

TRAFALGAR - SIDEROAD 32 (SCOTSDALE FARM AND AREA)

Region of Halton	NAI Area # 7449	Credit Valley Conservation Authority
Town of Halton Hills	Size: 81 hectares	Watershed: Credit River
Con 8, Lots 28-29	Ownership: 24% private, 76% public (Ontario Heritage Trust)	Subwatershed: Silver Creek

General Summary

This natural area is relatively large, compact in shape and offers interior forest habitat. Most of the area is comprised of forest and treed swamp. This natural area is well linked to other natural areas of the Niagara Escarpment corridor. Most of this land is in public ownership, held by Ontario Heritage Trust as Scotsdale Farm. This area contains the headwaters of Snow's Creek, a tributary of Silver Creek.

Its mature forests and swamps and rolling terrain create a number of microclimates that contribute to its diversity. There are large Sugar Maple (*Acer saccharum ssp. saccharum*), White Ash (*Fraxinus americana*) and Red Oak (*Quercus rubra*) in the deciduous forest canopies and mature Butternuts (*Juglans cinerea*). Rocky outcrops in upland deciduous forest sections support uncommon fern species including Walking Fern (*Asplenium rhizophyllum*), Maidenhair Spleenwort (*Asplenium trichomanes ssp. trichomanes*), and Upland Brittle Bladder Fern (*Cystopteris tenuis*). This area has high biodiversity of flora and fauna with Species At Risk, a data-sensitive species, provincially and regionally rare species present.

NAI ELC surveyors inventoried vegetation communities and plants and made incidental observations of other fauna (Table 1), covering 81% of the natural area (determined by access permission). Breeding bird, butterfly, dragonfly/damselfly and herpetofaunal inventories were conducted in 2003 by Halton Natural Areas Inventory (HNAI) biologists using a methodology similar to that of this NAI, although their delineation of this natural area extended over more than one concession block (Dwyer, 2006). Hence, some of the species listed for this natural area, derived from the HNAI data, may only be present in adjacent habitat patches. Data from the Halton Natural Areas Inventory surveys is included in the NAI data set. Additional incidental records were contributed by other observers. This combined body of knowledge about this natural area is presented here. With respect to the NAI core inventories (vegetation communities, plants, breeding birds), this area is considered data-complete. Fish species inventories were conducted both within the natural area and from downstream sampling stations. As there are no barriers between the downstream stations and this natural area, the downstream inventory data was extrapolated to the natural area and combined with the data collected on-site.

Table 1: NAI Field Visits

Visit Date	Inventory Type
15 May 2001	Fish
09 July 2008	ELC
10 July 2008	ELC
14 July 2008	ELC

05 June 2009	Flora
08 July 2009	Flora
09 July 2009	Flora
08 Sept. 2009	Flora

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Natural Feature Classifications

This natural area is part of:

Earth Science ANSI – partially within regionally significant Snow's Creek

ESA - Snow's Creek Woods ESA

PSW - Acton-Silver Creek Wetland Complex

Niagara Escarpment Plan

Greenbelt Plan

Physical Features

This area is in the Niagara Escarpment physiographic region; characterized by an escarpment that forms a significant break in the bedrock of the region. The escarpment has formed from the differing erosion rates of the bedrock layers, the softer lower shale layers eroding out from under the hard dolostone cap rock until portions of the cap rock collapse to form a cliff face and talus slope. In this area, the escarpment cliff feature is buried by glacial deposits, producing a sudden rise in the land rather than a cliff face. This site is located a short distance back from the top of the escarpment.

Two creeks drain different parts of this area. The southwest portion of the natural area forms the headwaters of Snow's Creek, a tributary of Silver Creek. A creek runs through the northeast part of the area, joining Silver Creek after running down the escarpment slope. A few hundred metres north of this natural area the northeast creek is dammed, forming an elongate manmade pond.

Human History

The nearby community of Silver Creek is half a kilometre south of this natural area. It was settled in 1850 when John Graham opened a saw and gristmill along Silver Creek. Around this time a plank road was built through Silver Creek (Hutchinson, 1997; Rowe, 2004). From this we can infer that logging and crop-raising were early activities in the general area.

Scotsdale Farm was established in 1938 when Stewart and Violet Bennett purchased a 200 acre farm. Over the years they acquired neighbouring farms and natural areas until they had 531 acres where they bred Arabian horses and shorthorn cattle. Evidence of grazing still exists in some upland forest areas that show low ground flora diversity. Old barbed wire fencing was also noted around a small forest pond. Some areas were logged historically. In 1982, their property was given to the Ontario Heritage Trust (Hildebrandt, 2008).

In 1984, the remnants of an early to mid 16th century small Iroquois village were found on the eastern side of Scotsdale farm in an old field overlooking Owl Creek. The village site is just outside this natural area. Since then, a number of artefacts have been found on the property (some potentially in this natural area) including arrowheads, stone tool fragments and a clay pipe with a face carved into it. Evidence of a hearth was also found in what is believed to have been a longhouse (*ibid*).

This natural area is on the south part of Scotsdale Farm. This natural area has a network of public trails including the Bruce Trail and the Bennett Heritage Trail. The area receives light passive recreational use year round. Adjacent lands are regenerating old fields and rural residences. These cultural meadows are large and play a contributing role in supporting the functions of the natural area. Beyond the cultural meadows are agricultural fields, rural residences and a rural estate subdivision.

Vegetation Communities

The general community types present are coniferous forest (1%), deciduous forest (26%), mixed forest (8%), shallow marsh (1%), coniferous swamp (45%), deciduous swamp (2%), mixed swamp (15%), cultural savannah (2%) and cultural woodland (1%).

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A total of 12 vegetation communities of seven different types were mapped over the 81% of this area to which the NAI ELC crew had access (Table 2). The Fresh-Moist Sugar Maple – Hemlock Mixed Forest (FOM6-1, 2 communities) and White Cedar – Conifer Organic Coniferous Swamp (SWC3-2, 3 communities) are regionally rare.

Table 2: ELC Vegetation Communities

Map reference *	Vegetation type	Size in hectares	% of natural area
FOD5-8	Dry-Fresh Sugar Maple – White Ash Deciduous Forest (2 communities)	18.39	22.68
FOM6-1	Fresh-Moist Sugar Maple – Hemlock Mixed Forest (2 communities)	4.73	5.83
MAS3-1B	Narrow-leaved Cattail Organic Shallow Marsh	0.41	0.51
SWC3-1	White Cedar Organic Coniferous Swamp	13.12	16.18
SWC3-2	White Cedar – Conifer Organic Coniferous Swamp (3 communities)	21.59	26.62
SWDM4-5	Poplar Mineral Deciduous Swamp (2 communities)	0.87	1.08
SWM1-1	White Cedar – Hardwood Mineral Mixed Swamp	6.32	7.80
	TOTAL AREA INVENTORIED	65.43	

* 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

Three data-sensitive species occur in this natural area. Credit Valley Conservation should be contacted for further details.

Vascular Plants

Vascular plant biodiversity is high in this natural area. A total of 438 vascular plant species are recorded for this area, of which 348 (79%) are native. One of these species, Butternut (*Juglans cinerea*), is Endangered both nationally and provincially, as well as being provincially rare (S-rank S3?; Table 3). Two Butternut saplings and ten small trees were noted in poor to very good health. A second species present here, Jack's Poplar (*Populus x jackii*, S-rank S2) is also provincially rare. Forty-one species are regionally rare (Table 4).

Birds

Seventy-two bird species are recorded in this natural area, 70 (98%) of which are native. Most or all are believed to breed on site. Five of these are Species At Risk (Table 3). Cerulean Warbler (*Dendroica cerulea*) is Endangered nationally and Special Concern provincially, Bobolink (*Dolichonyx oryzivorus*) is Threatened nationally and provincially, Canada Warbler (*Wilsonia canadensis*) is Threatened nationally and Special Concern provincially and both Barn Swallow (*Hirundo rustica*) and Eastern Meadowlark (*Sturnella magna*) are Threatened nationally. Cerulean Warbler is also provincially rare (S-rank S3B). A Common Raven (*Corvus corax*), a species expanding south into this region, was seen flying overhead.

This area supports two species of colonial-nesting bird, Green Heron (*Butorides virescens*) and Barn Swallow. It supports one species of waterfowl, Mallard (*Anas platyrhynchos*). Interior forest habitat is present in this area, supporting eight species of area-sensitive forest interior birds, namely Hairy Woodpecker (*Picoides villosus*), Pileated Woodpecker (*Dryocopus pileatus*), Brown Creeper (*Certhia americana*), Black-and-white Warbler (*Mniotilta varia*), Black-throated Green Warbler (*Dendroica*

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virens), Ovenbird (*Seiurus aurocapilla*), Scarlet Tanager (*Piranga olivacea*) and Winter Wren (*Troglodytes troglodytes*). Open and successional habitat supports five species of grassland birds, namely Bobolink, Brown Thrasher (*Toxostoma rufum*), Eastern Kingbird (*Tyrannus tyrannus*), Eastern Meadowlark and Savannah Sparrow (*Passerculus sandwichensis*). Of these, Bobolink, Eastern Meadowlark and Savannah Sparrow are area-sensitive grassland birds. This area also supports at least three raptor species, Broad-winged Hawk (*Buteo platypterus*), Cooper's Hawk (*Accipiter cooperii*) and Sharp-shinned Hawk (*Accipiter striatus*).

Fish

Twelve native fish species were observed here. This natural area supports coldwater fish communities. Brook Trout (*Salvelinus fontinalis*), a species of cold, clean water, is present.

Two notable species are known historically from this site, Redside Dace (*Clinostomus elongatus*) (1975) and American Brook Lamprey (*Lampetra appendix*) (1983). Redside Dace is Endangered nationally and provincially. It is also provincially rare (S-rank S2). American Brook Lamprey is provincially rare (S-rank S3).

Butterflies and Skippers

Sixty species of butterflies, skippers and moths were recorded, 57 (95%) of which are native. Incidental records of moth species exist for this area. One of the butterfly species present here, Monarch (*Danaus plexippus*), is designated Special Concern both nationally and provincially (Table 3). The Monarch is also provincially rare (S-rank S2N, S4B).

Dragonflies and Damselflies

Two dragonfly/damselfly species were recorded incidentally in this natural area.

Herpetofauna

Seventeen herpetofaunal species are recorded here, all of which are native. Three of these are Species At Risk (Table 3). Eastern Snapping Turtle (*Chelydra serpentina*) and Eastern Milksnake (*Lampropeltis triangulum triangulum*) are both Special Concern nationally and provincially. They are also provincially rare (S-rank S3 for both). Western Chorus Frog (*Pseudacris triseriata*) is Threatened nationally.

Salamander egg masses were observed and are indicative of amphibian breeding within this natural area (McIlveen, 2010, Scallen, 1998). A record of a Brown Snake (*Storeria dekayi dekayi*; from 1999), Spring Peeper (*Pseudacris crucifer*; from 1990-1998) and a Northern Red-bellied Snake (*Storeria occipitomaculata occipitomaculata*; from pre-1990) were reported in Macadam (1999) either in or near this natural area.

Mammals

Ten native, common mammal species have been detected incidentally at this site. Mink (*Mustela vison*) are present.

Table 3: Designated Species At Risk

Scientific name	Common name	COSEWIC	COSSARO	S rank	G rank
VASCULAR PLANTS					
<i>Juglans cinerea</i>	Butternut	END	END	S3?	G4
BIRDS					
<i>Hirundo rustica</i>	Barn Swallow	THR		S5B	G5
<i>Dolichonyx oryzivorus</i>	Bobolink	THR	THR	S4B	G5

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<i>Wilsonia canadensis</i>	Canada Warbler	THR	SC	S4B	G5
<i>Dendroica cerulea</i>	Cerulean Warbler	END	SC	S3B	G4
<i>Sturnella magna</i>	Eastern Meadowlark	THR		S5B	G5
BUTTERFLIES					
<i>Danaus plexippus</i>	Monarch	SC	SC	S2N, S4B	G5
HERPETOFAUNA					
<i>Chelydra serpentina</i>	Eastern Snapping Turtle	SC	SC	S3	G5T5
<i>Lampropeltis triangulum triangulum</i>	Eastern Milksnake	SC	SC	S3	G5T5
<i>Pseudacris triseriata</i>	Western Chorus Frog	THR		S4	G4

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

Scientific name	Common name	S rank	G rank
VASCULAR PLANTS			
<i>Asplenium platyneuron</i>	Ebony Spleenwort	S4	G5
<i>Asplenium trichomanes ssp. trichomanes</i>	Maidenhair Spleenwort subspecies	SU	G5T5
<i>Botrychium simplex</i>	Least Moonwort	S4?	G5
<i>Carex cephalophora</i>	Oval-leaved Sedge	S5	G5
<i>Carex magellanica ssp. irrigua</i>	Boreal Bog Sedge	S5	G5T5
<i>Carex trisperma var. trisperma</i>	Three-seed Sedge subspecies	S5	G5T5
<i>Carex woodii</i>	Pretty Sedge	S4	G4
<i>Chrysosplenium americanum</i>	American Golden-saxifrage	S5	G5
<i>Corallorhiza trifida</i>	Early Coralroot	S5	G5
<i>Cypripedium reginae</i>	Showy Lady's-slipper	S4	G4
<i>Dicentra cucullaria</i>	Dutchman's Breeches	S5	G5
<i>Drosera rotundifolia</i>	Roundleaf Sundew	S5	G5
<i>Epilobium coloratum</i>	Purple-leaf Willow-herb	S5	G5
<i>Equisetum pratense</i>	Meadow Horsetail	S5	G5
<i>Erigeron pulchellus</i>	Robin's Plantain Fleabane	S5	G5
<i>Galium boreale</i>	Northern Bedstraw	S5	G5
<i>Gaultheria hispidula</i>	Creeping Snowberry	S5	G5
<i>Geum rivale</i>	Purple Avens	S5	G5
<i>Glyceria borealis</i>	Small Floating Manna-grass	S5	G5
<i>Ledum groenlandicum</i>	Common Labrador Tea	S5	G5
<i>Lobelia cardinalis</i>	Cardinal Flower	S5	G5
<i>Lycopodium annotinum</i>	Stiff Clubmoss	S5	G5
<i>Lycopodium obscurum</i>	Tree Clubmoss	S4	G5
<i>Malaxis monophyllos ssp. brachypoda</i>	White Adder's Mouth	S4	G4Q

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<i>Orthilia secunda</i>	One-side Wintergreen	S5	G5
<i>Oryzopsis racemosa</i>	Black-fruit Mountain-ricegrass	S4	G5
<i>Penstemon hirsutus</i>	Hairy Beardtongue	S4	G4
<i>Phegopteris connectilis</i>	Northern Beech Fern	S5	G5
<i>Picea mariana</i>	Black Spruce	S5	G5
<i>Platanthera obtusata</i>	Small Northern Bog-orchid	S5	G5
<i>Polypodium virginianum</i>	Rock Polypody	S5	G5
<i>Solidago uliginosa</i>	Bog Goldenrod	S5	G4G5
<i>Stachys hispida</i>	Hispid Hedge-nettle	S4S5	G5T4Q
<i>Triosteum aurantiacum</i>	Coffee Tinker's-weed	S5	G5
<i>Ulmus thomasi</i>	Rock Elm	S4?	G5
<i>Utricularia minor</i>	Lesser Bladderwort	S5	G5
<i>Vaccinium myrtilloides</i>	Velvetleaf Blueberry	S5	G5
<i>Vaccinium oxycoccos</i>	Small Cranberry	S5	G5
<i>Viola adunca</i>	Hooked-spur Violet	S4S5	G5
<i>Viola macloskeyi</i> ssp. <i>pallens</i>	Smooth White Violet	S5	G5T5
<i>Viola selkirkii</i>	Selkirk's Violet	S5	G5?

Site Condition and Disturbances

This is a high quality area that is relatively undisturbed and well linked to nearby natural areas. Many of the vegetation communities are mature with some mid-aged and young communities. Younger communities are regenerating from past logging or grazing. Some logging persists.

Non-native species are minimal but are more abundant near the edges of the natural area with Garlic Mustard (*Alliaria petiolata*) being a notable problematic invasive.

The Bruce Trail and Bennett Heritage Trail pass through this natural area along with a few side trails. These sustain light recreational use.

Tree diseases include Butternut Canker and possibly Beech Bark Disease.

Some small roads were noted in the forests which may have been used for logging purposes. There is moderate traffic noise in communities near Trafalgar Rd.

Ecological Features and Functions

This area is part of the Snow's Creek Woods ESA and part is included in the provincially significant Acton-Silver Creek Wetland Complex. Part of the area is also within the Snow's Creek regionally significant Earth Science ANSI.

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 large (over 10 ha) cultural meadows adjacent to this area further strengthens the functions of this natural area. The riparian areas provide a transitional zone between terrestrial and aquatic habitats, helping to maintain the water quality of the streams, 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

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needs. This natural area contains regionally rare vegetation communities and thus has the potential to support additional biodiversity above and beyond that found in common community types.

This natural area has a broad area of linkage, across Trafalgar Rd., with another large natural area along the course of Snow's Creek. Trafalgar Rd. is quite busy and might pose a partial barrier to successful movement of soft types of slow-moving wildlife. The eastern part of this area has excellent connectivity with an extensive natural area along the Niagara Escarpment and Silver Creek Conservation Area, across 27 Sideroad. 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.

Data-sensitive species occur here. CVC should be contacted for further information.

This area contains five regionally rare communities of two vegetation types.

The area provides habitat for ten Species At Risk (one plant species, five bird species, one butterfly species, one frog species, one turtle species, one snake species). The also supports seven provincially rare species (two plant species, one bird species, one butterfly species, one turtle species, one snake species) and 41 regionally rare plant species. Two provincially rare fish species are known from historical records.

Interior forest habitat is present, supporting eight species of area-sensitive forest interior birds.

The area supports at least three raptor species, one waterfowl species and two colonial-nesting bird species. Open and successional habitat supports five species of grassland birds, of which three species are area-sensitive grassland birds.

Wetlands at this site support amphibian breeding.

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.

Opportunities

While connectivity with other natural areas to the west, south and east if good, there are some more isolated natural habitat patches to the north in the same concession block. Opportunities exist to build or enhance linkage with these other natural patches, along vegetated fencerows or the course of streams. This could be accomplished by allowing natural regeneration in broader strips along existing linkages or by restoration plantings.

Extensive regenerating old fields adjacent to this natural area support the function and health of this area. Maintaining these large meadows and preventing them from succession to treed communities will provide habitat for declining grassland birds. Meadows can be maintained by periodic (once every 3-5 years) mowing after the young of grassland birds have fledged.

Mapping and monitoring of invasive species, particularly along trails that penetrate into communities and the centre of the natural area, would be beneficial in determine whether and where controls are needed in order to prevent disturbance from these problematic species.

Assessing the health of the Butternut trees present at this site could be assessed by a Butternut Assessor to determine whether any are candidates for inclusion the Butternut recovery program.

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This natural area contains seven mature forest communities which could be checked for old-growth characteristics.

Given the habitat variety and presence of large tree species with sloughing, creviced or furrowed bark favoured by bats for roosting, bat audio surveys in this area might be productive.

Mink are present and a search for their den sites could be conducted.

Literature Cited

Dwyer, J. **Halton Natural Areas Inventory**. 2006. 2 volumes. Volume 1: Site Summaries. Volume 2: Species Checklists. ISBN 0-9732488-6-6, 0-9732488-7-4. Self-published.

Hildebrandt, G. **Scotsdale Farm: A Hidden Treasure**. Escarpment Views. Spring 2008. pp. 20-23. Available at <http://www.escarpmentviews.ca/> Last Accessed April 23, 2010.

Hutchinson, J.F. 1997. **The History of Wellington County**. Landsborough, Grand Valley, Ontario. Excerpt available at <http://www.erin.ca/About/history/>. Last Accessed April 13, 2010.

Kaiser, J. 2001. **The Vascular Plant Flora of the Region of Peel and the Credit River Watershed**. Prepared for: Credit Valley Conservation, the Regional Municipality of Peel, Toronto and Region Conservation Authority.

Macadam, L. 1999. **The Herpetofauna Atlas for the Halton Region**. Halton/North Peel Naturalist Club, Georgetown, ON.

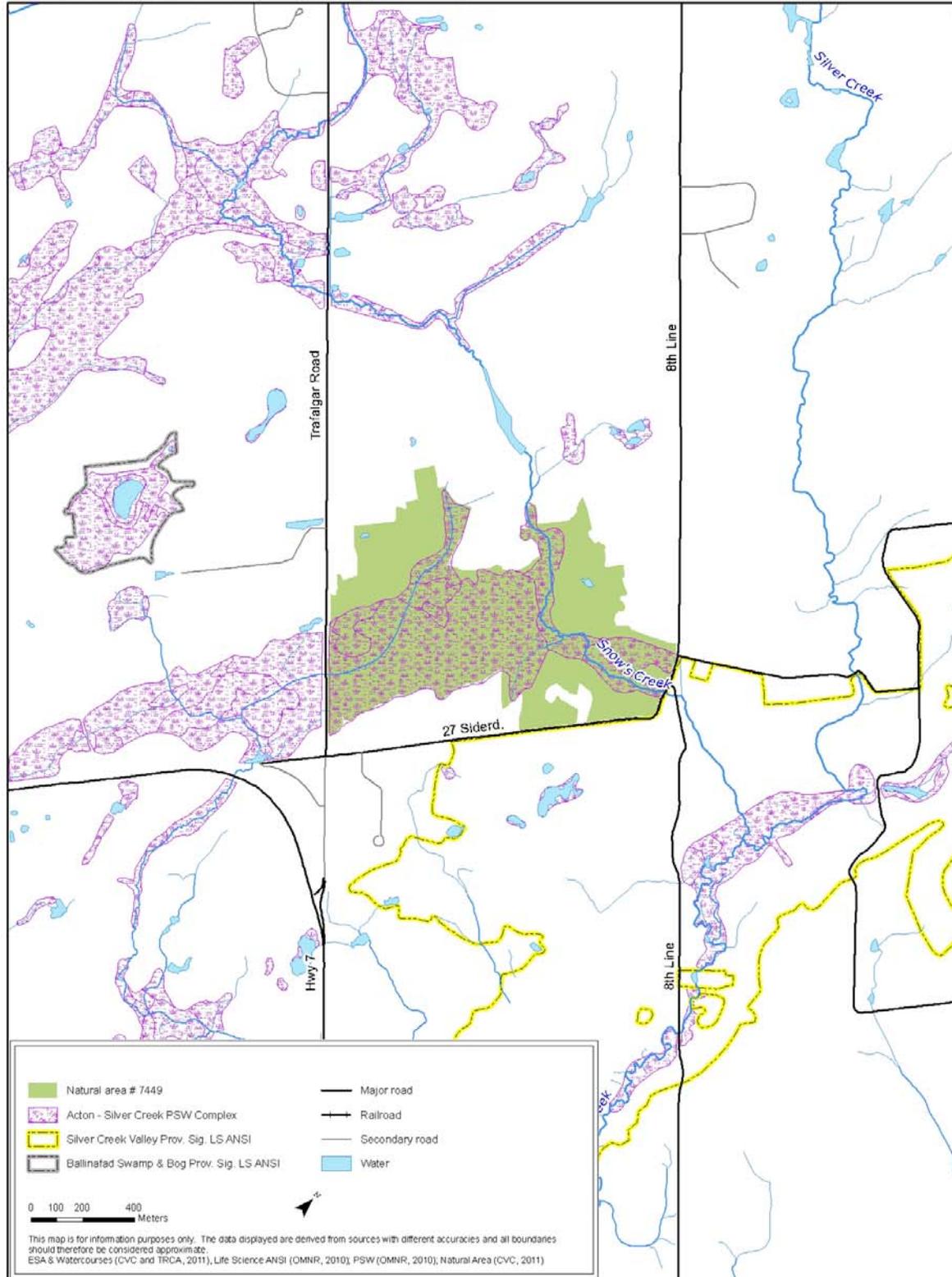
McIlveen, B. and I. 2010. **Region of Peel and Region of Halton Flora and Fauna Surveys**. Unpublished database.

Rowe, J.M.B. 2004. **The Historical Hamlet of Silver Creek**. Esquesing Historical Society. Available at <http://www.esquesinghistoricalsociety.ca/> Last Accessed 12 January 2011.

Scallen, D. 1998. **Amphibian Field Survey**. Unpublished data.

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Trafalgar - Sideroad 32 Context Map (NAI Area # 7449)



TRAFALGAR - SIDEROAD 32 (SCOTSDALE FARM AND AREA)

Trafalgar - Sideroad 32 Vegetation Communities Map (NAI Area # 7449)

