



Ministry of
Natural
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Dear Lin

As requested by Robert Thun of the Town of Oakville Planning Services Department in a telephone conversation of January 28, 2002, the Ministry is now in a position to outline the results and preliminary conclusions of a January 18, 2002 site visit to the "Buttonbush Thicket Swamp". The Ministry would like to thank the Town of Oakville for sending the original field notes prepared by LGL on the Buttonbush Thicket Swamp (letter dated October 23, 2001).

Results of the January 18, 2002 Field Visit.

The field visit was made between 10:30 AM and 1:30 PM on a sunny cold day with a light dusting of snow on the ground. The site visit was carried out by Elizabeth Zajc and myself from the Ministry and Cam Kitchen of Ecoplans on behalf of the property owner Trinison Management Corporation. To assist in the site visit, Colin McGregor, Vice President of Trinison, kindly provided a vegetation map prepared by Cam Kitchen. The map outlines the location of various wetlands and forests on and adjacent to the Trinison property.

Visits were made to 5 of the 6 wetlands on and adjacent to the Trinison property. The largest wetland entirely on the Trinison property is a 3.5 hectare wetland dominated by 2 to 4 m tall shrubs of Eastern Buttonbush (*Cephalanthus occidentalis*) with an understorey of Lake Sedge (*Carex lacustris*) and such secondary species as Canada Blue-joint (*Calamagrostis canadensis*), Tussock Sedge (*Carex stricta*) and Common Cattail (*Typha latifolia*). This central thicket swamp community is surrounded by a deciduous swamp dominated by Silver Maple (*Acer saccharinum*) and probably Swamp White Oak (*Quercus bicolor*) or a hybrid with Bur Oak (*Quercus macrocarpa*). Definitive determination of the Swamp White Oak will have to wait until the growing season. The understorey is dominated by Sensitive Fern (*Onoclea sensibilis*), Tussock Sedge, Lake Sedge and scattered shrubs of Eastern Buttonbush and Narrow-leaved Meadowsweet

(*Spiraea alba*). The eastern portion of the wetland supports a marsh dominated by Common Cattail and Lake Sedge. The wetland supports 6 locally rare species: Marsh Rose (*Rosa palustris*), Eastern Buttonbush, Tufted Loosestrife (*Lysimachia thyrsiflora*), Narrow-leaved Meadowsweet, Tussock Sedge and Swamp White Oak. The wetland has an outflow on the north-central side and a north trending ditch also provides an outlet on the northeast side. Abutting the wetland on the south side and northeast corner are forests dominated by Red Oak with the southernmost portion recently selectively logged. Agricultural fields abut the wetland on the northeast and eastern sides. Recently deposited fill on the west side of the wetland appears to have been put on top of what was another 1.5 hectares of wetland. Removal of this fill back to the original wetland level would improve the ecological health of the wetland.

Another 5 wetlands occur partially on or adjacent to the Trinison Property. In the northeast corner there is a 2 hectare wetland that supports a marsh dominated by Reed Canary Grass (*Phalaris arundinacea*) with scattered Common Cattail. This wetland is connected by a stream and ditch outflowing from the 3.5 hectare wetland to the south. Agricultural fields surround the wetland.

On the southeast side of the Trinison property there are 2 wetlands each under a hectare in size that support a thicket swamp and a deciduous swamp. The thicket swamp is dominated by Eastern Buttonbush with various herbs in the understorey. The swamp is dominated by Swamp White Oak with an understorey of scattered Buttonbush shrubs and a variety of herbs and sedges. These 2 wetlands support 6 locally rare species: Marsh Rose, Eastern Buttonbush, Swamp White Oak, Winterberry (*Ilex verticillata*), Tuckerman's Sedge (*Carex tuckermantii*) and Three-parted Beggar-ticks (*Bidens tripartita*). The two wetlands are surrounded by a forest dominated by Red Oak with scattered White Oak and Red Maple and the occasional White Pine.

A wetland on the west side of the Trinison property about 2 hectares in size supports a deciduous swamp of Hybrid Silver X Red Maple and Bur Oak with scattered shrubs of Blue-beech (*Carpinus caroliniana*), Grey Dogwood (*Cornus foemina*) and European Buckthorn (*Rhamnus cathartica*) and a variety of understorey grasses and herbs.

A 1 hectare wetland abuts the southwest corner of the property at Highway 5. It supports a deciduous swamp. This wetland was not inventoried during the site visit due to a lack of time.

Preliminary Conclusions on the Jan 18, 2002 Field Visit

The 6 wetlands on or adjacent to the Trinison property are connected to each other by agricultural fields, forests and hedgerows, are within 700 metres of each other and are located in a headwater morainal area where wetland complexes can cross watersheds. The 6 wetlands can be considered part of a wetland complex which will be called the Trafalgar Wetland Complex.

A complete evaluation of this wetland complex will have to wait until a field visit by the Ministry during the 2002 growing season.

The Trafalgar Wetland Complex occurs in site district 7E4. The Ministry has used physiography and climate to divide the Province of Ontario into 67 site districts. Site District 7E4 encompasses the north side of Lake Ontario from the Rouge River west to the Niagara Escarpment and south of the Oak Ridges Moraine. It includes all of the City of Toronto, southernmost York Region (Town of Markham and City of Vaughan), southern Peel Region (Mississauga and Brampton) and southeastern Halton Region, including all of the Town of Oakville and the eastern part of the Town of Milton.

Wetlands are considered very rare in site district 7E4, based on the "Ontario Wetland Evaluation System 1994 Southern Manual". In this site district the largest wetlands are restricted to a series of lakeshore marshes. Inland, wetlands are generally smaller and are found scattered on tablelands and in valleys. Wetlands are also very rare in the Town of Oakville covering less than 1% of its lands. The two largest wetlands in the Town of Oakville are the Oakville Creek and Bronte Creek Wetlands along the lakeshore. Both of these wetlands have been evaluated. Inland, there are several series of smaller wetlands associated with the depressions ("kettles") and fluting on the Trafalgar Moraine. The Moraine extends in an east-west line, north of Highway 5 from the Niagara Escarpment at Nelson to Streetsville. The wetlands associated with the Trafalgar Moraine have not yet been evaluated.

The Trafalgar Wetland Complex supports 2 wetland communities that are rare in the Province according to W. Bakowsky 1996 (revised Jan 1 1997), "Natural Heritage Resources of Ontario: Vegetation Communities of Southern Ontario, Ontario Ministry of Natural Resources, Natural Heritage Information Centre". These 2 communities are also considered rare in the Greater Toronto Area and in site district 7E4. They include the Swamp White Oak deciduous swamp and the Eastern Buttonbush thicket swamp. The Eastern Buttonbush thicket swamp on the Trinson Property and the smaller nearby example, are two of only a few Buttonbush thicket swamps known in the Greater Toronto Area and in site district 7E4. The larger Buttonbush thicket swamp on the Trinson Property supports the largest and best example of such a community type in the Greater Toronto Area and in site district 7E4.

The Trafalgar Wetlands also support 9 plant species that are considered rare in site district 7E4, based on the "Distribution and Status of the Vascular Plants of the Greater Toronto Area, Ontario Ministry of Natural Resources, Aurora District" (August 2000 draft). These 9 plant species include Eastern Buttonbush (the largest populations in site district 7E4), Marsh Rose (the largest populations in site district 7E4), Swamp White Oak, Tuckerman's Sedge, Three-parted Beggar-ticks, Winterberry, Tufted Loosestrife, Narrow-leaved Meadowsweet and Tussock Sedge. Additional plant species will also likely be found in the growing season that could not be seen in a winter survey and some of these species may also be locally rare.

Wetlands Elsewhere in the North Oakville Study Area

A preliminary look at aerial photographs beyond the Trinson Property and its environs show at least 20 additional wetlands in the North Oakville study area ranging from under

a hectare to several hectares in size. The wetlands are concentrated in the kettles and fluted depressions on the Trafalgar Moraine. Many of these wetlands have also been identified in the LGL North Oakville Natural Heritage Inventory and Analysis report. They include a locally rare Winterberry thicket swamp supporting locally rare plant species, a 2 ha cattail-sedge marsh supporting waterfowl and amphibian species and a variety of deciduous swamps, thicket swamps and meadow marshes.

The Ministry is willing to do preliminary mapping of wetlands in the north Oakville study area if it could borrow 1:10:000 or 1:8,000 scale spring stereo aerial photography. Mr. Robert Thun, January 28, 2002 telephone conversation, offered to check with the Town, the Region and the Conservation Authority the availability of spring aerial photography. Once all the wetlands have been mapped the Ministry will evaluate these additional wetlands.

Wetland Functions and the Role of Smaller Wetlands

Wetlands are known to serve many important functions. For example, they can be breeding areas for woodland and field amphibians, waterfowl breeding and staging areas, and they can support rare plants, animals and vegetation communities. The ecological health of surrounding field and forest communities is often dependent on their associated wetlands. Wetland species and functions in turn are dependent on the surrounding upland habitats. For example many wetland species such as waterfowl and amphibians require adjacent uplands for feeding or nesting. Woodland frogs and salamanders breed in wetlands but hibernate and feed in the surrounding forests, being able to travel up to 2 kms from their breeding ponds. Wetland frogs such as the Green Frog and Leopard Frog feed in the fields around wetlands. Waterfowl such as Mallard and Blue-winged Teal nest in upland fields up to several hundred metres from a wetland.

Wetlands are sensitive to changes within their watershed. This is particularly the case for wetlands on moraines. For example, kettle wetlands generally have small watersheds and are dependent on surface spring runoff. Because many kettles are isolated and whatever goes in stays in, they are sensitive to changes in water quality/quantity or water frequency.

Wetland size is not necessarily an indicator of significance. Smaller wetlands have been shown to be often more diverse than larger wetlands. Smaller wetlands such as those on the Oak Ridges Moraine are very important as woodland amphibian breeding areas, support a variety of wetland bird species as well as rare vegetation communities and species. Similar small wetlands on the Trafalgar Moraine also provide these functions. For example, the LGL North Oakville report notes that woodland frogs and salamanders such as Northern Spring Peeper, Grey Treefrog, Midland Chorus Frog Wood Frog and Spotted Salamander occur around the wetlands on the Trafalgar Moraine. These wetlands based on the LGL report also support wetland bird species such as Mallard, Virginia Rail, Swamp Sparrow, Willow Flycatcher, Northern Waterthrush, Green-backed Heron, Great Blue Heron, Canada Goose, Wood Duck, Green-winged Teal, American Black Duck and Blue-winged Teal. As noted previously, the Trafalgar Moraine wetlands also support rare wetland plant communities and rare plant species

Possible Additional Life Science ANSIs in the North Oakville Study Area

At the present time the only life science Area of Natural and Scientific Interest (ANSI) identified by the Province in the North Oakville study area is the Oakville or 16-Mile Creek ANSI. The Ministry did detailed fieldwork on this ANSI in 1998 and the results from this work were incorporated into the LGL North Oakville Natural Heritage Inventory and Analysis Report.

While wetland fieldwork is being carried out, the Ministry as a matter of course will assess whether any of the wetlands and surrounding forests in the North Oakville study area warrant a life science ANSI status.

The Ministry uses the site district approach to identify and assess the status of life science ANSIs. The North Oakville study area is in site district 7E4. Life Science ANSIs are selected on the basis of five criteria: representation, diversity, condition, ecological considerations and special features. The major criterion for ANSI selection is representation.

Areas in North Oakville that may warrant ANSI status are some of the kettle wetlands and adjacent forests such as the Buttonbush thicket swamps and Swamp White Oak deciduous swamps in and adjacent to the Trinison property. At the present time, none of the ANSIs identified in site district 7E4 provide representation of Buttonbush thicket swamp or Swamp White Oak deciduous swamp wetland types. These wetlands also support site district rare plant species and wetland communities that fulfill the special features criteria. Some of these special features are not found in the present ANSIs identified in site district 7E4. If based on the Ministry fieldwork some of the wetlands and surrounding forests in North Oakville fulfill the criteria for ANSI selection the Ministry will produce an ANSI summary report and map of the ANSI boundaries. This will be distributed to all landowners, the region of Halton and the Town of Oakville.

If you have any further questions please feel free to call me at (905) 713-7370, or FAX (905) 713-7360 or e-mail: steve.varga@mnr.gov.on.ca

Yours sincerely

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