# KENNEDY – MAYFIELD EAST
# (HEART LAKE CONSERVATION AREA)

| | | |
|---|---|---|
| **Region of Peel** | **NAI Area # 2105, 2358, 2365** | **Toronto and Region Conservation Authority** |
| **City of Brampton** | **Size: 150 hectares** | **Watershed: Etobicoke Creek** |
| **Con 2 E, Lots 13-18** | **Ownership: 4% private, 96% public (TRCA)** | **Subwatershed: Upper Etobicoke Creek** |

**General Summary**

This is a large high-quality natural area located in the Heart Lake Conservation Area is in good condition despite heavy recreational use. The area is biologically rich, with many habitat types and many species present, including a large number of rare species. The area consists largely of mature deciduous forest on the sandy hills and wetlands, part of the Heart Lake Provincially Significant Wetland Complex, between the hills. This area contains the only two natural lakes in the Etobicoke Creek watershed. Both lakes are hydrologically unusual for this region. The location of this natural area on the Brampton Esker sets it apart within this physiographic region and watershed.

This site is considered urban, although it is currently on the urban fringe, with older single-family residential development to the south and west. However, new residential development is underway to the north in the Town of Caledon, north of Mayfield Road, and future industrial/commercial development east of Heart Lake Road.

TRCA ELC surveyors, botanists and ornithologists have provided complete data coverage for the core NAI inventories (vegetation communities, plant species, breeding birds) plus incidental observations of other fauna over the delineated area (Table 1). TRCA ecologists have also surveyed frog species in this area.

**Table 1: TRCA Field Visits**

| Visit Date | Inventory Type |
|---|---|
| Unspecified 1995 | Fauna |
| 01 June 1995 | Fauna |
| Unspecified 1998 | Fauna |
| 01 July 1998 | Fauna |
| Unspecified 2000 | Flora, Fauna |
| 16 June 2000 | ELC |
| 02 Nov. 2000 | ELC |
| Unspecified 2001 | Fauna |
| 23 Apr. 2001 | Fauna |
| 07 June 2001 | Fauna |
| 08 June 2001 | Fauna |
| 21 June 2001 | Fauna |
| 01 June 2002 | Fauna |
| Unspecified 2003 | Flora, Fauna |
| 02 Apr. 2003 | Fauna |
| 12 May 2003 | Flora |
| 21 May 2003 | Flora |
| 01 June 2003 | Fauna |
| 17 June 2003 | Flora |
| 18 June 2003 | ELC |
| 20 June 2003 | ELC |
| 01 July 2003 | ELC |
| 02 July 2003 | ELC, Flora |
| 03 July 2003 | ELC, Flora |
| 08 July 2003 | ELC, Flora |
| 10 July 2003 | ELC, Flora |
| 14 July 2003 | ELC, Flora |
| 01 Sept. 2003 | Flora |
| 04 Sept. 2003 | ELC, Flora |
| 05 Sept. 2003 | ELC, Flora |
| 08 Sept. 2003 | Flora |
| 09 Sept. 2003 | Flora |
| Unspecified 2004 | Fauna |
| 05 July 2004 | Fauna |
| 26 Oct. 2004 | Fauna |
| Unspecified 2005 | Fauna |
| 26 May 2005 | Fauna |
| 27 May 2005 | Fauna |
| 19 June 2005 | Fauna |
| 26 June 2005 | Fauna |

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| | |
|---|---|
| Unspecified 2006 | Fauna |
| 19 Feb. 2006 | Fauna |
| 02 Apr. 2006 | Fauna |
| 10 Apr. 2006 | Fauna |
| 12 Apr. 2006 | Fauna |
| Unspecified 2007 | Fauna |

| | |
|---|---|
| 27 Jan. 2007 | Fauna |
| Unspecified 2008 | Fauna |
| 30 May 2008 | Fauna |
| 15 June 2008 | Fauna |
| 18 June 2008 | Fauna |
| 17 June 2009 | Fauna |

**Natural Feature Classifications and Planning Areas**
This natural area is part of:
Earth Science ANSI – regionally significant Brampton Buried Esker
ESA – Heart Lake Woodlands ESA
PSW – Heart Lake Wetland Complex

**Physical Features**
This area is in the South Slope physiographic region; characterized by low-lying ground moraines. At a more local scale, this natural area is situated on the north end of the Brampton Esker. The esker is a ridge of sand and gravel deposited by glacial meltwater during the final retreat of the Laurentide Ice Sheet (Natural Heritage Information Centre, 2010a; Wake, 1997). It is the only esker within the TRCA jurisdiction (Toronto and Region Conservation Authority, 2010a) and accounts for the steeply hilly topography of this site.

Heart Lake, the main hydrological feature of this area, is a 16.5 hectare kettle lake. The lake was formed 10,000 years ago after an ice block was severed from the retreating glacier and trapped within glacial till before finally melting. Teapot Lake, in the northeast corner of the area, is a 0.6 hectare kettle lake and also a meromictic lake (Natural Heritage Information Centre, 2010b). Meromictic lakes are unusual in that water from the upper and lower layers of the lake do not mix. Heart Lake and Teapot Lake are the only natural lakes in the Etobicoke Creek watershed (Ford, 2008; Toronto and Region Conservation Authority, 2010a; Wake, 1997).

These lakes drain into Etobicoke Creek. Soils of the South Slope region are generally poorly-draining clay loams, but in this area the coarse, permeable sands and gravels of the esker allow recharge to groundwater aquifers (Toronto and Region Conservation Authority, 2010a). Organic deposits have accumulated to substantial depths in the bog community located in a bay of Heart Lake (Ford, 2008).

**Human History**
The former community of Snelgrove was located nearby at the crossroads of Hurontario St. and Mayfield Road. John Snell, an Englishman, was an early settler who received a land grant of 100 acres in 1838. In its early days the community was known as Edmonton but was changed in 1895 due to confusion with Edmonton, Alberta. Hurontario St. was then, as now, a main route north into Caledon. By 1877, Snelgrove was a thriving community of 200 people and around 1878, the Credit Valley Railroad extended its rail-line to Snelgrove (Caledon Public Library, 2009; Corporation of the City of Brampton, 2010). Outside of Snelgrove, much of the general area was farmland from the 1800's well into the 1900's.

The property of Heart Lake Conservation Area was acquired in the 1950's and the conservation area was opened to the public in 1957 (Toronto and Region Conservation Authority, 2010b). Parts of the conservation area have been reforested and these plantations are not likely older than 50 years.

The conservation area is popular for a variety of recreational activities year-round. Heart Lake is stocked with fish for recreational fishing and there are boat rentals available. There are more than

eight kilometres of hiking trails and a number of picnicking areas. Cross-country skiing and skating are available in the winter (Toronto and Region Conservation Authority, 2010b; Wake, 1997).

According to W.P. Bull, an early historian, Heart Lake was once owned by a Colonel A.E. Taylor (circa 1938). Of historic interest, Taylor reported occasionally seeing sulphur-coloured water spurting out of the lake up to fifteen feet or more in moving columns. Taylor and other locals attributed this hydrological phenomenon to a “sea serpent” (Bull, 1938).

This natural area is bordered on the north and east by roads. To the west and south, the surrounding land use is predominantly single-family housing subdivisions. This area of Brampton was developed over the last few decades and much of the land was previously farmland.

**Vegetation Communities**

The general community types present here are coniferous forest (0.3%), deciduous forest (37%), mixed forest (2%), shrub bog (0.5%), treed bog (0.1%), meadow marsh (2%), shallow marsh (4%), deciduous swamp (12%), mixed swamp (1%), thicket swamp (5%), submerged shallow aquatic (3%), mixed shallow aquatic (2%), open aquatic (8%), cultural meadow (4%), cultural thicket (5%), cultural woodland (2%) and plantation (13%).

One-hundred-and-forty-five plant communities were mapped for this area, belonging to 64 different vegetation types (Table 2). Six of the vegetation types are provincially rare: Fresh-Moist Black Walnut Lowland Deciduous Forest (FOD7-4, S-rank S2S3), Leatherleaf Shrub Kettle Bog (BOS2-1, S-rank S3), Tamarack - Leatherleaf Treed Kettle Bog (BOT2-1, S-rank S3), Red Maple - Conifer Organic Mixed Swamp (SWM5-1, S-rank S3S4), Silky Dogwood Mineral Thicket Swamp (SWT2-8, S-rank S3S4) and Winterberry Organic Thicket Swamp (SWT3-7, S-rank S3S4). The Fresh-Moist Sugar Maple - Hemlock Mixed Forest (FOM6-1) community and both bog communities are regionally rare.

Twenty-two of the community types are considered to be TRCA regional Communities of Conservation Concern: Fresh-Moist Oak - Sugar Maple Deciduous Forest (FOD9-1, L-rank L3), Dry-Fresh Hardwood Hemlock Mixed Forest (FOM3-1, L-rank L3), Dry-Fresh Paper Birch Mixed Forest (FOM5-1, L-rank L3), Leatherleaf Shrub Kettle Bog (BOS2-1, L-rank L1), Tamarack - Leatherleaf Treed Kettle Bog (BOT2-1, L-rank L1), Broad-leaved Sedge Organic Meadow Marsh (MAM3-6, L-rank L2), Jewelweed Organic Meadow Marsh (MAM3-8, L-rank L3), Forb Organic Meadow Marsh (MAM3-9, L-rank L3), Swamp Loosestrife Organic Shallow Marsh (MAS3-12, L-rank L2), Broad-leaved Cattail Organic Shallow Marsh (MAS3-1A, L-rank L3), Red Maple Mineral Deciduous Swamp (SWD3-1, L-rank L3), Red Maple Organic Deciduous Swamp (SWD6-1, L-rank L2), Silver Maple Organic Deciduous Swamp (SWD6-2, L-rank L2), Swamp Maple Organic Deciduous Swamp (SWD6-3, L-rank L3), Red Maple - Conifer Organic Mixed Swamp (SWM5-1, L-rank L2), Silky Dogwood Mineral Thicket Swamp (SWT2-8, L-rank L3), Alder Organic Thicket Swamp (SWT3-1, L-rank L3), Willow Organic Thicket Swamp (SWT3-2, L-rank L3), Winterberry Organic Thicket Swamp (SWT3-7, L-rank L2), Spiraea Organic Thicket Swamp (SWT3-A, L-rank L2), Duckweed Mixed Shallow Aquatic (SAM1-2, L-rank L3) and Water Lily - Bullhead Lily Mixed Shallow Aquatic (SAM1-A, L-rank L3).

An additional 16 community types are TRCA regional Communities of Urban Conservation Concern: Fresh-Moist Hemlock Coniferous Forest (FOC 3-1, L-rank L4), Dry-Fresh Oak - Hardwood Deciduous Forest (FOD2-4, L-rank L4), Dry-Fresh Poplar Deciduous Forest (FOD3-1, L-rank L4), Dry-Fresh Paper Birch Deciduous Forest (FOD3-2, L-rank L4), Dry-Fresh Sugar Maple - Oak Deciduous Forest (FOD5-3, L-rank L4), Dry-Fresh Sugar Maple - Red Maple Deciduous Forest (FOD5-9, L-rank L4), Dry-Fresh Sugar Maple - Paper Birch - Poplar Deciduous Forest (FOD5-10, L-rank L4), Fresh-Moist Black Walnut Lowland Deciduous Forest (FOD7-4, L-rank L4), Fresh-Moist Paper Birch Deciduous Forest (FOD8-B, L-rank L4), Fresh-Moist Sugar Maple - Hemlock Mixed Forest (FOM6-1, L-rank L4), Broad-leaved Sedge Mineral Meadow Marsh (MAM2-6, L-rank L4), Broad-leaved Cattail Mineral Shallow Marsh (MAS2-1A, L-rank L4), Alder Mineral Thicket Swamp (SWT2-1, L-rank L4) and Red-

osier Mineral Thicket Swamp (SWT2-5, L-rank L4), Silky Dogwood Deciduous Thicket (CUT1-F, L-rank L4) and Grey Dogwood Deciduous Thicket (CUP1-4, L-rank L4).

**Table 2: ELC Vegetation Communities**

| Map reference * | Vegetation type | Size in hectares | % of natural area |
|---|---|---|---|
| FOC3-1 | Fresh-Moist Hemlock Coniferous Forest | 0.43 | 0.29 |
| FOD2-4 | Dry-Fresh Oak - Hardwood Deciduous Forest | 2.50 | 1.67 |
| FOD3-1 | Dry-Fresh Poplar Deciduous Forest (4 communities) | 2.30 | 1.53 |
| FOD3-2 | Dry-Fresh Paper Birch Deciduous Forest | 0.49 | 0.32 |
| FOD4-2 | Dry-Fresh White Ash Deciduous Forest | 0.14 | 0.09 |
| FOD4-I | Dry-Fresh Red Maple Deciduous Forest (2 communities) | 3.05 | 2.04 |
| FOD5-1 | Dry-Fresh Sugar Maple Deciduous Forest (4 communities) | 8.68 | 5.81 |
| FOD5-2 | Dry-Fresh Sugar Maple – Beech Deciduous Forest | 10.92 | 7.30 |
| FOD5-3 | Dry-Fresh Sugar Maple - Oak Deciduous Forest (2 communities) | 6.17 | 4.12 |
| FOD5-7 | Dry-Fresh Sugar Maple - Black Cherry Deciduous Forest | 2.82 | 1.88 |
| FOD5-9 | Dry-Fresh Sugar Maple - Red Maple Deciduous Forest | 0.22 | 0.14 |
| FOD5-10 | Dry-Fresh Sugar Maple - Paper Birch - Poplar Deciduous Forest | 1.06 | 0.71 |
| FOD6-5 | Fresh-Moist Sugar Maple - Hardwood Deciduous Forest (6 communities) | 8.06 | 5.39 |
| FOD7-2 | Fresh-Moist Ash Lowland Deciduous Forest (2 communities) | 1.09 | 0.73 |
| FOD7-4 | Fresh-Moist Black Walnut Lowland Deciduous Forest **PROVINCIALLY RARE S-rank S2S3** | 1.31 | 0.88 |
| FOD7-A | Fresh-Moist Manitoba Maple Lowland Deciduous Forest | 0.74 | 0.50 |
| FOD8-1 | Fresh-Moist Poplar Deciduous Forest (6 communities) | 3.39 | 2.27 |
| FOD8-B | Fresh-Moist Paper Birch Deciduous Forest | 0.34 | 0.22 |
| FOD9-1 | Fresh-Moist Oak - Sugar Maple Deciduous Forest (2 communities) | 2.13 | 1.43 |
| FOM3-1 | Dry-Fresh Hardwood Hemlock Mixed Forest (2 communities) | 0.98 | 0.65 |
| FOM5-1 | Dry-Fresh Paper Birch Mixed Forest | 0.78 | 0.52 |
| FOM6-1 | Fresh-Moist Sugar Maple - Hemlock Mixed Forest | 0.68 | 0.45 |
| MAM2-2 | Reed Canary Grass Mineral Meadow Marsh | 0.18 | 0.12 |
| MAM2-6 | Broad-leaved Sedge Mineral Meadow Marsh (2 communities) | 0.44 | 0.29 |
| MAM3-2 | Reed Canary Grass Organic Meadow Marsh | 0.32 | 0.21 |
| MAM3-6 | Broad-leaved Sedge Organic Meadow Marsh (3 communities) | 0.56 | .037 |
| MAM3-8 | Jewelweed Organic Meadow Marsh | 0.07 | 0.05 |
| MAM3-9 | Forb Organic Meadow Marsh (2 communities) | 1.21 | 0.81 |
| MAS2-1A | Broad-leaved Cattail Mineral Shallow Marsh (3 communities) | 0.56 | 0.38 |
| MAS3-12 | Swamp Loosestrife Organic Shallow Marsh | 0.12 | 0.08 |
| MAS3-1A | Broad-leaved Cattail Organic Shallow Marsh (7 communities) | 4.56 | 3.05 |

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|---|---|---|---|
| MAS3-1b | Narrow-leaved Cattail Organic Shallow Marsh | 0.60 | 0.40 |
| BOS2-1 | Leatherleaf Shrub Kettle Bog **PROVINCIALLY RARE S-rank S3** | 0.73 | 0.49 |
| BOT2-1 | Tamarack - Leatherleaf Treed Kettle Bog **PROVINCIALLY RARE S-rank S3** | 0.21 | 0.14 |
| SWD3-1 | Red Maple Mineral Deciduous Swamp | 0.39 | 0.26 |
| SWD6-1 | Red Maple Organic Deciduous Swamp | 0.77 | 0.51 |
| SWD6-2 | Silver Maple Organic Deciduous Swamp | 2.60 | 1.74 |
| SWD6-3 | Swamp Maple Organic Deciduous Swamp | 13.77 | 9.21 |
| SWM5-1 | Red Maple - Conifer Organic Mixed Swamp (5 communities) **PROVINCIALLY RARE S-rank S3S4** | 1.17 | 0.78 |
| SWT2-1 | Alder Mineral Thicket Swamp | 0.38 | 0.26 |
| SWT2-5 | Red-osier Mineral Thicket Swamp | 0.12 | 0.08 |
| SWT2-8 | Silky Dogwood Mineral Thicket Swamp **PROVINCIALLY RARE S-rank S3S4** | 0.14 | 0.09 |
| SWT3-1 | Alder Organic Thicket Swamp | 1.15 | 0.77 |
| SWT3-2 | Willow Organic Thicket Swamp (5 communities) | 4.29 | 2.87 |
| SWT3-7 | Winterberry Organic Thicket Swamp (2 communities) **PROVINCIALLY RARE S-rank S3S4** | 0.83 | 0.56 |
| SWT3-A | Spiraea Organic Thicket Swamp | 0.15 | 0.01 |
| SWT3-c | Exotic Organic Thicket Swamp | 0.38 | 0.25 |
| SAS1-4 | Water Milfoil Submerged Shallow Aquatic | 4.61 | 3.08 |
| SAM1-2 | Duckweed Mixed Shallow Aquatic (4 communities) | 0.83 | 0.56 |
| SAM1-A | Water Lily - Bullhead Lily Mixed Shallow Aquatic (3 communities) | 2.31 | 1.55 |
| OAO1 | Open Aquatic Ecosite (2 communities) | 11.96 | 8.00 |
| CUM1-A | Native Forb Old Field Meadow (2 communities) | 1.93 | 1.29 |
| CUM1-c | Exotic Forb Old Field Meadow (3 communities) | 4.11 | 2.75 |
| CUT1-A1 | Native Deciduous Sapling Cultural Thicket (3 communities) | 2.37 | 1.59 |
| CUT1-c | Exotic Cultural Thicket (7 communities) | 4.22 | 2.82 |
| CUT1-F | Silky Dogwood Cultural Thicket | 0.20 | 0.13 |
| CUW1-A3 | Native Deciduous Cultural Woodland (5 communities) | 2.50 | 1.67 |
| CUW1-b | Exotic Cultural Woodland | 0.51 | 0.34 |
| CUP1-3 | Black Walnut Deciduous Plantation | 0.34 | 0.23 |
| CUP1-4 | Hybrid Poplar Deciduous Plantation | 0.24 | 0.16 |
| CUP3-1 | Red Pine Coniferous Plantation (7 communities) | 2.32 | 1.55 |
| CUP3-2 | White Pine Coniferous Plantation (4 communities) | 2.29 | 1.53 |
| CUP3-G | White Cedar Coniferous Plantation | 0.39 | 0.26 |
| CUP3-H | Mixed Conifer Coniferous Plantation (12 communities) | 14.47 | 9.68 |
| | **TOTAL AREA INVENTORIED** | **149.58** | |

* 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 diversity is high in this natural area. A total of 371 species of vascular plants are present, of which 287 (77%) are native. One species, Butternut (*Juglans cinerea*) is Endangered both nationally and provincially, as well as being provincially rare (S-rank S3?; Table 3). Forty-two of the species are regionally rare (Table 4). Ninety-nine species are TRCA regional Species of Conservation

Concern and an additional 72 species are TRCA regional Species of Urban Conservation Concern (Table 4).

Breeding Birds

A total of 70 species of breeding birds have been observed at this natural area, of which 68 (97%) are native. One of these, Barn Swallow (*Hirundo rustica*), is Threatened nationally (Table 3). Eighteen of the breeding bird species are TRCA regional Species of Conservation Concern and an additional 26 species are TRCA regional Species of Urban Conservation Concern (Table 4).

Four species of colonial-nesting birds, Barn Swallow, Northern Rough-winged Swallow (*Stelgidopteryx serripennis*), Great Blue Heron (*Ardea herodias*) and Marsh Wren (*Cistothorus palustris*), breed in this area. The interior forest habitat provided at this site supports five species of area-sensitive forest interior birds, namely Brown Creeper (*Certhia americana*), Black-throated Green Warbler (*Dendroica virens*), Hairy Woodpecker (*Picoides villosus*), Pileated Woodpecker (*Dryocopus pileatus*) and Red-breasted Nuthatch (*Sitta canadensis*). The large patches of open successional habitat support the breeding of four grassland bird species, namely Brown Thrasher (*Toxostoma rufum*), Eastern Kingbird (*Tyrannus tyrannus*), Savannah Sparrow (*Passerculus sandwichensis*) and Willow Flycatcher (*Empidonax traillii*), one of which (Savannah Sparrow) is area-sensitive. The numerous wetlands at this site support breeding of Wood Duck (*Aix sponsa*), Mallard (*Anas platyrhynchos*), Marsh Wren, Sora (*Porzana carolina*) and Virginia Rail (*Rallus limicola*). Three raptor species, Cooper's Hawk (*Accipiter cooperii*), Sharp-shinned Hawk (*Accipiter striatus*) and Long-eared Owl (*Asio otus*), also use this area.

Long-eared Owl use conifer plantation habitat patches in this area as winter roosts (D. Renfrew, pers. comm., 2010).

Fish

At least ten species of fish are known from this natural area.

Herpetofauna

This natural area is rich in herpetofaunal species. Eight species of amphibians and five species of reptiles, all native, occur in this area. Two species, Eastern Snapping Turtle (*Chelydra serpentina*) and Eastern Milksnake (*Lampropeltis triangulum triangulum*), are designated Special Concern both nationally and provincially (Table 3). Both Eastern Snapping Turtle and Eastern Milksnake are also provincially rare, both having S-ranks of S3. Nine of the herpetofaunal species are TRCA regional Species of Conservation Concern and an additional four species are TRCA regional Species of Urban Conservation Concern (Table 4).

Although not found during fieldwork, W.P. Bull (1938) cites a historical record of a Bullfrog (*Rana catesbeiana*) from Heart Lake.

Midland Painted Turtles (*Chrysemys picta marginata*) and Eastern Snapping Turtles use the kettle lakes and breed on surrounding land. Wood Frogs (*Rana sylvatica*) and Spring Peepers (*Pseudacris crucifer*) breed in the wetlands and also use adjacent upland forests (Natural Heritage Information Centre, 2010b).

Mammals

Ten mammal species have been observed incidentally to occur in this area, all of which are native and common. One of the mammal species is a TRCA regional Species of Conservation Concern and an additional seven species are TRCA regional Species of Urban Conservation Concern (Table 4).

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**Table 3: Designated Species At Risk**

| Scientific name | Common name | COSEWIC | COSSARO | S rank | G rank |
|---|---|---|---|---|---|
| **VASCULAR PLANTS** | | | | | |
| *Juglans cinerea* | Butternut | END | END | S3? | G4 |
| | | | | | |
| **BIRDS** | | | | | |
| *Hirundo rustica* | Barn Swallow | THR | | S5B | G5 |
| | | | | | |
| **HERPETOFAUNA** | | | | | |
| *Lampropeltis triangulum triangulum* | Eastern Milksnake | SC | SC | S3 | G5T5 |
| *Chelydra serpentina* | Eastern Snapping Turtle | SC | SC | S3 | G5T5 |

**Table 4: Regionally rare species (shown in bold), TRCA Regional Species of Conservation Concern (L1-L3), and TRCA Regional Species of Urban Conservation Concern (L4) (Kaiser, 2001; TRCA, 2007)**

| Scientific name | Common name | S rank | G rank | L-rank |
|---|---|---|---|---|
| **VASCULAR PLANTS** | | | | |
| *Abies balsamea* | Balsam Fir | S5 | G5 | L3 |
| *Acer rubrum* | Red Maple | S5 | G5 | L4 |
| *Acer saccharinum* | Silver Maple | S5 | G5 | L4 |
| *Acer spicatum* | Mountain Maple | S5 | G5 | L4 |
| *Acer x freemanii* | Hybrid Maple | SNR | GNA | L3 |
| *Actaea pachypoda* | White Baneberry | S5 | G5 | L4 |
| *Allium tricoccum* | Small White Leek | S5 | G5 | L4 |
| *Alnus incana ssp. rugosa* | Speckled Alder | S5 | G5T5 | L3 |
| *Alopecurus aequalis* | Short-awn Foxtail | S4S5 | G5 | L3 |
| *Anemone acutiloba* | Liverleaf | S5 | G5 | L3 |
| *Aquilegia canadensis* | Wild Columbine | S5 | G5 | L3 |
| ***Aronia melanocarpa*** | **Black Chokeberry** | **S5** | **G5** | **L2** |
| *Asarum canadense* | Canada Wild-ginger | S5 | G5 | L4 |
| *Asclepias incarnata ssp. incarnata* | Swamp Milkweed | S5 | G5T5 | L4 |
| *Betula alleghaniensis* | Yellow Birch | S5 | G5 | L4 |
| *Betula papyrifera* | Paper Birch | S5 | G5 | L4 |
| *Boehmeria cylindrica* | False Nettle | S5 | G5 | L4 |
| *Calamagrostis canadensis* | Canada Blue-joint | S5 | G5 | L4 |
| *Calla palustris* | Water Arum | S5 | G5 | L2 |
| ***Calopogon tuberosus*** | **Tuberous Grass-pink** | **S4S5** | **G5** | **L1** |
| *Caltha palustris* | Marsh Marigold | S5 | G5 | L4 |
| *Cardamine concatenata* | Cutleaf Toothwort | S5 | G5 | L3 |
| *Cardamine diphylla* | Two-leaf Toothwort | S5 | G5 | L4 |
| *Cardamine pennsylvanica* | Pennsylvania Bitter-cress | S5 | G5 | L4 |
| ***Carex canescens ssp. canescens*** | **Silvery Sedge** | **S5** | **G5T5** | **L3** |
| ***Carex chordorrhiza*** | **Creeping Sedge** | **S5** | **G5** | **LX** |
| *Carex comosa* | Bristly Sedge | S5 | G5 | L3 |
| *Carex crinita* | Fringed Sedge | S5 | G5 | L3 |
| *Carex diandra* | Lesser Panicled Sedge | S5 | G5 | L3 |

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|---|---|---|---|---|
| *Carex hystericina* | Porcupine Sedge | S5 | G5 | L4 |
| *Carex interior* | Inland Sedge | S5 | G5 | L3 |
| *Carex intumescens* | Bladder Sedge | S5 | G5 | L4 |
| *Carex lacustris* | Lake-bank Sedge | S5 | G5 | L4 |
| ***Carex lasiocarpa*** | **Slender Sedge** | **S5** | **G5** | **L2** |
| *Carex leptalea ssp. leptalea* | Bristly-stalk Sedge subspecies | S5 | G5T5 | L3 |
| *Carex lupulina* | Hop Sedge | S5 | G5 | L3 |
| *Carex pseudo-cyperus* | Cyperus-like Sedge | S5 | G5 | L4 |
| *Carex retrorsa* | Retrorse Sedge | S5 | G5 | L4 |
| *Carex stricta* | Tussock Sedge | S5 | G5 | L4 |
| ***Carex tribuloides*** | **Blunt Broom Sedge** | **S4S5** | **G5** | **L4** |
| ***Carex trisperma var. trisperma*** | **Three-seed Sedge subspecies** | **S5** | **G5T5** | **L3** |
| *Carex tuckermanii* | Tuckerman Sedge | S4 | G4 | L3 |
| *Carpinus caroliniana ssp. virginiana* | Blue-beech | S5 | G5 | L4 |
| *Carya cordiformis* | Bitter-nut Hickory | S5 | G5 | L4 |
| ***Caulophyllum giganteum*** | **Giant Blue Cohosh** | **S4?** | **G4G5Q** | **L4** |
| ***Cephalanthus occidentalis*** | **Common Buttonbush** | **S5** | **G5** | **L3** |
| ***Ceratophyllum demersum*** | **Common Hornwort** | **S5** | **G5** | **L3** |
| ***Chamaedaphne calyculata*** | **Leatherleaf** | **S5** | **G5** | **L3** |
| *Cicuta bulbifera* | Bulb-bearing Water-hemlock | S5 | G5 | L3 |
| ***Cinna arundinacea*** | **Stout Wood Reedgrass** | **S4** | **G5** | **L3** |
| *Claytonia virginica* | Narrow-leaved Spring-beauty | S5 | G5 | L3 |
| *Clintonia borealis* | Blue Bead-lily | S5 | G5 | L3 |
| *Coptis trifolia* | Goldthread subspecies | S5 | G5T5 | L2 |
| *Cornus amomum ssp. obliqua* | Silky Dogwood | S5 | G5T5 | L3 |
| *Cornus canadensis* | Bunchberry | S5 | G5 | L2 |
| *Corylus cornuta* | Beaked Hazelnut | S5 | G5 | L4 |
| *Cystopteris bulbifera* | Bulblet Fern | S5 | G5 | L4 |
| ***Decodon verticillatus*** | **Hairy Swamp Loosestrife** | **S5** | **G5** | **L2** |
| *Dicentra canadensis* | Squirrel-corn | S5 | G5 | L3 |
| *Diervilla lonicera* | Northern Bush-honeysuckle | S5 | G5 | L4 |
| ***Drosera rotundifolia*** | **Roundleaf Sundew** | **S5** | **G5** | **L1** |
| *Dryopteris clintoniana* | Clinton Woodfern | S4 | G5 | L3 |
| *Dryopteris cristata* | Crested Shield-fern | S5 | G5 | L3 |
| *Dryopteris intermedia* | Evergreen Woodfern | S5 | G5 | L4 |
| *Dryopteris marginalis* | Marginal Woodfern | S5 | G5 | L4 |
| ***Dulichium arundinaceum*** | **Three-way Sedge** | **S5** | **G5** | **L2** |
| *Eleocharis smallii* | Creeping Spike-rush | S5 | G5? | L3 |
| *Elodea canadensis* | Canada Waterweed | S5 | G5 | L4 |
| *Epilobium leptophyllum* | Linear-leaved Willow-herb | S5 | G5 | L3 |
| *Equisetum fluviatile* | Water Horsetail | S5 | G5 | L3 |
| ***Equisetum sylvaticum*** | **Woodland Horsetail** | **S5** | **G5** | **L3** |
| ***Eriophorum vaginatum ssp. spissum*** | **Dense Cotton-grass** | **S5** | **G5T5** | **L1** |
| ***Eriophorum virginicum*** | **Tawny Cotton-grass** | **S5** | **G5** | **L2** |
| *Euonymus obovatus* | Running Strawberry-bush | S5 | G5 | L3 |
| *Eupatorium perfoliatum* | Common Boneset | S5 | G5 | L4 |
| *Eurybia macrophylla* | Large-leaf Wood Aster | S5 | G5 | L4 |
| *Fagus grandifolia* | American Beech | S4 | G5 | L4 |

# KENNEDY – MAYFIELD EAST (HEART LAKE CONSERVATION AREA)

| | | | | |
|---|---|---|---|---|
| *Festuca subverticillata* | Nodding Fescue | S4 | G5 | L4 |
| *Fraxinus nigra* | Black Ash | S5 | G5 | L4 |
| *Galium asprellum* | Rough Bedstraw | S5 | G5 | L4 |
| ***Galium tinctorium*** | **Stiff Marsh Bedstraw** | **S5** | **G5** | **L3** |
| ***Gaylussacia baccata*** | **Black Huckleberry** | **S4** | **G5** | **L3** |
| ***Glyceria canadensis*** | **Rattlesnake Manna-grass** | **S4S5** | **G5** | **L2** |
| *Glyceria grandis* | American Manna-grass | S4S5 | G5 | L4 |
| *Gymnocarpium dryopteris* | Oak Fern | S5 | G5 | L3 |
| *Hydrocotyle americana* | American Marshpennywort | S5 | G5 | L3 |
| *Ilex verticillata* | Common Winterberry | S5 | G5 | L3 |
| *Iris versicolor* | Blue Flag | S5 | G5 | L3 |
| *Juglans cinerea* | Butternut | S3? | G4 | L3 |
| *Juncus brachycephalus* | Small-head Rush | S4S5 | G5 | L2 |
| ***Juncus canadensis*** | **Canada Rush** | **S5** | **G5** | **L1** |
| *Juncus effusus ssp. solutus* | Lamp Rush | S5? | G5T5 | L4 |
| *Juncus nodosus* | Knotted Rush | S5 | G5 | L4 |
| ***Kalmia polifolia*** | **Bog Laurel** | **S5** | **G5** | **L2** |
| *Larix laricina* | American Larch | S5 | G5 | L3 |
| *Lemna trisulca* | Star Duckweed | S5 | G5 | L3 |
| *Lonicera canadensis* | American Fly-honeysuckle | S5 | G5 | L3 |
| *Lycopus americanus* | American Bugleweed | S5 | G5 | L4 |
| *Lycopus uniflorus* | Northern Bugleweed | S5 | G5 | L4 |
| ***Lysimachia terrestris*** | **Swamp Loosestrife** | **S5** | **G5** | **L3** |
| *Lysimachia thyrsiflora* | Water Loosestrife | S5 | G5 | L3 |
| *Maianthemum canadense* | Canada Mayflower | S5 | G5 | L4 |
| *Maianthemum trifolium* | Three-leaf Solomon's-seal | S5 | G5 | L3 |
| *Mimulus ringens* | Square-stem Monkey-flower | S5 | G5 | L4 |
| *Mitella nuda* | Naked Miterwort | S5 | G5 | L3 |
| *Monarda fistulosa* | Wild Bergamot Bee-balm | S5 | G5 | L4 |
| ***Nemopanthus mucronata*** | **Mountain Holly** | **S5** | **G5** | **L2** |
| *Nuphar variegata* | Yellow Cow-lily | S5 | G5T5 | L3 |
| *Nymphaea odorata ssp. odorata* | White Water-lily | S5? | G5T5 | L2 |
| *Nymphaea odorata ssp. tuberosa* | Tuberous White Water-lily | SU | G5T5 | L2 |
| *Oryzopsis asperifolia* | White-grained Mountain-ricegrass | S5 | G5 | L3 |
| *Osmunda cinnamomea* | Cinnamon Fern | S5 | G5 | L3 |
| *Penthorum sedoides* | Ditch-stonecrop | S5 | G5 | L4 |
| *Picea glauca* | White Spruce | S5 | G5 | L3 |
| ***Picea mariana*** | **Black Spruce** | **S5** | **G5** | **L2** |
| ***Pinus resinosa*** | **Red Pine** | **S5** | **G5** | **L2** |
| *Pinus strobus* | Eastern White Pine | S5 | G5 | L4 |
| ***Pogonia ophioglossoides*** | **Rose Pogonia** | **S4S5** | **G5** | **L1** |
| *Polygonatum pubescens* | Downy Solomon's-seal | S5 | G5 | L4 |
| *Polygonum amphibium* | Water Smartweed | S5 | G5 | L4 |
| ***Polygonum sagittatum*** | **Arrow-leaved Tear-thumb** | **S4** | **G5** | **L2** |
| *Polystichum acrostichoides* | Christmas Fern | S5 | G5 | L3 |
| *Pontederia cordata* | Pickerel Weed | S5 | G5 | L2 |
| *Populus grandidentata* | Large-tooth Aspen | S5 | G5 | L4 |
| ***Potamogeton pusillus var. pusillus*** | **Slender Pondweed** | **SU** | **G5T5** | **L1** |

# KENNEDY – MAYFIELD EAST
# (HEART LAKE CONSERVATION AREA)

| | | | | |
|---|---|---|---|---|
| ***Potamogeton epihydrus*** | **Ribbon-leaf Pondweed** | **S4S5** | **G5** | **L2** |
| *Potamogeton natans* | Floating Pondweed | S5 | G5 | L3 |
| ***Potamogeton spirillus*** | **Spiral Pondweed** | **S4S5** | **G5** | **LX** |
| ***Potamogeton zosteriformis*** | **Flatstem Pondweed** | **S5** | **G5** | **L2** |
| *Potentilla palustris* | Swamp Cinquefoil | S5 | G5 | L2 |
| *Prunella vulgaris ssp. lanceolatus* | Lance Self-heal | S5 | G5T5 | L4 |
| *Quercus macrocarpa* | Bur Oak | S5 | G5 | L4 |
| *Quercus rubra* | Northern Red Oak | S5 | G5 | L4 |
| ***Rosa palustris*** | **Swamp Rose** | **S5** | **G5** | **L2** |
| *Rubus pubescens* | Dwarf Red Raspberry | S5 | G5 | L4 |
| *Rudbeckia hirta* | Black-eyed Susan | S5 | G5 | L4 |
| *Rumex orbiculatus* | Water Dock | S4S5 | G5 | L3 |
| *Sagittaria latifolia* | Broadleaf Arrowhead | S5 | G5 | L4 |
| *Salix amygdaloides* | Peach-leaved Willow | S5 | G5 | L4 |
| *Salix bebbiana* | Bebb's Willow | S5 | G5 | L4 |
| *Salix discolor* | Pussy Willow | S5 | G5 | L4 |
| *Salix lucida* | Shining Willow | S5 | G5 | L3 |
| *Salix petiolaris* | Meadow Willow | S5 | G5 | L4 |
| ***Sarracenia purpurea*** | **Northern Pitcher-plant** | **S5** | **G5** | **L1** |
| *Scirpus cyperinus* | Cottongrass Bulrush | S5 | G5 | L3 |
| *Scirpus microcarpus* | Red-tinge Bulrush | S5 | G5 | L4 |
| *Schoenoplectus tabernaemontani* | Soft-stem Bulrush | S5 | G5 | L4 |
| *Sium suave* | Hemlock Water-parsnip | S5 | G5 | L4 |
| *Sparganium eurycarpum* | Large Bur-reed | S5 | G5 | L3 |
| *Spiraea alba* | Narrow-leaved Meadow-sweet | S5 | G5 | L4 |
| *Spirodela polyrrhiza* | Greater Duckweed | S5 | G5 | L3 |
| *Taxus canadensis* | Canadian Yew | S4 | G5 | L3 |
| *Thelypteris palustris* | Marsh Fern | S5 | G5T5 | L4 |
| *Thuja occidentalis* | Eastern White Cedar | S5 | G5 | L4 |
| *Tiarella cordifolia* | Heart-leaved Foam-flower | S5 | G5 | L4 |
| *Triadenum fraseri* | Marsh St. John's-wort | S5 | G5 | L2 |
| *Trientalis borealis ssp. borealis* | Starflower | S5 | G5T5 | L3 |
| *Trillium erectum* | Red Trillium | S5 | G5 | L4 |
| *Trillium grandiflorum* | White Trillium | S5 | G5 | L4 |
| *Tsuga canadensis* | Eastern Hemlock | S5 | G4G5 | L4 |
| *Typha latifolia* | Broad-leaf Cattail | S5 | G5 | L4 |
| ***Vaccinium corymbosum*** | **Highbush Blueberry** | **S4** | **G5** | **L1** |
| ***Vaccinium myrtilloides*** | **Velvetleaf Blueberry** | **S5** | **G5** | **L3** |
| ***Veronica scutellata*** | **Marsh Speedwell** | **S5** | **G5** | **L3** |
| ***Viburnum cassinoides*** | **Northern Wild-raisin** | **S5** | **G5T5** | **L2** |
| *Viburnum cf. trilobum* | Highbush Cranberry | S5 | G5T5 | L2 |
| *Viola blanda* | Sweet White Violet | S4S5 | G4G5 | L3 |
| *Viola canadensis* | Canada Violet | S5 | G5 | L3 |
| ***Viola macloskeyi ssp. pallens*** | **Smooth White Violet** | **S5** | **G5T5** | **L3** |
| *Waldsteinia fragarioides* | Barren-strawberry | S5 | G5 | L4 |
| ***Wolffia borealis*** | **Dotted Watermeal** | **S4S5** | **G5** | **L3** |
| *Wolffia columbiana* | Columbia Watermeal | S4S5 | G5 | L4 |
| ***Woodwardia virginica*** | **Virginia Chainfern** | **S4** | **G5** | **L1** |
| | | | | |

# KENNEDY – MAYFIELD EAST
# (HEART LAKE CONSERVATION AREA)

| **BIRDS** | | | | |
|---|---|---|---|---|
| *Empidonax alnorum* | Alder Flycatcher | S5B | G5 | L4 |
| *Scolopax minor* | American Woodcock | S4B | G5 | L3 |
| *Hirundo rustica* | Barn Swallow | S5B | G5 | L4 |
| *Coccyzus erythropthalmus* | Black-billed Cuckoo | S5B | G5 | L3 |
| *Dendroica virens* | Black-throated Green Warbler | S5B | G5 | L3 |
| *Certhia americana* | Brown Creeper | S5B | G5 | L3 |
| *Toxostoma rufum* | Brown Thrasher | S4B | G5 | L3 |
| *Geothlypis trichas* | Common Yellowthroat | S5B | G5 | L4 |
| *Accipiter cooperii* | Cooper's Hawk | S4B | G5 | L4 |
| *Tyrannus tyrannus* | Eastern Kingbird | S5B | G5 | L4 |
| *Otus asio* | Eastern Screech-owl | S5 | G5 | L4 |
| *Contopus virens* | Eastern Wood-pewee | S4B | G5 | L4 |
| *Dumetella carolinensis* | Gray Catbird | S5B | G5 | L4 |
| *Ardea herodias* | Great Blue Heron | S5B | G5 | L3 |
| *Myiarchus crinitus* | Great Crested Flycatcher | S4B | G5 | L4 |
| *Bubo virginianus* | Great Horned Owl | S5 | G5 | L4 |
| *Picoides villosus* | Hairy Woodpecker | S5 | G5 | L4 |
| *Passerina cyanea* | Indigo Bunting | S4B | G5 | L4 |
| *Empidonax minimus* | Least Flycatcher | S4B | G5 | L4 |
| *Cistothorus palustris* | Marsh Wren | S4B | G5 | L3 |
| *Oporornis philadelphia* | Mourning Warbler | S4B | G5 | L3 |
| *Colaptes auratus* | Northern Flicker | S4B | G5 | L4 |
| *Stelgidopteryx serripennis* | Northern Rough-winged Swallow | S4B | G5 | L4 |
| *Dryocopus pileatus* | Pileated Woodpecker | S5 | G5 | L3 |
| *Dendroica pinus* | Pine Warbler | S5B | G5 | L3 |
| *Melanerpes carolinus* | Red-bellied Woodpecker | S4 | G5 | L4 |
| *Sitta canadensis* | Red-breasted Nuthatch | S5 | G5 | L4 |
| *Vireo olivaceus* | Red-eyed Vireo | S5B | G5 | L4 |
| *Pheucticus ludovicianus* | Rose-breasted Grosbeak | S4B | G5 | L4 |
| *Archilochus colubris* | Ruby-throated Hummingbird | S5B | G5 | L4 |
| *Passerculus sandwichensis* | Savannah Sparrow | S4B | G5 | L4 |
| *Accipiter striatus* | Sharp-shinned Hawk | S5 | G5 | L3 |
| *Porzana carolina* | Sora | S4B | G5 | L3 |
| *Actitis macularius* | Spotted Sandpiper | S5B | G5 | L4 |
| *Melospiza georgiana* | Swamp Sparrow | S5B | G5 | L4 |
| *Tachycineta bicolor* | Tree Swallow | S4B | G5 | L4 |
| *Rallus limicola* | Virginia Rail | S5B | G5 | L3 |
| *Sitta carolinensis* | White-breasted Nuthatch | S5 | G5 | L4 |
| *Meleagris gallopavo* | Wild Turkey | S5 | G5 | L3 |
| *Empidonax traillii* | Willow Flycatcher | S5B | G5 | L4 |
| *Troglodytes troglodytes* | Winter Wren | S5B | G5 | L3 |
| *Aix sponsa* | Wood Duck | S5B | G5 | L3 |
| *Hylocichla mustelina* | Wood Thrush | S4B | G5 | L3 |
| *Sphyrapicus varius* | Yellow-bellied Sapsucker | S5B | G5 | L3 |
| | | | | |
| **HERPETOFAUNA** | | | | |
| *Bufo americanus* | American Toad | S5 | G5 | L4 |
| *Thamnophis sirtalis sirtalis* | Eastern Gartersnake | S5 | G5T5 | L4 |
| *Lampropeltis triangulum triangulum* | Eastern Milksnake | S3 | G5T5 | L3 |

# KENNEDY – MAYFIELD EAST (HEART LAKE CONSERVATION AREA)

| | | | | |
|---|---|---|---|---|
| *Notophthalmus viridescens viridescens* | Eastern Newt | S5 | G5T5 | L2 |
| *Plethodon cinereus* | Eastern Red-backed Salamander | S5 | G5 | L3 |
| *Chelydra serpentina* | Eastern Snapping Turtle | S3 | G5T5 | L2 |
| *Hyla versicolor* | Gray Treefrog | S5 | G5 | L2 |
| *Rana clamitans* | Green Frog | S5 | G5 | L4 |
| *Chrysemys picta marginata* | Midland Painted Turtle | S5 | G5T5 | L3 |
| *Storeria dekayi dekayi* | Northern Brownsnake | SU | G5T5 | L4 |
| *Rana pipiens* | Northern Leopard Frog | S5 | G5 | L3 |
| *Pseudacris crucifer crucifer* | Spring Peeper | S5 | G5 | L2 |
| *Rana sylvatica* | Wood Frog | S5 | G5 | L2 |
| | | | | |
| **MAMMALS** | | | | |
| *Tamias striatus* | Eastern Chipmunk | S5 | G5 | L4 |
| *Sylvilagus floridanus* | Eastern Cottontail | S5 | G5 | L4 |
| *Ondatra zibethicus* | Muskrat | S5 | G5 | L4 |
| *Blarina brevicauda* | Northern Short-tailed Shrew | S5 | G5 | L4 |
| *Tamiasciurus hudsonicus* | Red Squirrel | S5 | G5 | L4 |
| *Condylura cristata* | Star-nosed Mole | S5 | G5 | L3 |
| *Odocoileus virginianus* | White-tailed Deer | S5 | G5 | L4 |
| *Marmota monax* | Woodchuck | S5 | G5 | L4 |

**Site Condition and Disturbances**

Historically, over half of the Brampton Esker was mined for gravel, to the south of Heart Lake Conservation Area. This resulted in the loss of a number of kettle wetlands and bogs to the south, and some impacts within Heart Lake CA (Natural Heritage Information Centre, 2010a).

There has been some water quality deterioration within Heart Lake CA as indicated by algal blooms and an altered plant composition. This may be due to run-off from nearby developed land and/or a large Canada Goose (*Branta canadensis*) population in the area. The kettle lakes are quite susceptible to water quality issues because of their small catchment area and low turnover rates. The bogs which have low nutrient levels are particularly susceptible (*ibid*).

Light to moderate disturbance resulting from trails occurs in some of the forest and cultural communities. Trail disturbance is minimal in the wetland communities. Light flooding is present in a few marsh and swamp communities. Trash/dumping is light to severe throughout with light disturbance being the norm. The more impacted areas are near recreational parts and on the west side of the park adjacent to residential land use. Disturbance from exotic species ranges from light to severe. Invasive species are more extensive at the south end of the site, especially around recreational areas and along the west edge of the area behind residences. Age of the treed communities ranges from pioneer to mature. Mature forest occurs in a band around the east side of Heart Lake, and to the south of Heart Lake. There is a large mature Swamp Maple deciduous swamp in the north end of this natural area.

**Ecological Features and Functions**

Heart Lake Woodlands ESA is included in this area. The wetlands of this natural area are part of the provincially significant Heart Lake Wetland Complex. This area is included in the regionally significant Brampton Buried Esker Earth Science ANSI.

# KENNEDY – MAYFIELD EAST (HEART LAKE CONSERVATION AREA)

With forest communities greater than 2 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.

Heart Lake and Teapot Lake are the only two natural lakes in the Etobicoke Creek watershed. In addition, both are kettle lakes, and one (Teapot) is also a meromictic lake.

By containing a very wide variety of habitat types, this natural area supports biodiversity, particularly for species that require more than one habitat type for their life needs. This natural area contains provincially and regionally rare vegetation communities and thus has the potential to support additional biodiversity above and beyond that found in common community types.

A wetland and a successional area occur to the north across Mayfield Road and also to the east across Heart Lake Road. 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, which all create additional resilience for the ecosystem.

A tributary of Etobicoke Creek passes through this area and thus this natural area supports the connectivity function of Etobicoke Creek and its tributaries which provide a natural habitat corridor that facilitates the cross-regional movement of wildlife along this corridor between major provincial corridors.

This is an area of groundwater recharge (Natural Heritage Information Centre, 2010b).

This area contains six provincially rare vegetation types and three regionally rare vegetation types.

This area provides habitat for four Species At Risk (one plant species, one bird species, two herpetofaunal species).

This area supports three provincially rare species (one plant species, one turtle species, one snake species) and 42 regionally rare vascular plant species.

This natural area supports the breeding of four species of colonial-nesting birds, five species of area-sensitive forest interior birds, two species of waterfowl, three species of wetland nesting birds and three raptor species. The area also supports four species of grassland birds, of which one is area-sensitive.

This area supports amphibian breeding, with eight amphibian species breeding in the wetlands of this site. This area supports turtle 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, Region of Peel Official Plan, and Brampton Official Plan.

As a community that is capable of high mast (nut) production, the Fresh-Moist Oak - Sugar Maple Deciduous Forest (FOD9-1) communities are an importance source of food for a variety of fauna species

Wetlands within this natural area are used regularly by school groups and naturalists for environmental education and nature appreciation.

# KENNEDY – MAYFIELD EAST (HEART LAKE CONSERVATION AREA)

**Opportunities**

This natural area has so many special features that finding a balance between protection of this high-quality area and responding to high interest in recreational use of the area will be an ongoing challenge. It does however, offer good opportunity to dispense educational messaging on environmental issues and protection practices.

Existing linkages to other natural areas should be maintained.

The distribution and extent of invasive species could be mapped and monitored. This is especially important near recreational areas, along trails and behind residences which can serve as their entry points into a natural area. Control of invasive species might be considered.

Parts of this area adjacent to residential developments should be monitored for dumping of yard waste and trash and encroachment into the natural area.

The health of the Butternut tree(s) on site could be assessed by a Butternut Assessor to determine whether any might be candidates for inclusion in the Butternut Recovery Program.

Additional inventories of dragonflies/damselflies, butterflies and small mammals would likely be productive given the high biodiversity of other surveyed taxa.

There is a significant potential for wildlife road mortality as this natural area bordered by busy roads in an increasingly urbanized area. A road ecology assessment of the extent of wildlife mortality on Heart Lake Road is being undertaken by the TRCA in conjunction with the Toronto Zoo, the Etobicoke-Mimico Watershed Alliance and local volunteers in 2011. This project has the potential to reveal if and where measures to mitigate against this mortality might be taken (e.g. constructed crossings and signage), may be warranted.

Since some of the forest communities are mature, they should be checked for characteristics of old growth, which may be considered a significant habitat feature.

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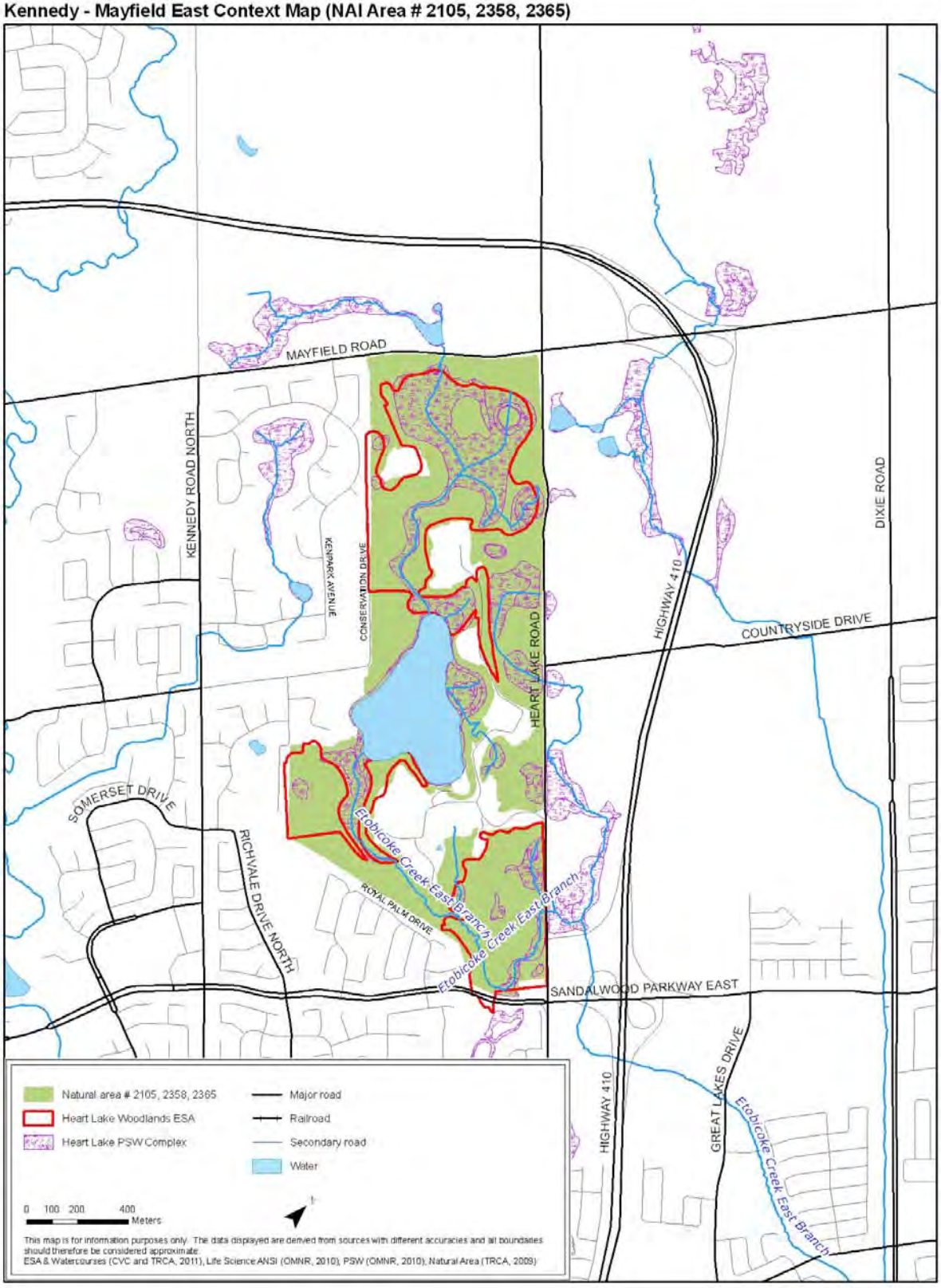
# KENNEDY – MAYFIELD EAST
# (HEART LAKE CONSERVATION AREA)

**Kennedy - Mayfield East Context Map (NAI Area # 2105, 2358, 2365)**

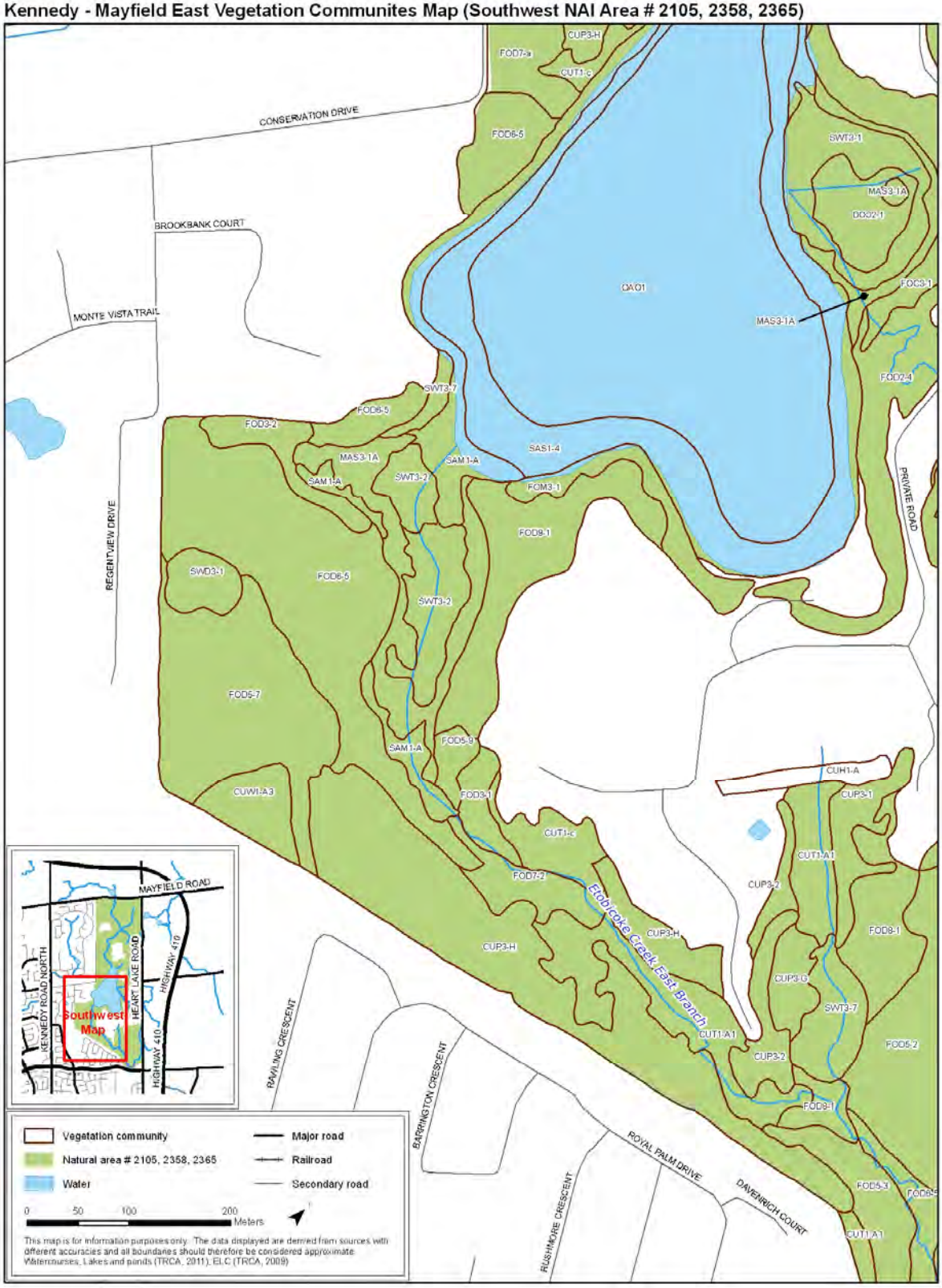


# KENNEDY – MAYFIELD EAST
# (HEART LAKE CONSERVATION AREA)

Kennedy - Mayfield East Vegetation Communites Map (North NAI Area # 2105, 2358, 2365)

# KENNEDY – MAYFIELD EAST
# (HEART LAKE CONSERVATION AREA)

Kennedy - Mayfield East Vegetation Communites Map (Southwest NAI Area # 2105, 2358, 2365)



# KENNEDY – MAYFIELD EAST
# (HEART LAKE CONSERVATION AREA)

Kennedy - Mayfield East Vegetation Communites Map (Southeast NAI Area # 2105, 2358, 2365)