

# **Natural Features of the Kawartha Nordic Ski Club Property**

Kawartha Nordic Ski Club Inc. Property  
Part Lots 12, Concession 6, and Part Lots 11 and 12, Concession 7  
Geographic Township of Burleigh,  
County of Peterborough

Prepared for  
The Kawartha Nordic Ski Club Inc. (KNSC)

**Prepared By:**  
**KNSC Natural Heritage Committee**

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## Background Information

This report was generated with direction from the Board of Directors who approved the Terms of Reference for the KNSC Natural Heritage Committee in July 2020 as stated here:

*“The Kawartha Nordic Natural Heritage Committee (the Committee) shall work towards building a Natural Heritage Inventory and recommendations for Land Stewardship for the Kawartha Nordic Ski Club Property and Crown lands used by Kawartha Nordic . The initial focus will be on the Kawartha Nordic property.”*

Extensive field work was conducted by members of the committee and a report prepared by Mike McMurtry and David Bell. The draft report was presented to the Board of Directors in October, 2021. The final report - including new mapping products - is now complete and the KNSC Natural Heritage Committee would be pleased to present it at the 2023 AGM.

## Executive Summary

The Kawartha Nordic Ski Club Inc. (KNSC) owns and manages a 345-acre property along Hwy. 28, north of Eel’s Creek. This report is the product of over 33 field days of volunteer effort, over 28 bird counts, the compilation of roughly **840 species of flora and fauna from iNaturalist** and the confirmed documentation of **12 Species at Risk\*** supported by the property. **Detailed maps of wetlands and ecological communities documented via field work are shown in Figures 2 & 3, contained in this report.**

**The KNSC property is a natural gem made up of forests, wetlands, open rock barrens and meadows. Surveys for this project found that the property supports 356 species of flora and 595 species of wildlife!**

When compared with other properties in the area, these numbers are staggering. The nearby Ingleton-Wells property, for instance, hosts 96 documented plants and 30 animals, whereas Big/Boyd Island supports 361 plants and 68 animals (KLT assessment/inventory reports, personal communication, Thom Unrau, Aug. 2021).

*\*SAR in this count are: Chorus Frog, Snapping Turtle, Midland Painted Turtle, Eastern Wood Pewee, Nighthawk, Black Ash, Barn Swallow, Bald Eagle, Canada Warbler, Wood Thrush, Evening Grosbeak, Monarch Butterfly*

While it is recognized that survey efforts at the above-noted comparison properties varied from the intense survey efforts at KNSC, the results are still remarkable. Owing to this species diversity and the property's relative lack of human disturbance, it is likely that almost all the pre-settlement complement of plants and animals are present.



**Let's begin with the forests.** The forests of the KNSC are comprised of mixed and deciduous tree species, and though there has been logging on the property, there are magnificent older specimens of White Oak, White Ash, Silver Maple, Sugar Maple & Eastern Hemlock.

The KNSC forests are connected to large areas of Crown Land including the Peterborough Crown Game Preserve, Sharpe Bay Fen Conservation Reserve and the Kawartha Highlands Provincial Signature Park. These connections provide movement corridors for wildlife and provide habitat for 'deep woods' or area-sensitive forest species that require extensive forested areas. Woodland area-sensitive birds such as the Ovenbird, Scarlet Tanager and Wood Thrush have been documented at KNSC, and woodland birds of prey (raptors) including Broad-winged Hawk, and Barred Owl nest in KNSC's forests. These species only occur when large woodlands predominate.

The property also contains a rare forest type: one forest stand ('w6' from the Forest Mgmt. Plan) is made up of 18% white oak trees, which is considered rare in this ecoregion. Both White and Red Oaks produce acorns which function as energy-rich winter foods for wildlife. Forests with Red Oaks that produce acorns in quantity are called 'mast producing areas' and are important to wildlife winter survival. Terrestrial Community 11, dominated by Red Oak, is one such important area at KNSC. Finally, the property provides habitat for Ontario's Endangered Black Ash tree, found in forested wetlands. Black ash is a species important to indigenous culture for basket making.



**Ecologically speaking, the KNSC property is diverse! In addition to the forested areas there are large and varied wetlands which store carbon and filter local water. Upland meadows create gaps in the canopy and open rock barrens provide yet another type of habitat.**



**Wetlands:** The size and natural condition of the wetlands at KNSC suggests they would be designated as Provincially Significant, were they formally evaluated via the Ontario Wetland Evaluation System (OWES).

These wetlands provide amphibian breeding habitat, and observations (in W01 & W11) of both Midland Painted Turtles and Snapping Turtles on the property suggest that KNSC provides significant turtle overwintering areas. Outstanding examples of wetland types (those with the least disturbance based on floristic quality) are shown below.

**High Ranking Wetland Types and Sites: Floristic Quality Assessment Scores  $\geq 5.0^*$**

Community Type	Wetland Sites	Details
Community 5	W02, 04, 05, 06, 10	Organic meadow marsh, high species diversity
Community 7	W03	Organic thicket swamp
Community 8	W04 & 06	Open water marsh with organic soils
Community 9	W17	Intolerant hardwood swamp with Black Ash
Community 18	W11	Open water marsh with mineral soil

*\*Analysis based on Mean Coefficient of Conservatism scores, Native & Non-Native Species.*

In addition, fish habitat is found in Wetlands 01, 10 & 11, and fishless ephemeral wetlands (vernal pools) on the property likely provide habitat for amphibians such as salamanders, which have yet to be documented on the property.



**Uplands:** Other habitats on the property include open rock barrens and meadows. Of the upland areas, those with the best condition according to the floristic quality analysis are shown below.

**High Ranking Upland Sites: Floristic Quality Assessment Scores  $>3.8^*$**

Community Type	Upland Site Details
Community 3	Moist Eastern Hemlock Eastern White Cedar forest
Community 12	Dry, Sandy Red Pine – White Pine Conifer forest
Community 15	American Beech, Sugar Maple, Basswood, Red Oak forest

*\*Analysis based on Mean Coefficient of Conservatism scores, Native & Non-Native Species.*



**Species At Risk:** Natural heritage assessments are often the first exercises in documenting special features and compiling nature observations on a property. In the case of the KNSC, the work produced via this report has brought to light the property’s importance in providing **habitat for 12 species at-risk as well as confirmed and candidate significant wildlife habitat.** Additional field efforts are likely to uncover more at-risk species and significant wildlife habitat (which is protected through Provincial policy).

**KNSC Lands are Provincially Important! Field work at the KNSC found both rare species and Provincially significant habitats. Some highlights:**

- **at-risk Snapping Turtles and Chorus Frogs**
- **rare White Oak forests**
- **endangered Black Ash trees**
- **at-risk birds including Evening Grosbeak and Canada Warbler**
- **endangered Monarch butterfly, and**
- **Broad-winged Hawk and Barred Owl nesting sites.**

The key findings of this report, as they relate to Provincial designations, protections and species-at-risk observations are listed in the following table.

**Provincially Designated Species and Habitats at KNSC**

Designation	Site ID	Details / Information Sources
SWH – Turtle Wintering Areas	W01 & W11	Documented presence of Midland Painted and Snapping Turtles
SWH – Mast Producing Area	C11	Red Oak dominated forest community
SWH - Rare Forest Type	C02	Forest Management Plan shows one stand ('w6') with 18% white oak. This aligns with Community 02.
SWH – Woodland Raptor Nesting		Broad-winged Hawk & Barred Owl nesting per Ontario Breeding Bird Atlas

SWH: Habitat for Species of Special Concern		<b>Confirmed on site (subnational rank):</b> Bald Eagle (S2N, S5B) Canada Warbler (S4B) Common Nighthawk (S4B) Eastern Wood Pewee (S4B) Monarch butterfly (S2N, S4B) Snapping Turtle (S4) Wood Thrush (S4B)
Federal SAR: Western Chorus Frog (THR), Evening Grosbeak & Midland Painted Turtle (SC)		<b>Confirmed on site.</b> Species designated by COSEWIC
Habitat of SAR Designated as THR or END: Black Ash tree, Barn Swallow	C19 (Black Ash)	<b>Both confirmed on site.</b> Black Ash exists in C9, C14 & C19, but is the dominant overstory in C19. Swallow nesting habitat to be confirmed.
Habitat of SAR Designated as THR or END: Bobolink, Meadowlark, Cerulean Warbler, Golden Eagle		<b>Species observed on site but with unsuitable or marginal breeding habitat.</b> Breeding or foraging habitat is required for SWH designation.
Potential SAR Habitat		Studies needed to confirm the following species given that suitable breeding habitat/growing conditions exist: Eastern Whip-poor-will, Spotted Turtle, American Ginseng, Eastern Hog-nosed Snake, Blanding's Turtle.
Fish Habitat	W01 W10 W11	Baitfish. Protected waters and connecting waterways (Fisheries Act)



**Human Impacts:** The trails, roads and landscaping activities on the property have brought with them several non-native species that have impacted the condition of adjacent ecological communities. That said, the overall condition of most communities, especially the wetland communities, is very good.

The Natural Features report is presented in the following pages, with more details on the field work, data compilation and analysis of the ecological features of the KNSC.

**In conclusion, the KNSC property supports a variety of habitat types in excellent condition and these large, natural, flourishing systems support flora and fauna, including several at-risk species.**

**Using this report as a springboard, the KNSC could consider creating 'zones' of high sensitivity for wildlife, and identify 'zones' of lower sensitivity, so that human management of the property could best support and celebrate the natural heritage values by not encroaching on the most valuable assets of the land.**

**Building on this report, KNSC could consider engagement with tax exemption programs (managed forests and conservation lands) and partnerships to help further evaluate the area's rich natural heritage features. Partnerships with Kawartha Land Trust's *Partners in Conservation* program as well as the Peterborough Field Naturalists and post-secondary institutions could facilitate the completion of additional studies and inventory work.**