



Achieving Local Forest Landscape Conservation with Examples from the Kawartha Highlands Region

Ancient Forest Exploration & Research and Catchacoma Forest Stewardship Committee (thanks to the many members)

by Peter Quinby, June 22, 2023

online presentation to the Jack, Chandos and Kasshabog Lakes Assn.



All photos from the
Catchacoma Old-growth Forest

Catchacoma Lake

Acknowledgements

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1. Outline

- **General Strategy and Ecological Significance**
- **Important Legislation and Guidance**
- **Case Study: Catchacoma Old-growth Forest**
- **Case Study: Three Lakes Region (Chandos, Jack, Kasshabog)**
- **Important References and Manuals**



2. General Strategy, Significant Ecosystems and Species

Goals

- become the *knowledge authority* on the ecology and management of the stewardship area
- use *citizen science*
- use knowledge, education and communication to *advocate for improved local landscape stewardship and policies*



Forest Protection is “to maintain and restore natural forest cover”. It is one of many activities of forest management; others include:

- logging
- road building
- applying pesticides and herbicides
- planting
- facilitating and managing recreation
- suppressing fires, or making them larger? etc.



Local Stewardship Committee (variety of members)

- educators
- communicators
- scientists/naturalists/ecologists
- landowners & cottagers
- community leaders
- students
- committed people, etc.



Significant Ecosystems

(assess in the field or with imagery)

- **old growth & mature forests** (including mother trees)
- **riparian forests and other sensitive forests**
- **wetlands**
- **streams and rivers**
- **lakes**
- **significant wildlife habitat** (e.g., reproductive habitat, migratory habitat, hibernation habitat, etc.)

A photograph of a light-colored, possibly white or cream, wolf-like animal standing in a forest clearing. The animal is facing right, looking down at the ground. The background shows dense green foliage and trees.

Algonquin wolf or
coy-wolf

Significant Species

(assess in the field)

- **Species-at-Risk** (Algonquin wolf)
- **Top carnivores** (Algonquin wolf)
- **Keystone species** (Algonquin wolf)
- **Colonial (or packs) species** (Algonquin wolf)
- **Migratory birds** (Canada goose)
- **Invasive species** (Eurasian milfoil)



Regional Ecology (field and imagery assessment)

- **Carbon storage and sequestration** - wetlands & forests
- **Watershed ecology** and impacts to lands & waters; increased temperatures???
- **Connectivity** - wildlife corridors, satellite-park/key biodiversity areas
- **Forest fires** - facilitated by logging slash, open canopies, increased temps.
- **Invasive spp.** - hemlock woolly adelgid

3. Important Legislation (Ontario) and Other Guidance

- anything that addresses the natural environment
- mostly Ontario legislation
- some federal legislation applicable too
- there are many regulations and guidelines associated with Ministry responsibilities
- others; e.g., forest management certification bodies



Crown Forest Sustainability Act

- provide for the sustainability of Ontario's Crown forests
- manage the Crown forests to meet the social, economic and environmental needs of present and future generations
- defines the forest management planning process that allows for public participation
- covers many other aspects of forest management



Environmental Assessment Act

- ensures that governments and public bodies consider potential environmental effects before an infrastructure project begins
- applies to MNRF-sanctioned forestry operations on Crown land – ***Class EA failure***
- Ontario is the only Canadian jurisdiction where environmental assessments are generally not required for private-sector projects.



Endangered Species Act

- provides science-based species assessment based on the best-available science and Aboriginal Traditional Knowledge
- species classified as endangered or threatened and their habitat automatically receive legal protection
- mitigation plans do allow for habitat destruction



Invasive Species Act

- sets out rules to prevent and control the spread of invasive species
- species are regulated to minimize risk to Ontario's natural environment



Water Resources Act

- regulates sewage disposal and “sewage works”
- prohibits the discharge of polluting materials that may impair water quality



Provincial Policy Statement (under the *Planning Act*)

- consolidated statement of the government's policies on land use planning
- covers policies to effectively manage:
 - growth that consumes natural resources
 - growth that harms the environment and
 - protection of public health and safety



Other Government Commitments

- **Old-growth Forest Policy** - provincial, est. 1994, revised 2003; minimum ages only; minimal protection - one per site district
- **Guidelines and Recommendations** - provincial, cover ministerial responsibilities, technical documents
- **30 x 30 strategy - federal** - 30% protection by 2030; <14% of Canada protected now; new evidence shows that 50 - 60% protection is required to safeguard the integrity of the Earth's species and ecosystems
- **National Program for Ecological Corridors**





Forest Certification Guidance

- **Forest Stewardship Council – International (one of many)**
- **NGO formed in 1994; dedicated to promoting responsible management of the world's forests**
- **includes ecological sustainability**
- **one of the world's most respected and widespread forest certification systems**
- **e.g., species-at-risk indicators; intact landscapes; fair labor regulations**

4. Catchacoma Forest Work to Date (since summer 2019; on our 5th field season)

- ***Discovered and verified*** that the Catchacoma Forest was “old growth” – 1,650 acres (662 ha)
- ***Compared*** the size of the Catchacoma Forest to other known old-growth eastern hemlock forests – **LARGEST IN CANADA**
- ***Formed a partnership*** with the Youth Leadership in Sustainability HS Program in Peterborough (citizen science – data collection)
- ***Formed a partnership*** with the Canadian Museum of Nature (lichen identification)
- ***Formed a partnership*** with Trent University (wolf DNA analysis)

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- ***Started collecting stand- and landscape-level data*** including permanent plots
 - ***Formed the Catchacoma Forest Stewardship Committee*** along with the Wilderness Committee
 - ***Used all forms of communication to “spread the word”,*** including a documentary film and Forest hikes
 - ***Participated in Forest Management Planning*** - input re decision-making about logging/road building
 - ***Created a hiking map*** for the Forest
 - ***Fundraising*** to support research and education
 - ***Have met with*** the municipal government, the logging consortium (BMFC), MNRF, MECP and MPP
 - ***Obtained a moratorium on logging*** in July 2021

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- ***Contributing to a provincial-level field protocol*** for assessing landscapes for the presence of OGFs
 - ***Continue to produce technical reports***, and more than 20 ***press articles*** have been written
 - ***Preparing a detailed case study*** that will be published in book form
 - ***Established a field station*** to support field studies
 - ***Catchacoma Forest included in the Highlands Corridor*** designed by the Haliburton Land Trust

Old-
growth
Forests

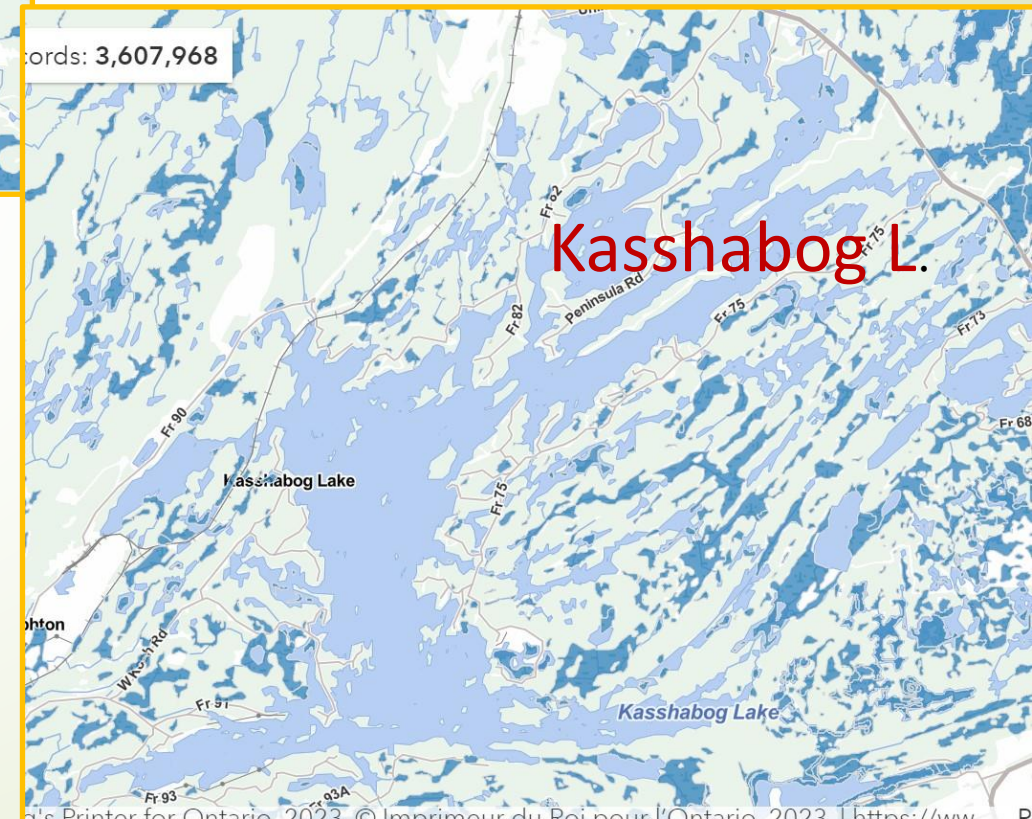
5. Quick Assessment for the Jack Lake, Lake Chandos, and Kasshabog Lakes Region

- ***Different scale*** than the Catchacoma Forest; many orders of magnitude larger
- ***What is ecologically unique*** about your region? Use existing information to start; lake ecology and conservation, watershed ecology, fire management, landscape fragmentation, mature and OGFs, ecological connectivity, others?
- Form a “***stewardship committee***” - include if possible: conservation NGO, scientists, educators, communicators, local citizens, etc.
- ***Establish partnerships***



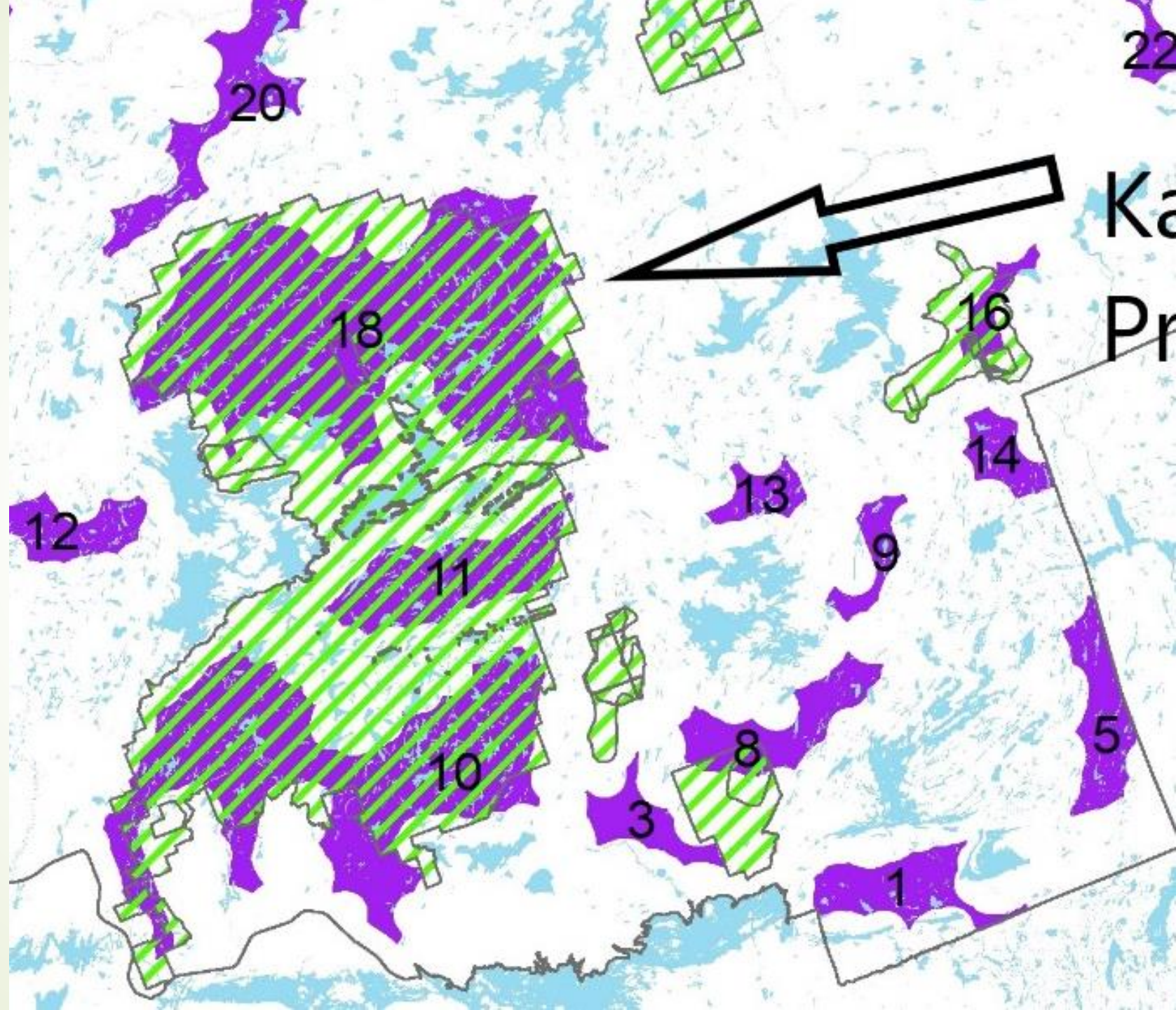
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- Engage in ***forest management planning***
 - ***Fundraising***
 - ***Collect data and produce technical reports*** (publish in journals if possible); be strategic; use strengths and focus on unique features; include connectivity at the regional scale
 - ***Create a GIS database*** – lots of free spatial data available, e.g., topography, water bodies, wetlands, forest stand composition, past logging, human settlements, species ranges/presence
 - ***Educate and raise public awareness*** - all related parties including the public; many forms incl. meetings
 - ***Advocate for improved stewardship policies and practices*** that maintains and restores ecological integrity and public health

Wetlands

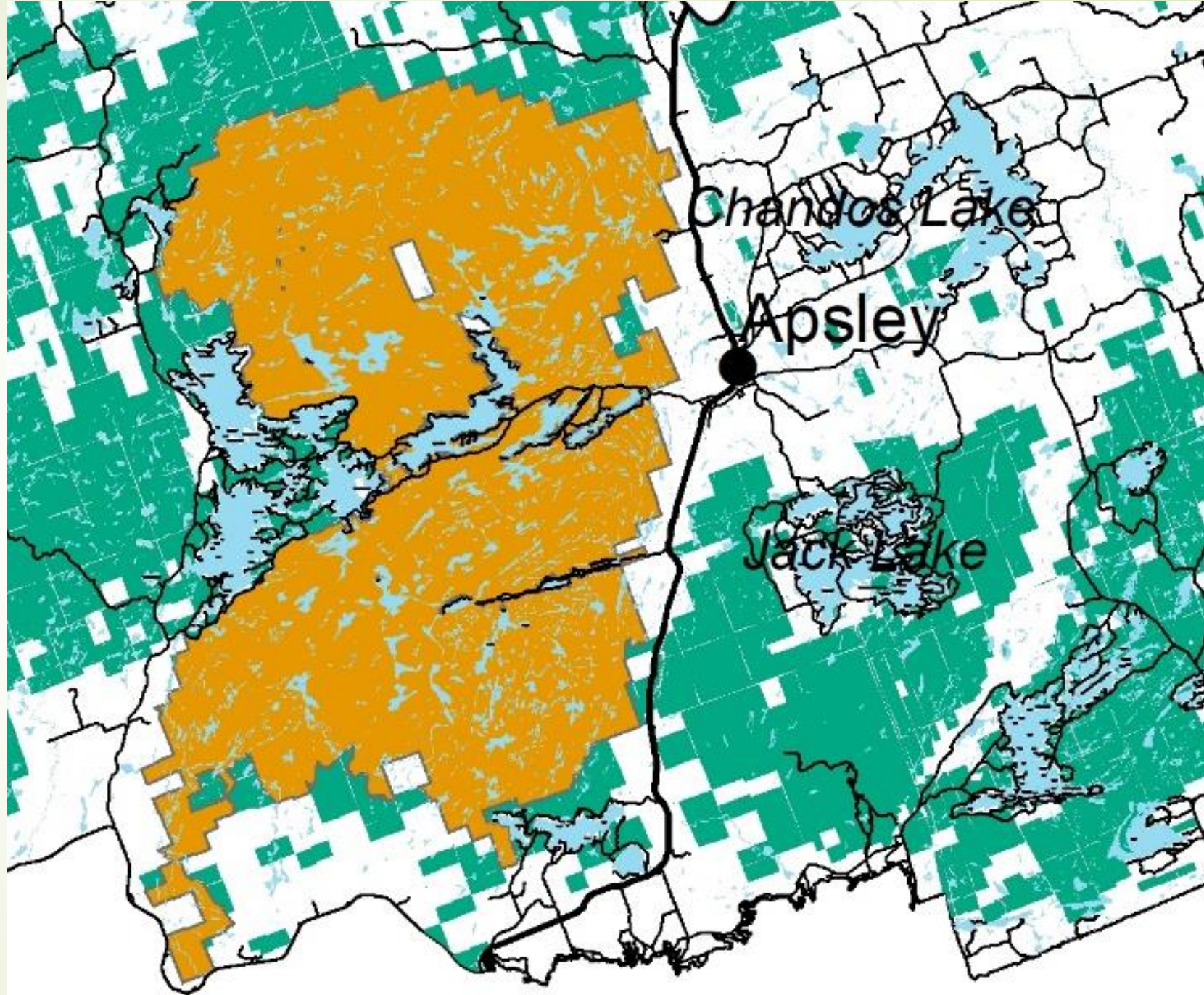


Roadless Areas

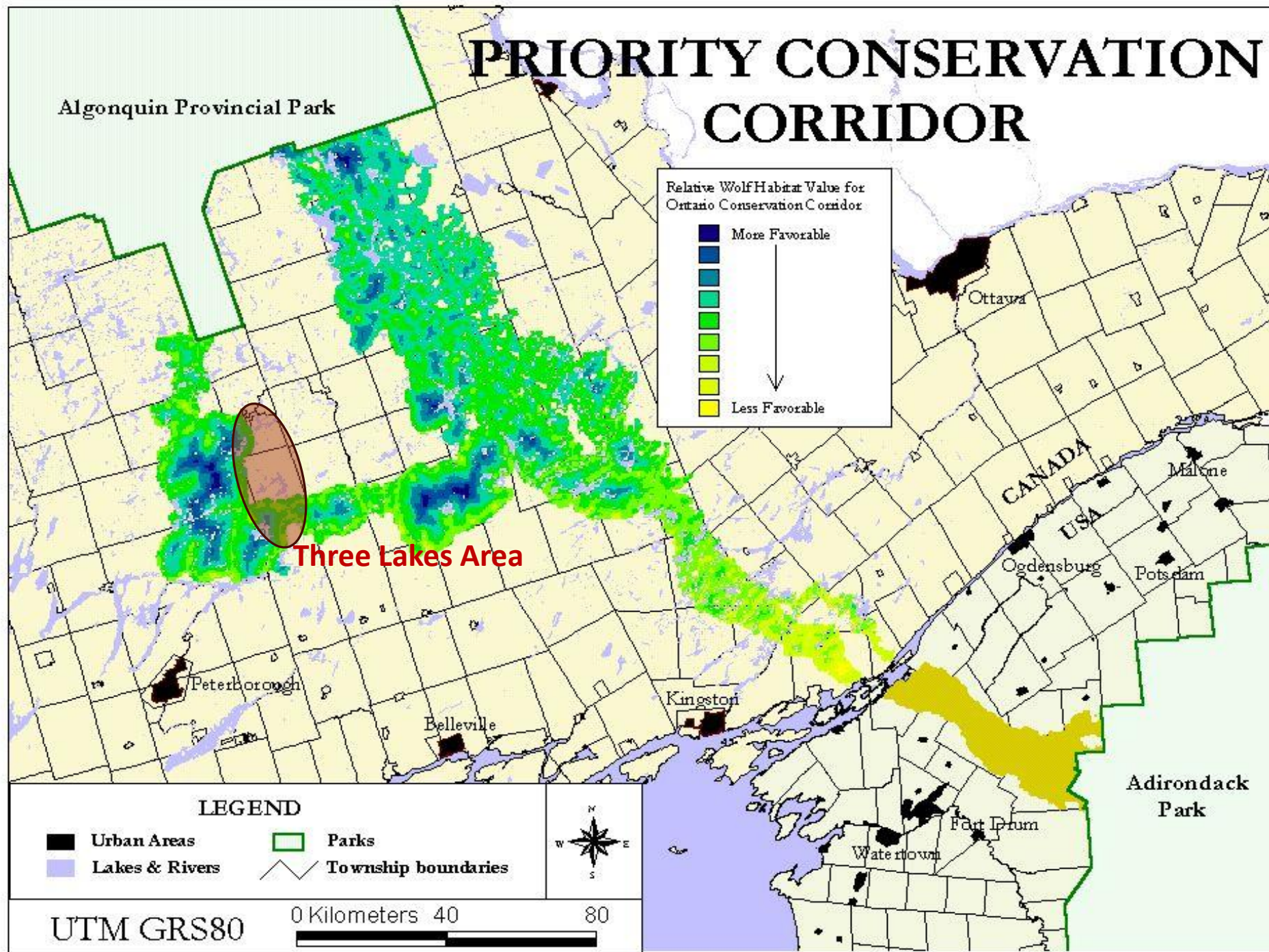
(purple; 8, 9, 13, 14, 16; green = protected)



Crown Land
(green)



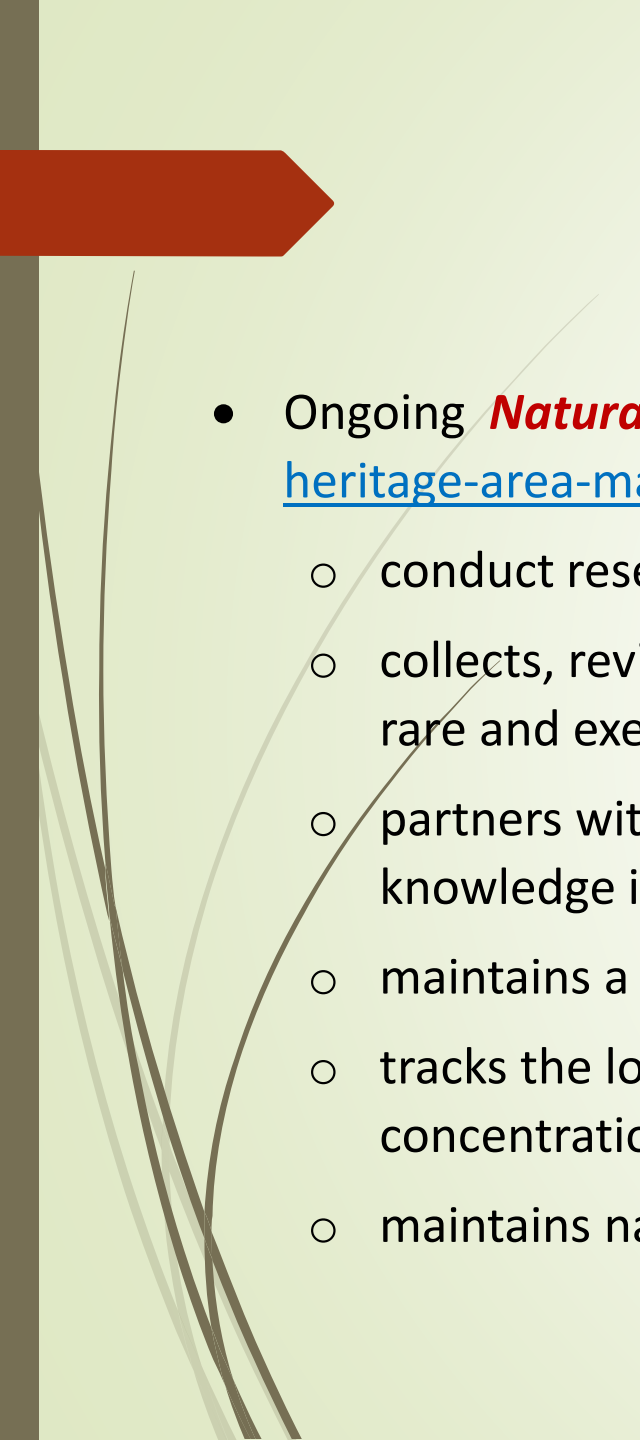
A2A Wildlife Corridor



6. Important References/Literature (main ones, there are others)

- 2000 *Significant Wildlife Habitat Technical Guide*, Ontario MNRF
- 2003 *Old-growth Forest Definitions for Ontario*, Ontario MNRF
- 2003 *Old Growth Policy for Ontario's Crown Forests*, Ontario MNR
- 2005 *More than Trees: A Citizen's Guide to Making Conservation a Bigger Part of Forest Management*, CPAWS-Wildlands League
- 2010 *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement*, 2005, Second Edition, Ontario MNRF
- 2010 *Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales*, Ontario MNRF
- 2013 *Ontario Wetland Evaluation System, Northern Manual*, Version 1.2, Queen's Printer for Ontario, Toronto
- 2017 *Wildland Fire Risk Assessment and Mitigation Reference Manual* in support of the Provincial Policy Statement, 2014, Ontario MNRF

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- 2020 ***Provincial Policy Statement, 2020***, Under the Planning Act, Lieutenant Governor in Council, Order in Council No. 229/2020
 - 2020 ***Forest Information Manual***, Ontario MNRF (sets out the mandatory requirements, standards, roles and responsibilities, timelines, and conditions for providing information in respect of Crown forests. This includes the provision of forest resources inventories, maps, geospatial data layers, forest operations inspections, forest values, base data, reports and other information required for the purpose of forest management planning and ensuring compliance with the Crown Forest Sustainability Act and its regulations.)
 - 2023 ***Principles and Criteria for Forest Stewardship*** (FSC-STD-01-001 V5-3), Forest Stewardship Council

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- Ongoing **Natural Heritage Information Center** (NHIC; <https://www.ontario.ca/page/make-natural-heritage-area-map>)
 - conduct research and surveys in the field for priority species and natural areas across Ontario
 - collects, reviews, manages and distributes information for: species of conservation concern, rare and exemplary plant communities, wildlife concentration areas, and natural areas
 - partners with others to advance biodiversity, natural heritage and species conservation knowledge in Ontario; individuals can add to the database
 - maintains a list of over 17,000 plants, animals and lichens in Ontario
 - tracks the locations and conditions of over 2,000 species, plant communities and wildlife concentration areas
 - maintains natural heritage information on over 9,000 natural areas in the province

Thank You

Many research projects...

Slope Aspect/
Temperature

Highest Aspect/
Temperature Diversity



0 0.07 0.15 0.3 0.45 0.6 Kilometers

