Muskoka Landscape and its Habitat Types

Branched Bartonia
Threatened Species

BEACON ENVIRONMENTAL

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Presentation Outline

- Living in Muskoka – wow are we lucky!
- Some history on our Landscape
- Habitat Types – relate to SAR
- Forests and Rock Barrens
- Wetlands and Shorelines
- Habitat Mosaics - Stewardship

Living in Muskoka

Voted best summer trip destination – 2011

-people come here for the beauty and diversity of our landscape!

"The 2,500-square-mile natural playground includes 8,699 miles of shoreline; .....countless waterfalls and lakes bordered by the granite peaks of Algonquin Provincial Park to the east and the 30,000 islands of Georgian Bay Islands National Park to the west."

Where do you live in Muskoka?

- 20 Subwatersheds
- Georgian Bay Coast
- Severn River Corridor
- Algonquin highlands
- Muskoka Lakes
- Numerous rivers
- Vast forest and natural cover with scattered farmland

Southern Ontario

- Uniform landscape
- Natural areas typically isolated

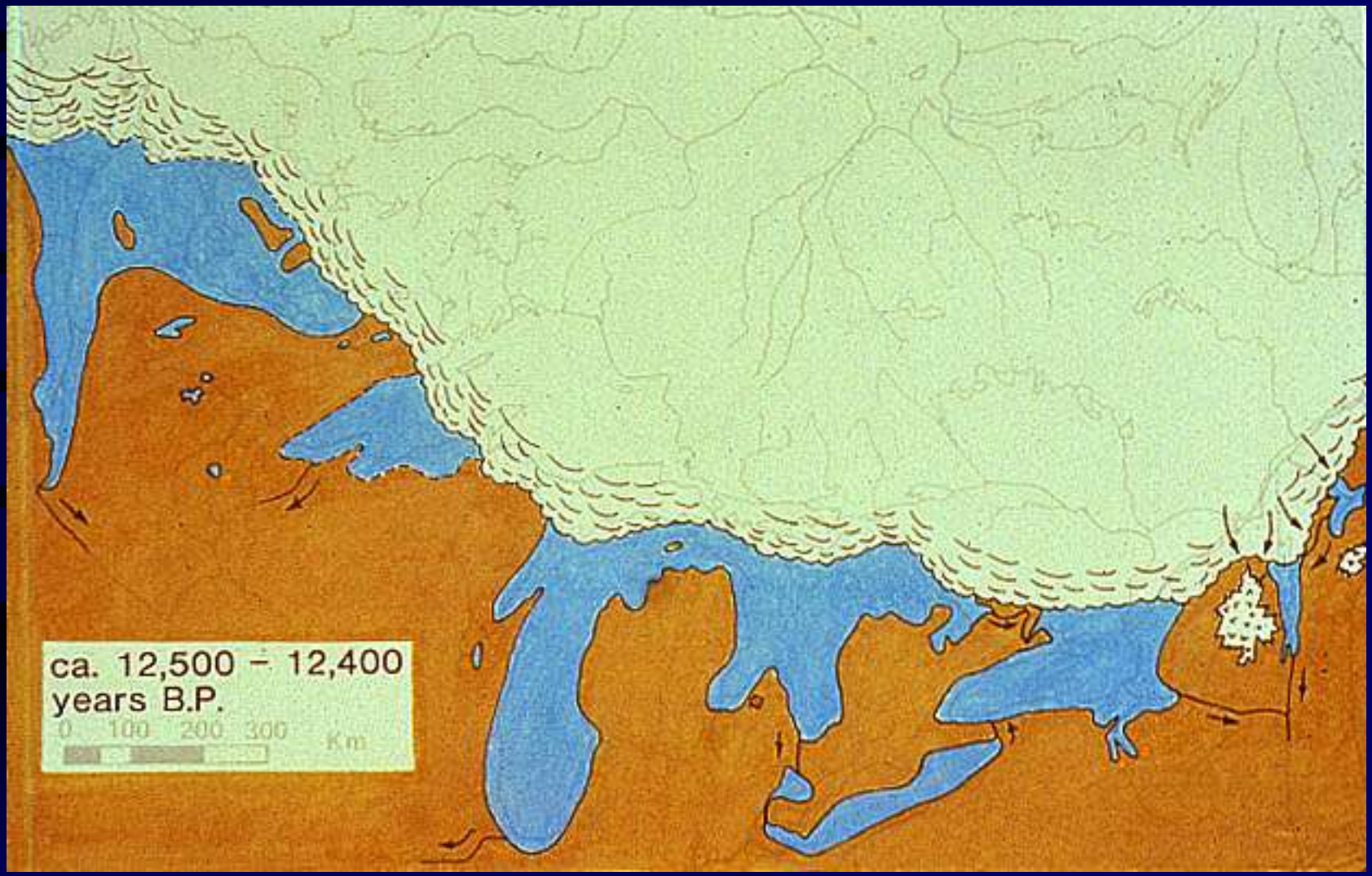
Muskoka Landscape

- Landscape diversity
- Connected natural areas

Explore Muskoka on GoogleEarth
or FlashEarth

Shaping of Muskoka Landscape

- Glaciation – Wisconsinan 10,000 to 15,000 years ago
  - Scraping of soil and erosion and deposition from forceful melt water
- Logging of Primary and Secondary Forests approx 75 to 125 years ago
  - Selective harvesting (pine, birch, hemlock) and intensive fires across the landscape of slash and cut over
- Early and more recent Settlement and development
  - Original settlers associated with logging, clearing for farmland
  - Establishment of urban areas, cottage development, roadway expansion


ca. 12,500 – 12,400
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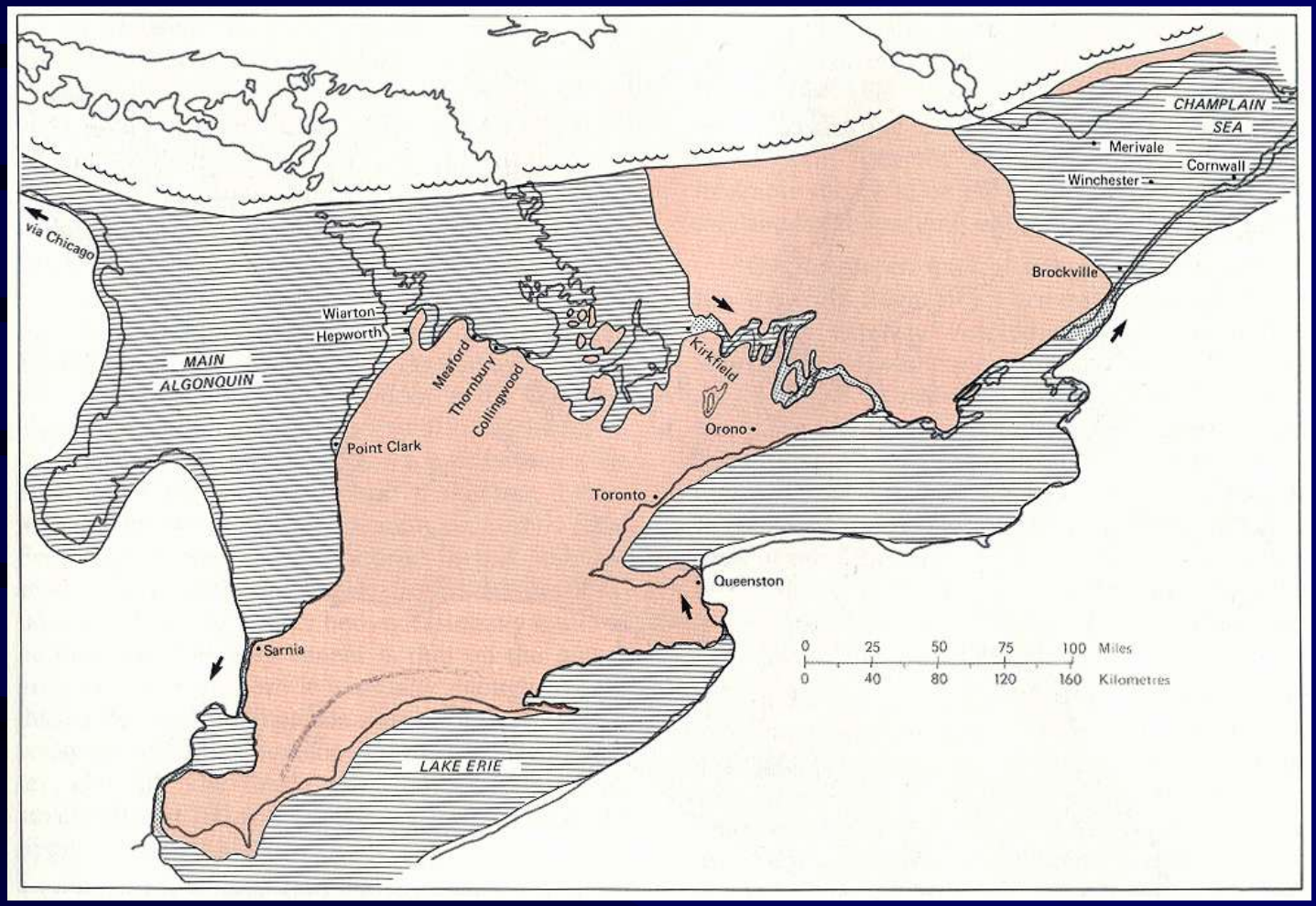
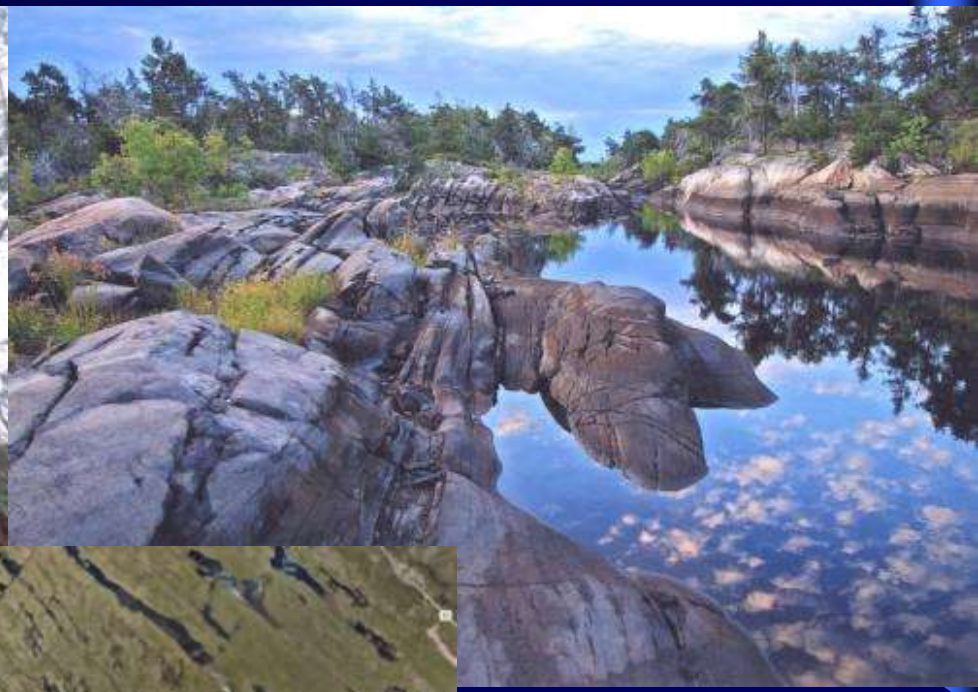


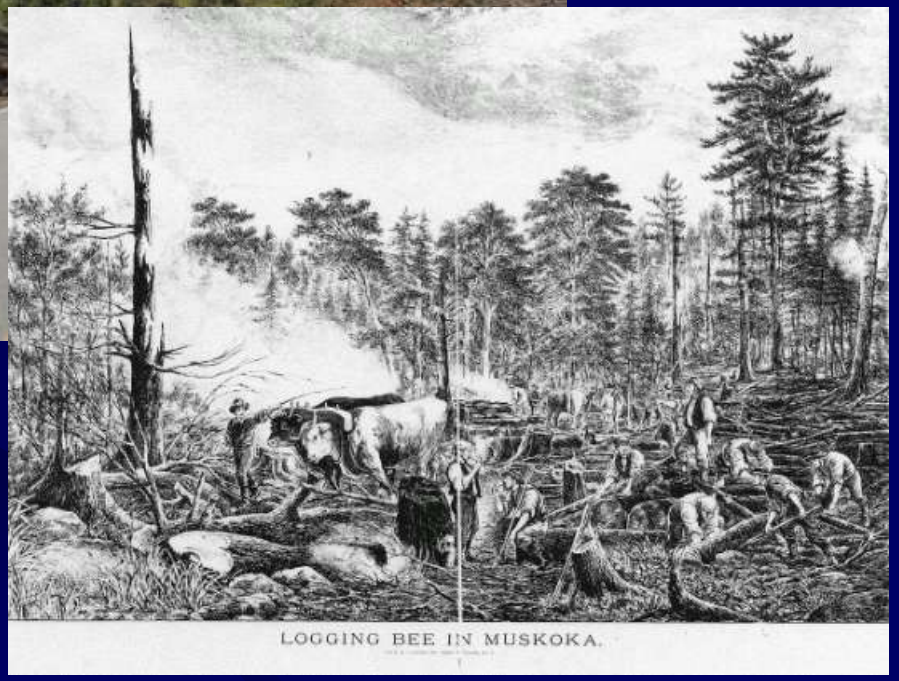
Source: Chapman and Putnam, 1984

Evidence of Glaciation



Early Logging and Fires

- Removal of primary forest, selective tree removal (White Pine, Yellow Birch, E. Hemlock)
- Less Hemlock now, limited old growth, changes in forest tree compostion
- Intensive fires across the landscape after logging burning trees tops and slash piles – high heat burned off soil on rock barrens
- Has resulted in greater representation of open and shrub rock barrens were there would have been forest or dense shrub communities



LOGGING BEE IN MUSKOKA.

Settlement and Expansion

Habitat Types

- Forests: mixed, deciduous and coniferous (maple, oak-pine associations, ash, aspen, birch)
- Swamps: thicket, mixed, deciduous and coniferous (maple, ash, black spruce, tamarack)
- Marshes: meadow marsh (dry out), shallow marsh (standing water), rushes, sedges, cattails
- Fens and some Bogs: deep organic peat soils, hummocks, sedges, ericaceous shrubs, black spruce, nutrient poor
- Shallow Water and Shorelines: bulrushes, pondweeds, lily pads, submergent vegetation
- Rock Barrens: open bare rock, shrub (juniper), semi-treed

Forests

- Dry Oak-Pine mixed forests are common along Georgian Bay coast
- Mixed or coniferous forests around lakes (pine, cedar, balsam fir)
- Conifer forests, often Hemlock, found along north facing slopes
- Semi-open forests or gaps can provide habitat for Whip-poor-will
- Although uncommon, Butternut can be found in the southern limit in Muskoka

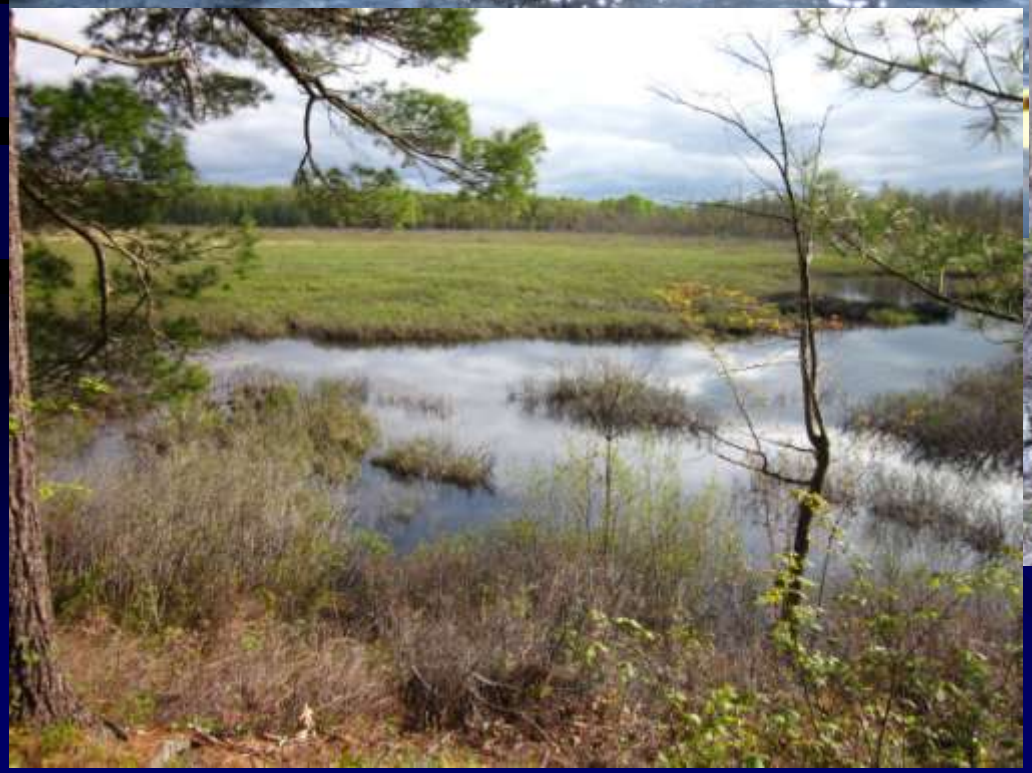
•Cerulean Warbler: Threatened in Ontario and Nationally.

•Species is in decline primarily due to habitat loss and fragmentation, selective logging of larger trees and alteration of forest canopy structure.

•Habitat consists of large, contiguous tracks of deciduous forest, nests in canopy of larger trees. Often micro-habitat specific.

Swamps

- Swamps are dominated by shrubs or trees. >25% cover
- May be flooded seasonally or for long periods of time. < 2.0 m deep
- Vegetation may be composed of coniferous or deciduous forest or tall shrub thickets – some old growth
- Blandings Turtle will utilize swamps including for moving from marsh to nesting habitat – movement corridors
- Massasauga will hibernate in deep organic swamps



Marshes

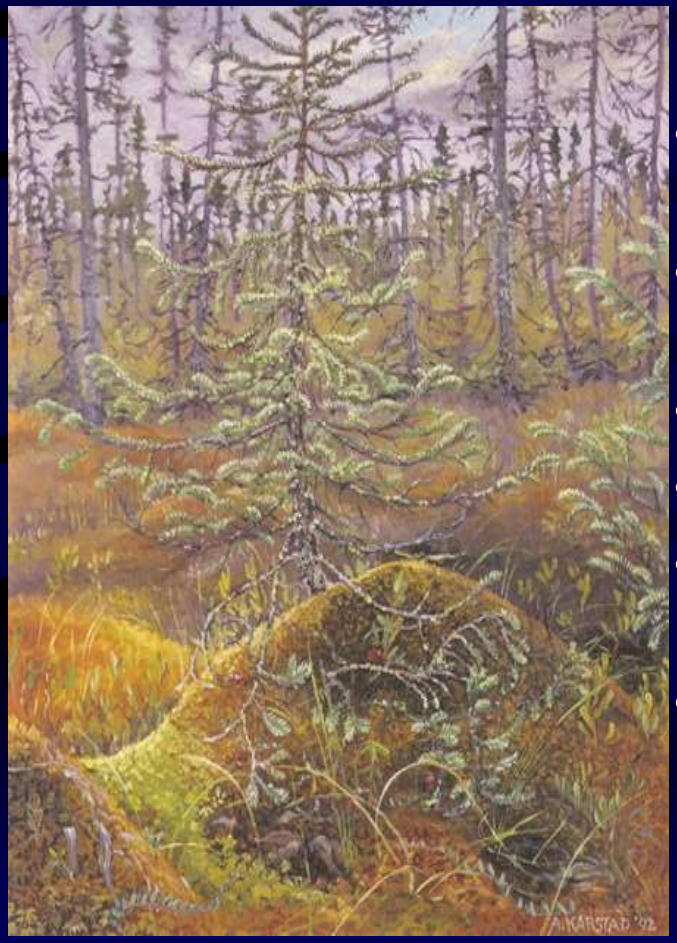
- Periodically or permanently covered by standing or slowly moving water. (< 2.0 m deep)
- Trees & shrub cover < 25%.
- Mainly cattails, sedges, forbs with some aquatics.
- Marshes are the most productive wetland type. Rich in nutrients.
- Blanding Turtle is typically found in marshes and beaver ponds
- Least Bittern found in large marshlands

Typical Marsh Types

Photo from: www.naturesphotoadventure.com

- Least Bittern: Threatened in Ontario and Nationally.
- A small and declining population that depends on large, high quality marsh habitats that are being lost and degraded across its range (NHIC).
- Habitats such as large coastal marshes or Wye Marsh with large areas of undisturbed marsh with tall, dense emergent marsh and good interspersion of open water.

Fens and Bogs



- Peatland with water table at or near the surface. Surface often raised. Floating.
- Dominated by sphagnum mosses (peat) and heath shrubs, bogs may support trees.
- More common in northern Ontario and rare in the south.
- Open, Semi-Treed, Treed Bog Types.
- Ribbonsnake can be found in fens
- Spotted Turtles known to hibernate in hummocks
- Massasauga Rattlesnake forages in fen and found there through mid summer

Shallow Water and Shorelines

- Transitional between saturated or seasonal wetlands and aquatic ecosystems (lakes). Typically < 2m deep.
- Include basins, pools and ponds, as well as wetlands found beside rivers, coastlines and shorelines; submerged vegetation; floating leaved plants.
- Many species of turtles, Musk Turtle found in shoreline marshes with soft substrates – Georgian Bay

Rock Barrens

Rock Barrens

Habitat Diversity – site level

Habitat Diversity and Mosaics

- Habitat Diverity: wide representation of forest types, swamp types, marsh types, fens, and rock barren
- Provides a wide range of habitat opportunities for plants and wildlife including many Species at Risk
- Habitat Mosaic: High ecological values with connected natural cover and a diversity and interspersion of habitat types.
- Mosaic that includes open and treed wetlands, with ridges supporting granite rock barrens (open, shrub and treed barrens) and many lakes and rivers in a forested landscape


Google


Wetland Complex
Rock Barren
Oak-Pine Forest
Forest/Rock Barren/Wetland Complex
Inshore Wetland
Oak-Pine Forest

Risks to Habitat Types

- Don’t want to go in the direction of a Southern Ontario landscape
- Impacts can happen at large scale and site specific
- Stewardship and maintaining habitat quality and quantity
- Provincial Endangered Species Act (ESA)

The End