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# June 2<sup>nd</sup>, 2020

Mayor Smith and Members of Council The Corporation of the Town of Bracebridge 1000 Taylor Court, Bracebridge Ontario, P1L 1R6

Attention: Matt Holmes, Manager of Planning Services

RE: Muskoka Royale Development Inc. Applications for Official Plan Amendment (D09-08/18) and Rezoning (D14-17/18) (the "Applications") implications of additional wildlife and plant species records for the Muskoka Royale College property and adjacent lands.

## **EXECUTIVE SUMMARY**

Dougan & Associates was retained by the South Bracebridge Environmental Protection Group to i) collate species records of wildlife and plants for the lands on and adjacent to the Muskoka Royale College property (subject lands) that have been documented from various sources, ii) summarize the species occurrences records, and iii) comment on the potential implications of the findings with regard to environmental policies, in particular wetland status and policy.

According to the sources of information reviewed, 204 species of wildlife have been identified from the subject lands. Of these, four reptile and 14 bird species are considered to be at risk by either the provincial or federal government. The records indicate that the subject lands also support several species considered 'rare' in the Province, and rare or uncommon in the District of Muskoka.

The records that represent species of conservation concern have implications for the determination of significance of natural features within the subject lands, including wetland significance. Of primary importance are the 2019 records for Blanding's Turtle provided by the Province's Natural Heritage Information Centre (NHIC). The occurrence of this species would indicate that either "Reproductive Habitat for an Endangered or Threatened Species" is present in the area and/or "Migration, Feeding, or Hibernation Habitat for an Endangered or Threatened Species" is present. Where these habitat types are associated with a wetland, they result in a high score (250 points and 150 points, respectively) under the Special Features section of the Ontario Wetland Evaluation System (OWES), Northern Manual (OMNR, 2014).

The sources of information reviewed illustrate that the Muskoka Royale College property and adjacent lands, including Henry Marsh, wetlands within the connected Beaumont Wetland complex, and the adjacent lands support a rich diversity of wildlife species, including a number of provincially and federally designated "Species at Risk". The area also supports several species considered 'rare' in the Province, and rare or uncommon in Muskoka District. Some of these significant species were considered year-round residents or breeding species, while many others were, based on their associated dates, thought to be migrants passing through the area.

To be considered Provincially Significant, a wetland and/or wetland complex requires only 200 points in either of the Biological or Special Features Components of the OWES (OMNR, 2014). Therefore, the results from this background review strongly indicate that if an evaluation of the wetlands associated with subject lands, including the various wetland features present, Henry Marsh, and the broader Beaumont Wetland Complex was undertaken, they would score a sufficient number of points to be designated as a Provincially Significant Wetland Complex.

## INTRODUCTION

The enclosed provides D&A's review and summary of the wildlife and plant species records compiled as part of a background review of various sources for the Muskoka Royale College property and adjacent lands. This review included multiple sources of information, including species lists provided by the Muskoka Conservancy, Ontario Reptile and Amphibian Atlas, eBird, iNaturalist, Natural Heritage Information Centre (NHIC), as well as incidental observations made by individuals from the Muskoka Field Naturalists, the Muskoka Conservancy, and the South Bracebridge Environmental Protection Group.

#### **KEY FINDINGS**

Seven sources of information formed the basis of this summary of wildlife and plant records from the Muskoka Royale College property and adjacent lands. This included the following:

- 1. Bird observations from the Henry Marsh eBird hotspot from between June 2002 and April 2020 (eBird, 2020)
- 2. Bert Cross Family Nature Reserve Species List prepared by A. Rusak (Muskoka Conservancy, 2020). The 10.5-acre nature reserve is directly adjacent to Henry Marsh.
- 3. iNaturalist (https://inaturalist.ca/) observations
- 4. Appendix A (Description of Henry Marsh and Associated Species) in Margaret McLaren letter to the Town of Bracebridge re: Muskoka Royale Planning Application, dated March 31, 2019. Appendix A prepared by David Goodyear, Muskoka Field Naturalists (Muskoka Conservancy, 2019).
- 5. Data from the Ontario Reptile and Amphibian Atlas (Ontario Nature, 2019)
- 6. Verbal reporting of species records from Sandy Gemmiti (Data Integration Analysis at the Natural Heritage Information Centre)
- 7. Incidental observations from various community members

According to these sources of information, 204 species of wildlife have been identified from Henry Marsh and adjacent lands in Bracebridge. Table 1 lists the number of wildlife species/wildlife groups documented. 'Species at Risk' (SAR) (i.e. those species designated "Special Concern", "Threatened" or "Endangered" in Ontario (Government of Ontario, 2007; OMECP, 2020) or Canada (Government of Canada, 2002) or species considered to be 'provincially rare' (i.e. a subnational conservation status of S1, S2 or S3)(NHIC, 2020) are shown in parenthesis.

Table 1. Numbers of wildlife species documented from Henry Marsh and Adjacent Lands between June 2002 and April 2020.

	Julie 2002 and April 2020.								
	Total # of Unique Species	Incidental Obs. 2020	NHIC Species Records (S. Gemmiti, 2020)	Ontario Reptile and Amphibian Atlas (Ontario Nature, 2019)	Appendix A: Description of Henry Marsh & assoc. species (Muskoka Conservancy, 2019)	iNaturalist Data (iNaturalist, 2020)	Bert Cross Family Nature N.R. Species List (Muskoka Conservancy, 2020)	eBird Checklist for Henry Marsh (eBird, 2020)	
Dragonflies	5 (1)		1 (1)			4	2		
Butterflies	5					3	4		
Moths	5					4	3		
Bees	1					1	1		
Amphibians	5			4		1	4		
Reptiles	6 (4)	2 (2)	4 (4)	4 (3)	1 (1)	2	1		
Birds	174 (14)		3 (3)		9 (9)	14 (1)	86 (1)	171 (12)	
Mammals	3	3							
Total	204 (19)	4 (1)	8 (8)	8 (3)	10 (10)	29 (1)	101 (1)	171 (12)	

The following are summaries of each of the data sources.

#### **eBird Checklist for Henry Marsh Summary**

- One hundred and sixty-nine (169) bird species have been recorded from the Henry Marsh eBird "hotspot" between June 2002 and April 2020. This is based on 484 checklists submitted to eBird (eBird, 2020).
- Two (2) additional unconfirmed species, different than the 169, were also documented during the same period.
- Therefore, a total of 171 unique bird species were reported from Henry Marsh between April 2003 and March 2020.
- Based on the associated date information, it was determined that 23 of the 171 species were either year-round residents or species that likely bred within or adjacent to Henry Marsh; the remaining 148 species were likely migrants, or could not be distinguished from migrants, due to the date they were recorded.
- Four (4) of the 23 species interpreted to be residents and/or species with suitable breeding habitat in the area are "Species at Risk" (SAR) (Government of Canada, 2002; Government of Ontario, 2007, OMECP, 2020):
  - o Barn Swallow (Threatened in Ontario and Canada)
    - Most recently, two birds were reported on May 30, 2019. No additional comments were provided.
  - Golden-winged Warbler (Special Concern in Ontario and Threatened in Canada)
    - Three (3) birds were reported on June 4, 2010. The observer noted: "all singing at same time from 3 different spots…at west side and at east side of marsh and one west of trail in shrubs in open area".
  - Least Bittern (Threatened in Ontario and Canada)
    - Two (2) birds were observed together on June 26, 2002. The observer noted that they could be a breeding pair.
  - Wood Thrush (Special Concern in Ontario and Threatened in Canada)

- This species was most recently documented on June 25, 2019, "from the parking lot"
- Eight (8) of the 23 are considered "priority species" for conservation in Bird Conservation Region (BCR) 12: Boreal Hardwood Transition (Environment Canada, 2014). These included:
  - o American Woodcock
  - Barn Swallow
  - o Golden-winged Warbler
  - o Least Bittern
  - Ruffed Grouse
  - o Sedge Wren
  - o Tree Swallow
  - o Wood Thrush
- In addition, four (4) of the 23 species are either considered rare or uncommon in the District of Muskoka (Bowles *et al.*, 1995):
  - Least Bittern (rare)
  - Long-eared Owl (rare)
  - Sedge Wren (rare)
  - o Sora (uncommon)
  - Willow Flycatcher (rare)
- Finally, five (5) of the 23 species are considered "area-sensitive". Area-sensitive species require larger areas of suitable habitat in order to sustain their populations and are therefore considered more sensitive to habitat loss and fragmentation (OMNR, 2000). The five area-sensitive species included:
  - Barred Owl
  - Hairy Woodpecker
  - Least Bittern
  - o Ovenbird
  - Pileated Woodpecker
- Of the non-breeding or migrant species reported from Henry Marsh, eight were SAR (Government of Canada, 2002; Government of Ontario, 2007, OMECP, 2020) or provincially 'rare' (i.e. species with a provincial conservation rank of S1 to S3) (NHIC, 2020):
  - o Bald Eagle (Special Concern in Ontario & S4B and S2 in winter)
  - Bank Swallow (Threatened in Ontario and Canada)
  - o Canada Warbler (Special Concern in Ontario and Threatened in Canada)
  - o Common Nighthawk (Special Concern in Ontario and Threatened in Canada)
  - o Eastern Wood-Pewee (Special Concern in Ontario and Canada)
  - Great Egret (S2B)
  - o Olive-sided Flycatcher (Special Concern in Ontario and Threatened in Canada)
  - o Rusty Blackbird (Special Concern in Canada, not Ontario)

# Bert Cross Family Nature Reserve (adjacent to Henry Marsh) Species List Summary

- One-hundred and thirteen (113) species of flora and fauna were included in the Species List (Muskoka Conservancy, 2020). It is noted that the list doesn't include Henry Marsh proper, just the 10.5-acre Muskoka Conservancy acquired in August 2017.
- Eight-six (86) species of birds were included in the Species List.

- However, since the list did not include any additional information (e.g. dates of observations) other than the species names, this data set cannot be used to confirm resident species and/or those documented during the breeding season.
- According to the correspondence associated with the list, all Species at Risk were purposely
  removed from the list for reasons of confidentiality. Nevertheless, one of the 86 species listed
  was a SAR: Rusty Blackbird. Although Rusty Blackbirds have been known to breed as far south
  as Bracebridge (Cadman et al., 2007), it would be considered a rare occurrence. For this reason,
  it is likely that this observation pertained to a migrant bird passing through the area.
- Fifteen (15) other species of wildlife were recorded (incl. dragonflies, butterflies, moths, bees, amphibians and reptiles), none of which are SAR (Government of Canada, 2002; Government of Ontario, 2007, OMECP, 2020), provincially 'rare' (NHIC, 2020), or rare or uncommon in Muskoka District (Bowles et al., 1995).
- In addition, twelve (12) species of plants were also included on the list, again, none of which are SAR (Government of Canada, 2002; Government of Ontario, 2007, OMECP, 2020), provincially 'rare' (NHIC, 2020), or rare or uncommon in Muskoka District (Bowles *et al.*, 1995).

## **iNaturalist Data Summary**

- Forty-four (44) species of plants & animals were on file in the iNaturalist database for the area
  roughly bounded by Stephens Bay Road to the west, Beaumont Drive to the north, the trail/
  clearing that runs north-south (adjacent to the stormwater management ponds) to the east,
  and the north edge of the Muskoka Royale College Study Area to the south (iNaturalist, 2020).
- This included: four (4) dragonfly species, five (5) butterfly species, four (4) moth species, one (1) bee species, one (1) amphibian species, two (2) reptile species, fourteen (14) bird species and thirteen (13) plant species.
- Of the bird species reported from this area, one was SAR (Government of Canada, 2002; Government of Ontario, 2007, OMECP, 2020): Rusty Blackbird (Special Concern in Canada, not Ontario). Based on the September 30, 2019 date, it was determined to be a migrant.
- A single record exists for a potentially regionally uncommon plant species (Bowles et al., 1995),
   Caulophyllum thalictroides var. thalictroides (Blue Cohosh), however the record on iNaturalist is only identified to genus level.

# Appendix A (Description of Henry Marsh and associated species) Summary

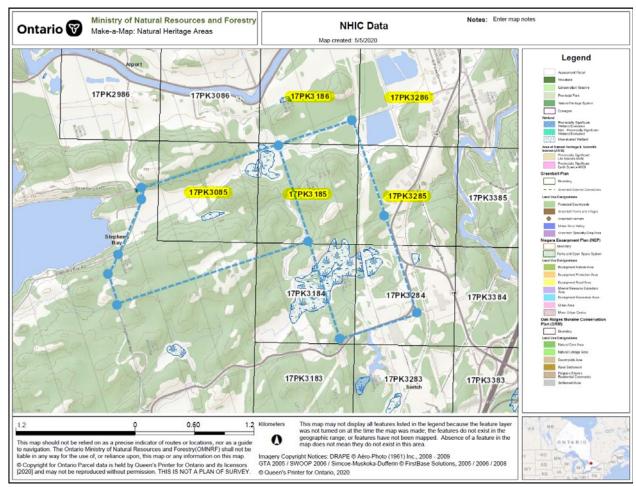
- Ten (10) wildlife Species at Risk (SAR) were highlighted in the brief description of Henry Marsh (Muskoka Conservancy, 2019). This included one reptile and nine bird species.
- While detailed information regarding these observations (e.g. dates and number of individuals recorded) was not provided in the summary, they were described as using the marsh as "a feeding, migratory staging, roosting or breeding site." The 10 wildlife SAR included:
  - Eastern Hog-nosed Snake (Threatened in Ontario and Canada; S3)
  - Bank Swallow (Threatened in Ontario and Canada)
  - o Barn Swallow (Threatened in Ontario and Canada)
  - o Canada Warbler (Special Concern in Ontario and Threatened in Canada)
  - o Eastern Wood-Pewee (Special Concern in Ontario and Canada)
  - o Golden-winged Warbler (Special Concern in Ontario and Threatened in Canada)
  - Least Bittern (Threatened in Ontario and Canada)
  - Red-shouldered Hawk (Special Concern in Canada and Not at Risk in Ontario)
  - o Rusty Blackbird (Special Concern in Canada, not Ontario)
  - o Wood Thrush (Special Concern in Ontario and Threatened in Canada)

# **Ontario Reptile and Amphibian Atlas Data Summary**

- Twenty-six (26) individual amphibian and reptile observations were on file with the Ontario Reptile and Amphibian Atlas for the lands bordered by Stephens Bay Road (west), Beaumont Drive (north), Muskoka Beach Road (south), and Hwy 118 (east) in the Town of Bracebridge, District of Muskoka. (Ontario Nature, 2019).
- This included four species of amphibians and four species of reptiles.
- According to Figure 1 (*i.e.* the Location Plan) of the Environmental Impact Study for Muskoka Royale College (Michalski Nielsen Assoc. Ltd., 2018), none of the 26 observations were recorded from within the Study Area. However, two of the observations were present with the "Balance of Lands". Both observations pertained to Midland Painted Turtles. The remainder of the observations were in close proximity to the Study Area.
- Three (3) of the eight species on file are SAR (Government of Canada, 2002; Government of Ontario, 2007; OMECP, 2020) or considered provincially 'rare' (NHIC, 2020):
  - Eastern Hog-nosed Snake (Threatened in Ontario and Canada; S3)
    - A single individual was reported on April 16, 2010 north of the Study Area. According to Rowell (2012), reported observations in Ontario suggest that this species generally emerges in mid to late-April. Therefore, the April 16<sup>th</sup> date indicates it hibernated nearby. Rowell (2012) also indicates that "Commensurate with their high levels of activity, Eastern Hog-nosed Snakes often utilize very large active ranges. At Wasaga Beach Provincial Park, ranges in excess of 100 ha have been documented (Cunningham 2004). In Parry Sound District, range lengths of between 116 and 3,034 (mean 1,877) metres and 1,241 and 4,971 (mean 2,484) metres have been observed in female and male snakes respectively (Rouse 2006)." Given this species' ability to utilize a wide variety of habitat types, such as open pine, deciduous and mixed forests, oak savannah, open fields, meadows and sandy shorelines (Rowell, 2012), this suggests that this species could be present within the Study Area.
  - o Eastern Milksnake (Special Concern in Canada, Not at Risk in Ontario; S4)
    - A single individual was reported on September 26, 2017 north of the "Balance of Lands". Given that reported observations in Ontario suggest that Eastern Milksnakes remain active until mid-October (Rowell, 2012), the late September date suggests it was going to hibernate nearby.
    - Eastern Milksnake is also considered "uncommon" in Muskoka District (Bowles et al., 1995)
  - Snapping Turtle (Special Concern in Ontario and Canada; S3)
    - Snapping Turtles were reported on 5 separate occasions between May 2016 and August 2018 from locations north, east and south of the Study Area.
    - The May observation pertained to a mating pair. Three additional observations occurred in the middle of June. Two of those documented an intact nest suggesting they were actively nesting. The third was observed dead on the road and was probably a female searching for/leaving nesting habitat. The August observation was of an individual basking in a pond.
    - Given these recent, nearby observations, the presence of large areas of wetland habitat and watercourses within the Study Area, as well as its location adjacent to Stephens Bay, suggest that this species is also likely a resident within the Study Area and "Balance of Lands".

# **Natural Heritage Information Centre (NHIC) Species Summary**

Sandy Gemmiti (Data Integration Analyst at NHIC) relayed Species at Risk and provincially 'rare' species records to the South Bracebridge Environmental Protection Group (SBEPG) for the five (5) 1 km x 1 km Universal Transverse Mercator (UTM) grid squares highlighted in yellow on Map 1 below: 17PK3186, 17PK3185, 17PK3286, 17PK3285, and 17PK3085.



Map 1. NHIC data squares overlapping the Muskoka Royale College study area.

- In total, three (3) turtle species, one (1) snake species, one (1) dragonfly species, and three (3) bird species were reported across the five squares. In addition, one (1) restricted species was reported in each square.
- The species documented included the following. Observation dates are in parenthesis.
  - Blanding's Turtle (Threatened in Ontario and Canada; S3): May 21, 2019; June 19, 2019, June 21, 2019 (x2); September 1, 2019.
  - o Bobolink (Threatened in Ontario and Canada): May 21, 2019 (x3); May 23, 2019 (x2).
  - o Eastern Hog-nosed Snake (Threatened in Ontario and Canada; S3)
  - Eastern Meadowlark (Threatened in Ontario and Canada); April 13, 2019 (x3); May 6, 2019 (x2).
  - o Eastern Milksnake (Special Concern in Canada, Not at Risk in Ontario): June 22, 2019.

- Midland Painted Turtle (Not at Risk in Ontario or Canada but designated Special Concern by the Committee on the Status of Endangered Wildlife in Canada [COSEWIC]): June 19, 2019 (x2); August 17, 2019; September 1, 2019.
- Snapping Turtle (Special Concern in Ontario and Canada; S3): May 5, 1992; June 22, 2019;
   September 25, 2019 (x2).
- o Variegated Meadowhawk (Not at Risk in Ontario or Canada; S3); September 14, 2019.
- Wood Thrush (Special Concern in Ontario and Threatened in Canada): June 28, 2003; May 29, 2017 (x3).
- o 1 Restricted Species: April 27, 2008, July 12, 2013; August 23, 2014 (x2); May 20, 2015;
- All of these species automatically receive some form of legal protection in Ontario or Canada (Government of Ontario, 2007; OMECP, 2020; NHIC, 2020; Government of Canada, 2002) with the exception of Midland Painted Turtle. Although Midland Painted Turtle has been designated Special Concern in Canada by COSEWIC, it hasn't been added to the 'List of Species at Risk' yet, i.e. the federal Species at Risk Act.
- Although Bobolink and Eastern Meadowlark have been documented from all five 1 km x 1 km grid squares, there doesn't appear to be any suitable breeding habitat within the proposed Muskoka Royale College Study Area. However, some potentially suitable breeding exists within the extreme southeast corner of the Muskoka Royale College "Balance of Lands", adjacent to Muskoka Beach Road.
- Correspondences with NHIC confirmed that there are records of Eastern Hog-nosed Snake (restricted species) on or directly adjacent to the site as recently as 2015. Given the wide distribution of records, it seems reasonable to conclude that the species occurs in the study area and should be adequately addressed in the EIS, likely with additional field survey work in support, especially as it applies to the mitigation of impacts.

#### **Incidental Observations Summary**

- Various people have contributed wildlife sightings from the area.
- Five species were documented: two species of turtle and three species of mammal.
- One species, Blanding's Turtle, is designated Threatened in Ontario and Canada and is provincially 'rare' (Government of Ontario, 2007; OMECP, 2020; Government of Canada, 2002; NHIC, 2020).
  - On May 7, 2016, D. Goodyear found a female Blanding's Turtle on the trail on the way to Henry Marsh (see photo below). He stated that it was the first one he had seen there.



- o Then on May 8, 2016, D. Goodyear found a male Blanding's Turtle at the Bracebridge Sewage Lagoons, about 1 km ENE of Henry Marsh.
- The May 7, 2016 dates is considered too early in the season to represent an individual actively nesting. In Ontario, this species typically nests between the last week of May and the first week of July, with peak activity throughout June (Environment Canada, 2016).
- According to the "General Habitat Description for the Blanding's Turtle (Emydoidea blandingii)" three categories of Blanding's Turtle habitat are afforded protection (OMNR, 2013). Category 1 habitat includes nest sites and overwintering sites and the area within 30 m of each. These sites are considered to have the lowest tolerance to alteration. Category 2 habitat includes the wetland complex that extends up to 2 km from an occurrence and 30 m around those suitable wetlands/waterbodies. These habitats are considered to have a moderate level of tolerance to alteration before their function is compromised. Category 3 habitat includes the area between 30 m and 250 m around suitable Category 2 wetlands/waterbodies. These habitats are considered to have the highest tolerance to alteration. Blanding's Turtles depend on these areas as movement corridors between wetlands. The General Habitat Description also considers "Small-scale alterations to land cover that do not impede overland movements or impair nesting sites" to be "generally compatible" in Blanding's Turtle Habitat.
- One species, Midland Painted Turtle, is designated Special Concern in Canada (<a href="https://wildlife-species.canada.ca/species-risk-registry/species/speciesDetails-e.cfm?sid=1403">https://wildlife-species.canada.ca/species-risk-registry/species/speciesDetails-e.cfm?sid=1403</a>).
  - On May 2, 2020, 3 Midland Painted Turtles were observed at Henry Marsh (see photo below).



#### **CONCLUSIONS**

The sources of information reviewed illustrate that the Muskoka Royale College property and adjacent lands, including Henry Marsh, wetlands within the connected Beaumont Wetland complex, and the adjacent lands support a rich diversity of wildlife species, including a number of provincially and federally designated "Species at Risk". The area also supports several species considered 'rare' in the Province, and rare or uncommon in Muskoka District. Some of these significant species were considered year-round residents or breeding species, while many others were, based on their associated dates, thought to be migrants passing through the area.

At this current time, the results from this background review have not been used to complete a full assessment of significance that relates the species records to specific policy interpretations for this site. Notwithstanding, many of the species that have been documented would have important policy implications related to the determination of significance status of natural features that are present in the area. In particular:

Special Concern Species at Risk and those that are identified as Regionally rare would have implications for determining the presence and extent of various types of Significant Wildlife Habitat.

Records for Endangered or Threatened Species at Risk would have important implications for permits required by the Ministry of the Environment, Conservation, and Parks.

All species of conservation concern would have implications for the determination of wetland significance. Of primary importance are the 2019 records for Blanding's Turtle provided by the NHIC, which would indicate that either "Reproductive Habitat for an Endangered or Threatened Species" is present in the area and/or "Migration, Feeding, or Hibernation Habitat for an Endangered or Threatened Species" is present. Where these habitat types are associated with a wetland, they result in a high score (250 points and 150 points, respectively) under the Special Features section of the Ontario Wetland Evaluation System (OWES), Northern Manual (OMNR, 2014). To be considered Provincially Significant, a wetland and/or wetland complex is required to score 600 points under all components of the OWES system, or 200 points in either of the Biological or Special Features Components of the system (OMNR, 2014). Therefore, the results from this background review strongly indicate that if an evaluation of the wetlands associated with the Muskoka Royale College property, including Henry Marsh and the broader Beaumont Wetland Complex was undertaken using the OWES, they would score a sufficient number of points under the Special Features Component section to be designated as a Provincially Significant Wetland.

We welcome any questions or clarifications.

Sincerely,

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Karl Konze

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