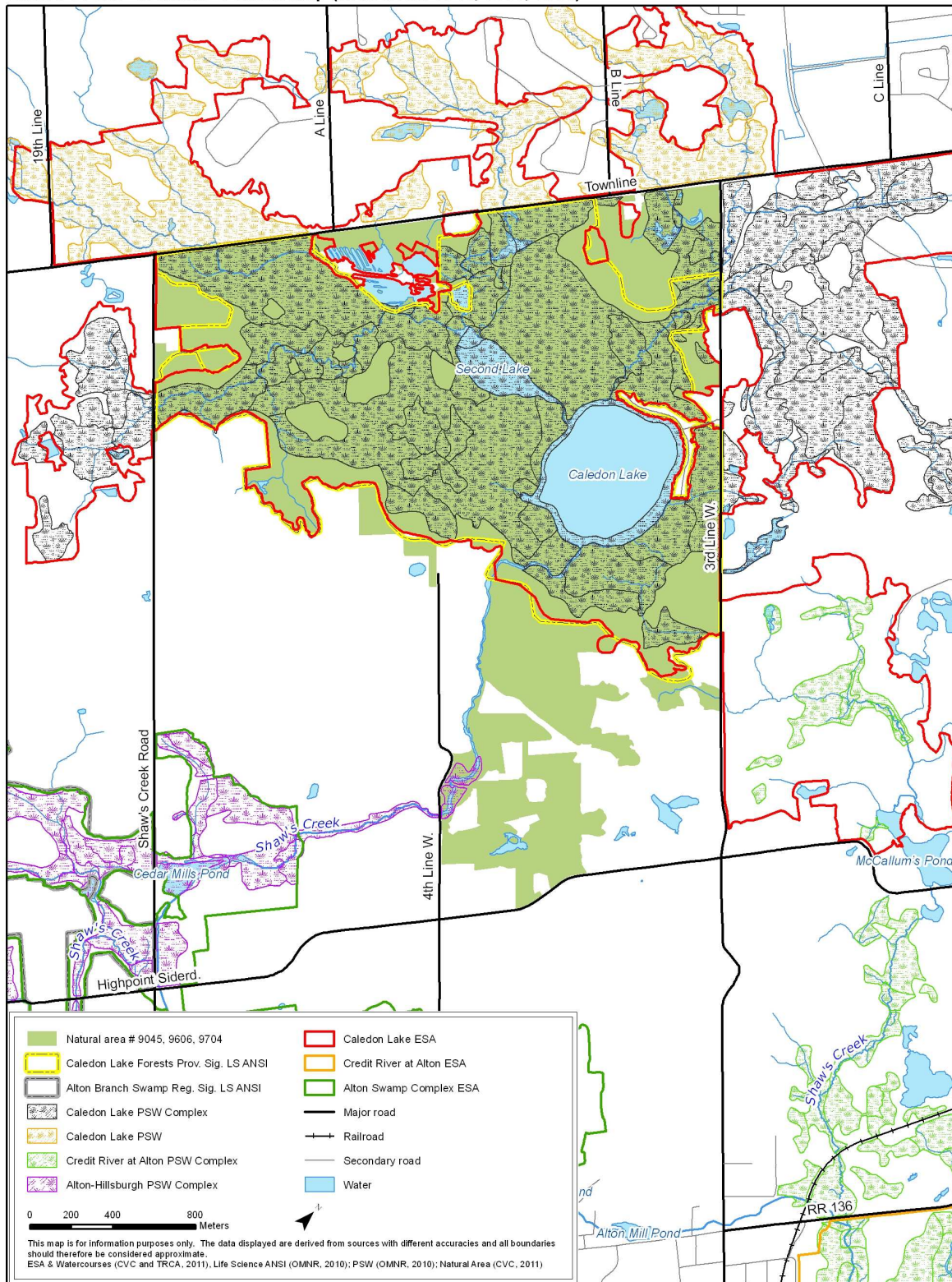
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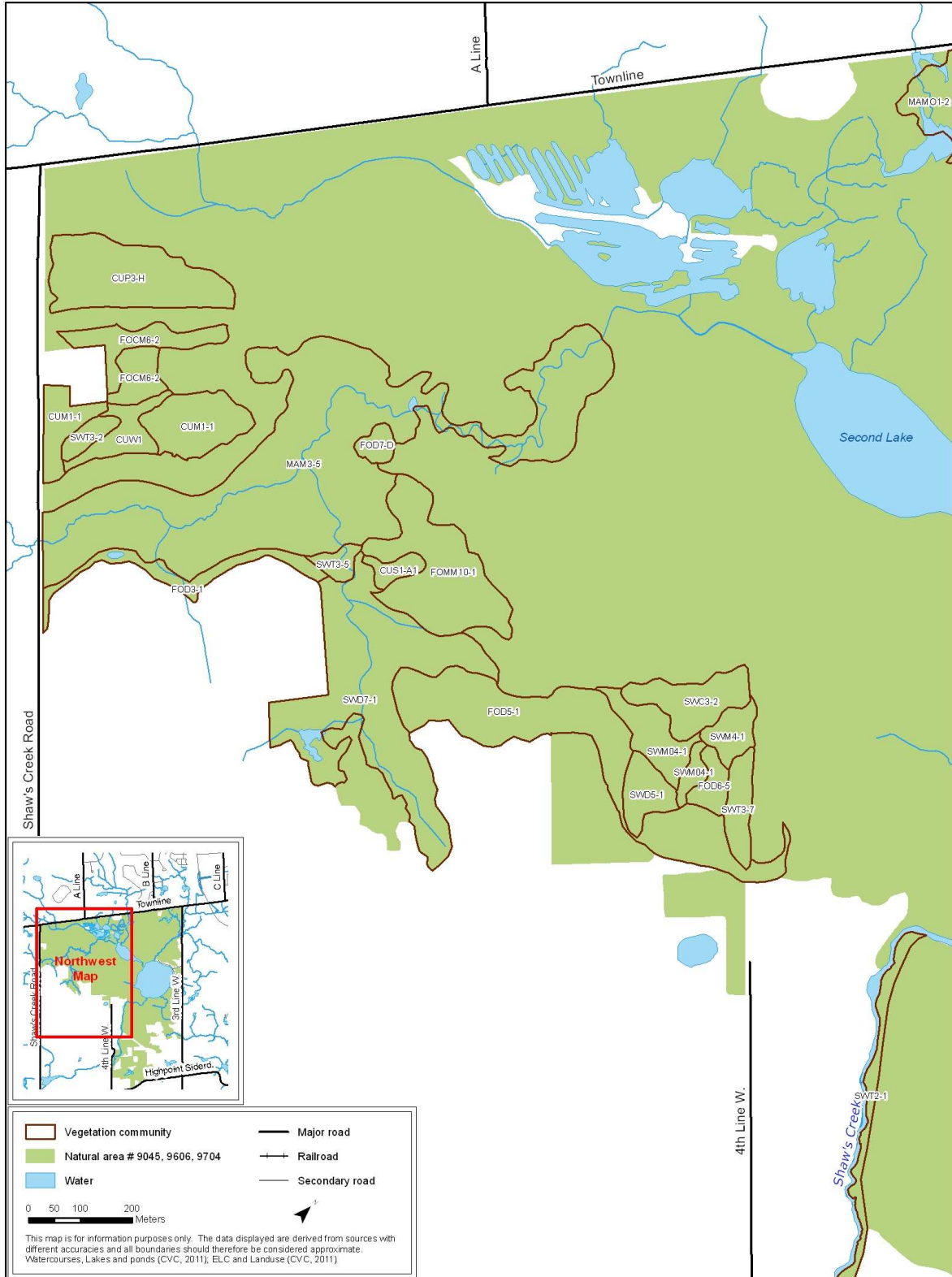
# SHAWS CREEK – TOWNLINE (CALEDON LAKE AREA)

Shaws Creek - Townline Context Map (NAI Area # 9045, 9606, 9704)



# SHAWS CREEK – TOWNLINE (CALEDON LAKE AREA)

Shaws Creek - Townline Vegetation Communities Map (Northwest NAI Area # 9045, 9606, 9704)



# SHAWS CREEK – TOWNLINE (CALEDON LAKE AREA)

Shaws Creek - Townline Vegetation Communities Map (Northeast NAI Area # 9045, 9606, 9704)



# SHAWS CREEK – TOWNLINE (CALEDON LAKE AREA)

Shaws Creek - Townline Vegetation Communities Map (South NAI Area # 9045, 9606, 9704)

