Rules for the Road

Normalizing Connectivity Planning for Protected Areas

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Outline

- An Ecological Integrity refresher
- Connectivity challenges and successes
- Making connectivity planning ‘normal’

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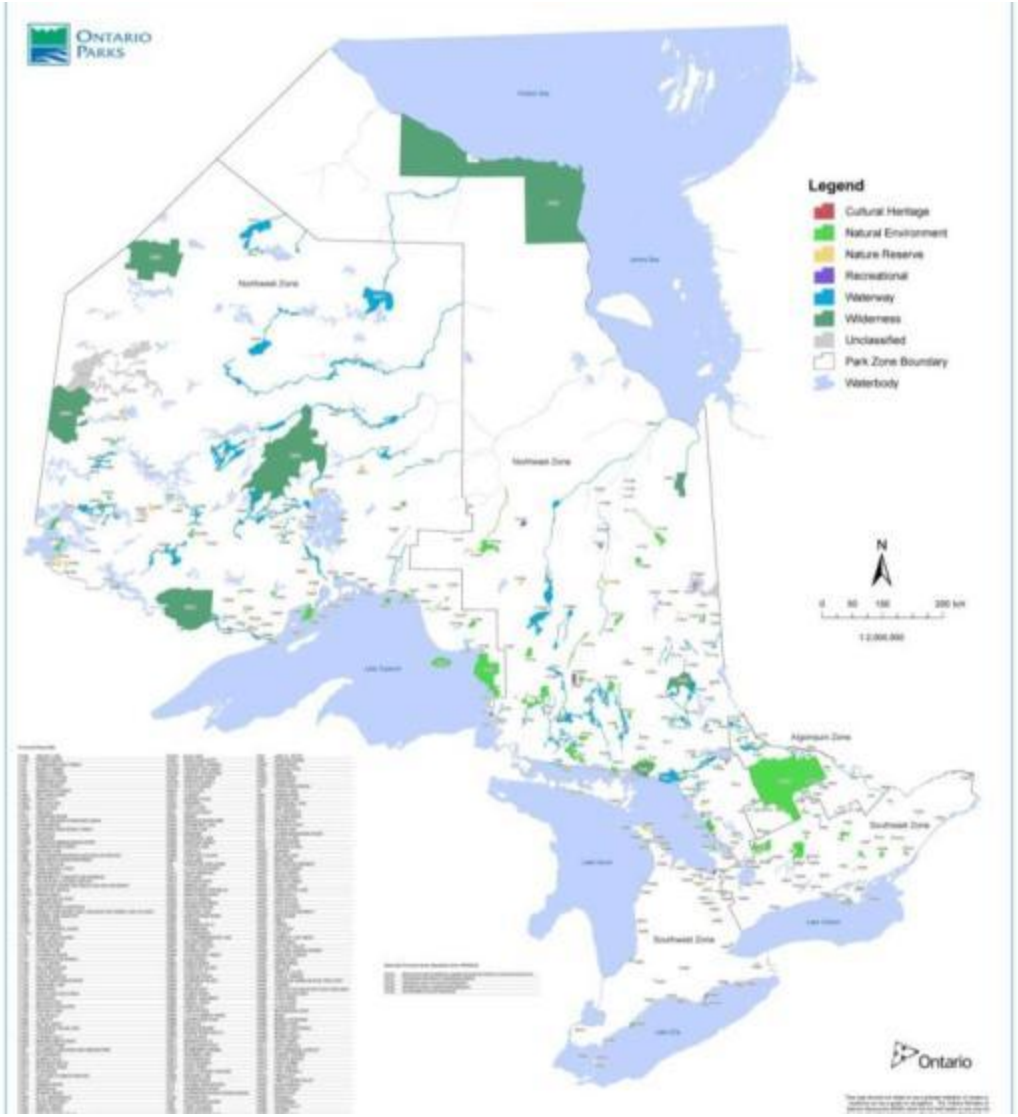
Ontario Parks
Legend
Cultural Heritage
Natural Environment
Nature Reserve
Recreational
Waterway
Wilderness
Unclassified
Park Zone Boundary
Waterbody
Northwest Zone
Northeast Zone
Algonquin Zone
Southwest Zone
Southwest Zone
N
Ontario

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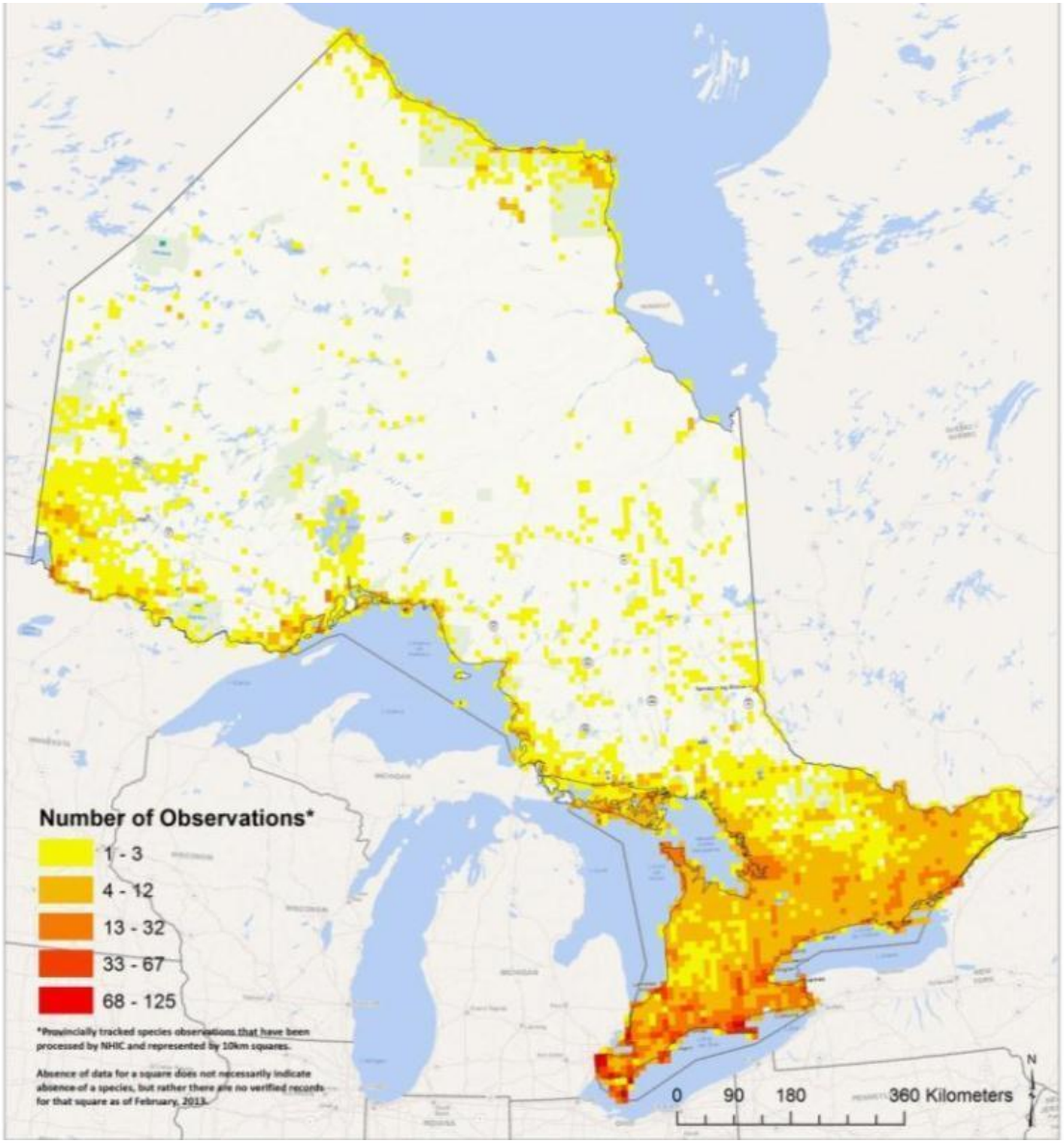

Ontario tracked species observations

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Maintenance of Ecological Integrity shall be the first priority and the restoration of Ecological Integrity shall be considered*(PPCRA, 2006)*

Ecological integrity refers to a condition in which biotic and abiotic components of ecosystems and the composition and abundance of native species and biological communities are characteristic for their natural regions and change and ecosystem proc unimpeded.

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Eastern Wolf, Algonquin Park

Ecosystems have integrity when they have their mixture of living and non-living parts and the interactions between these parts are not disturbed (by human activity).

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Ecological Integrity is a human concept about how nature should be without human interference.

Ecological integrity is not a destination, it is a direction

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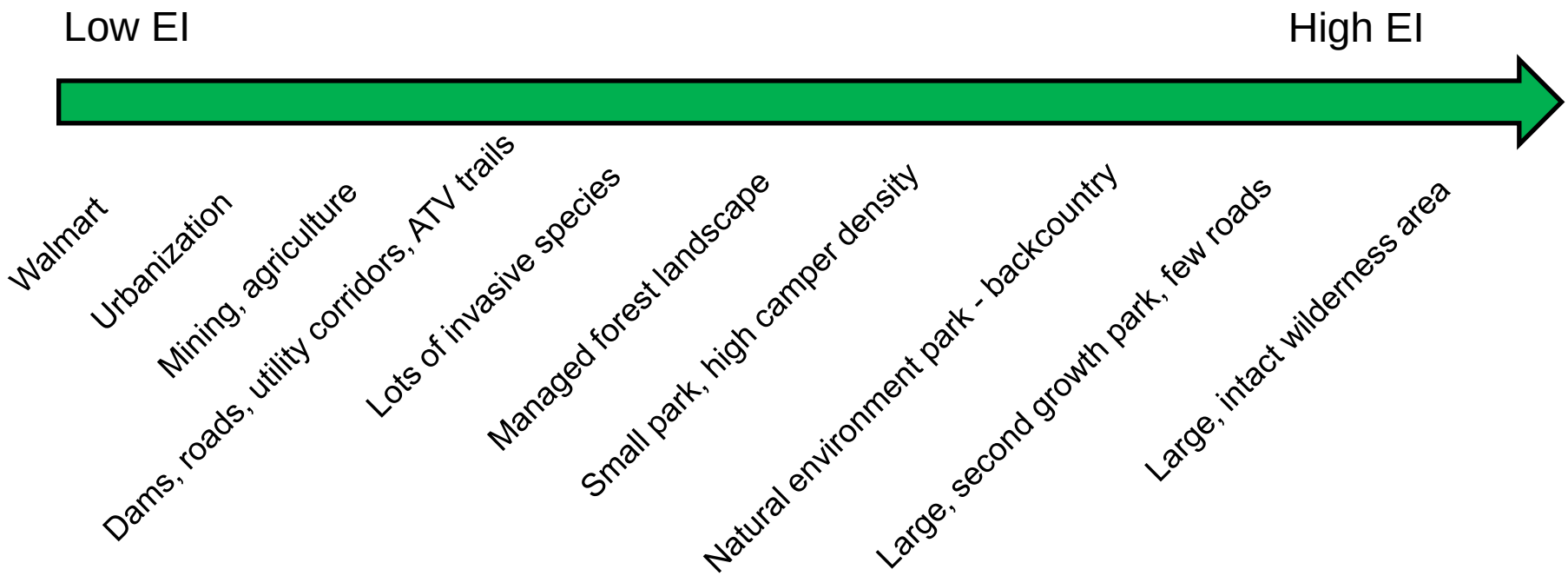
The Ecological Integrity continuum



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Ecological integrity also includes but is not limited to:

(a) healthy and viable populations of native species, including **species at risk**, and maintenance of the habitat on which the species depend; and

(b) levels of air and water quality consistent with **protection of biodiversity** and recreational enjoyment. 2006, c. 12, s. 5 (3).

Parks are dedicated to the people of Ontario, with the intent that "… these areas shall be managed to maintain their ecological integrity and to leave them **unimpaired for future generations**." 2006, c. 12, s. 6.

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Species at Risk populations can be indicators of ecosystem health

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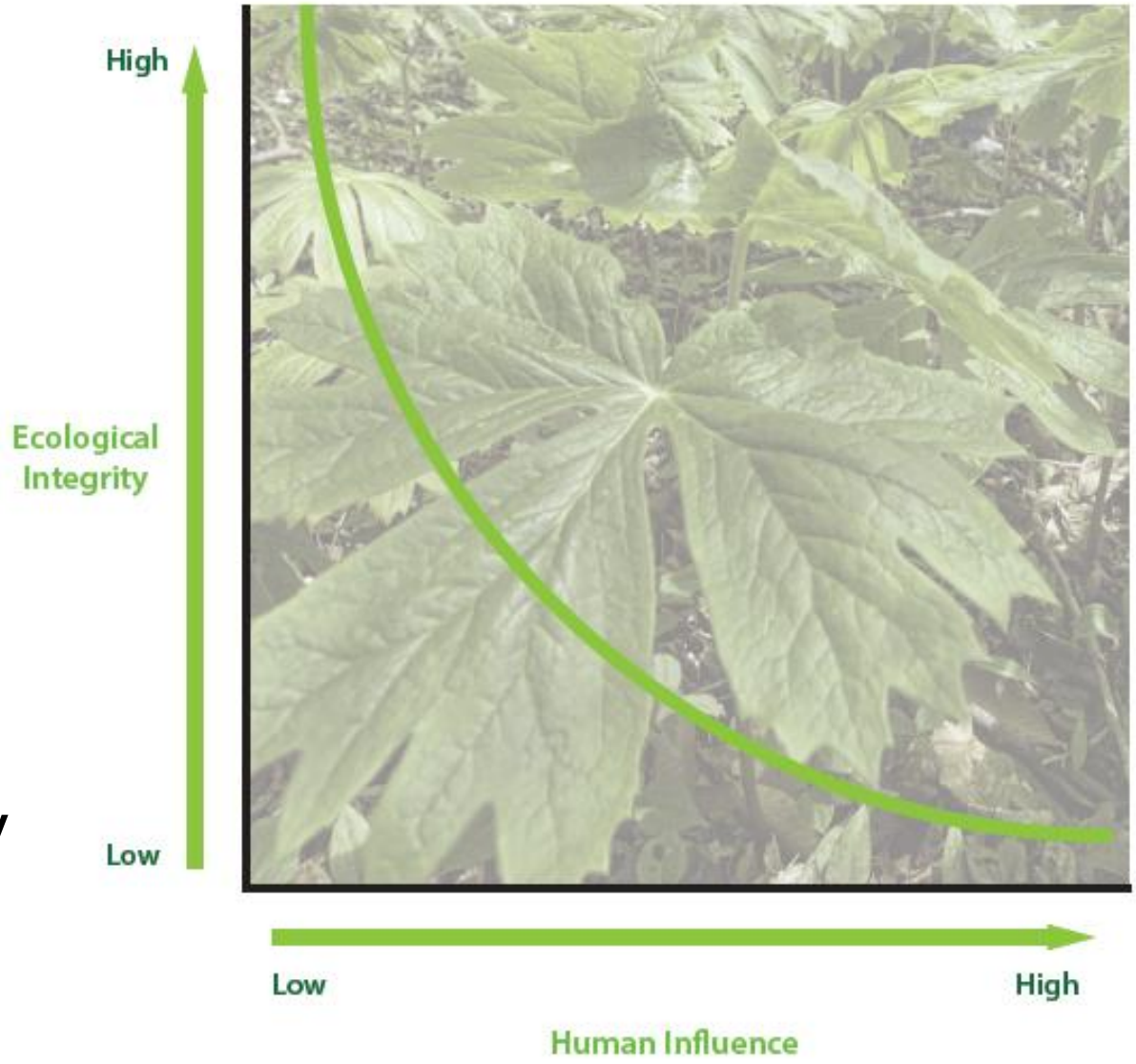
About half of Ontario's Species at Risk are directly or indirectly threatened by roads.

Eastern Wolf Pup, DOR,
Highway 60, Algonquin Park

Generally there is an inverse relationship between the level of human alteration and ecological integrity



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Management Planning for Protected Areas in the Context of Ecological Integrity (Planning Guideline)

WORKSHEET #6: DESCRIPTION OF PRESSURES

1. **Name of pressure:**

2. **Short description of pressure:**

3. **Size and status of pressure:**
   a) Size of areas affected by the pressure:
   b) Indicate if pressure is new, existing or legacy:
   c) Indicate if pressure is increasing, decreasing, remaining stable or status is unknown

4. **Pressure category:**
   a) Indicate the category associated with the pressure:
      - alien/invasive species
      - climate change
      - connectivity
      - disturbance regimes
      - fragmentation
      - hyper-abundant species
      - pollution
      - visitation
      - other
   b) Is the impact of the pressure cumulative with other pressures?

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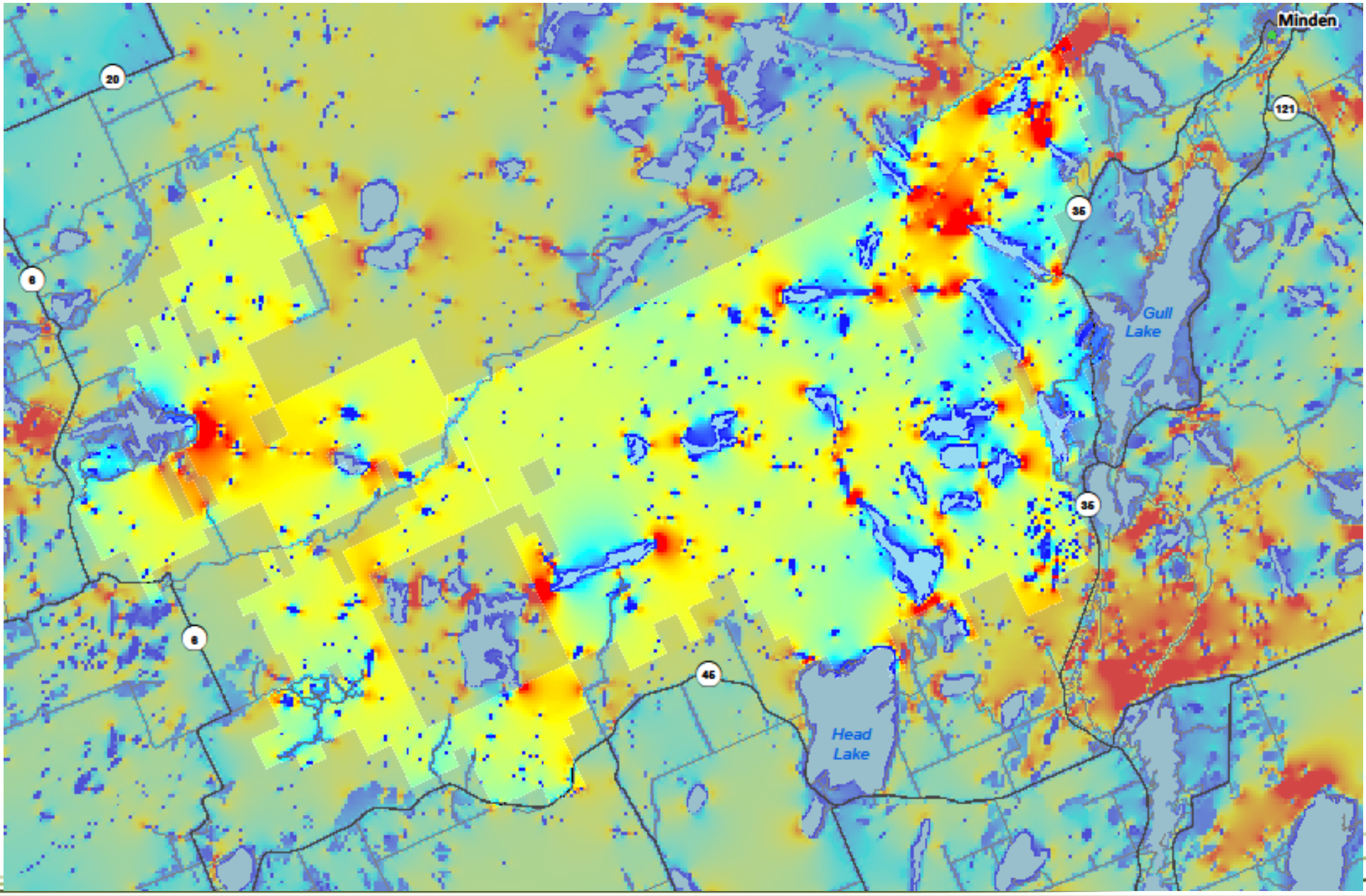
Queen Elizabeth II Wildlands Provincial Park



Circuitscape output for QEII

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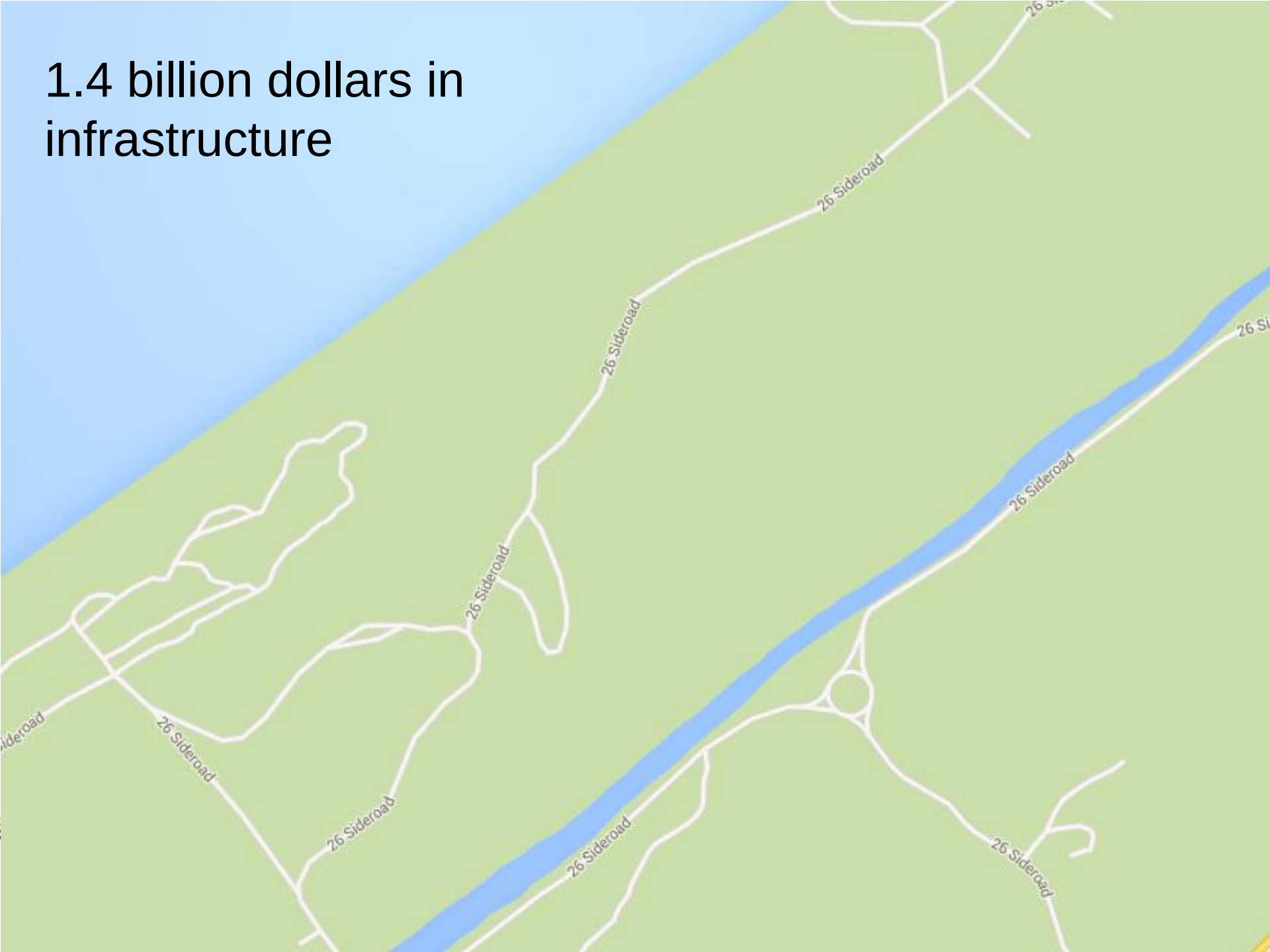
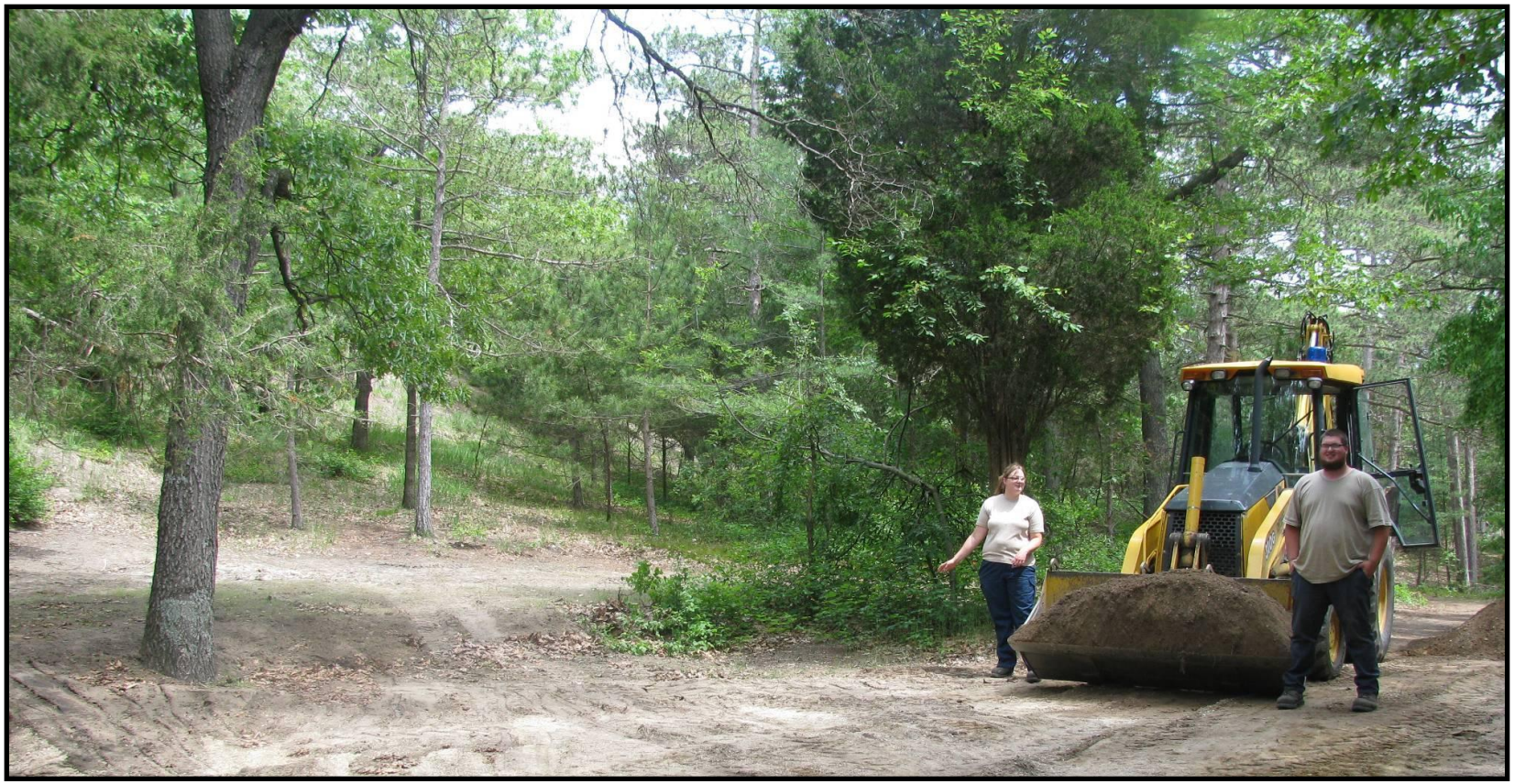
1.4 billion dollars in infrastructure



Road removal – Pinery Provincial Park



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Pinery Provincial Park ecopassage installation

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Algonquin Park Ecopassage

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Road Removal
Algonquin Park

Killbear Provincial Park Ecopassage

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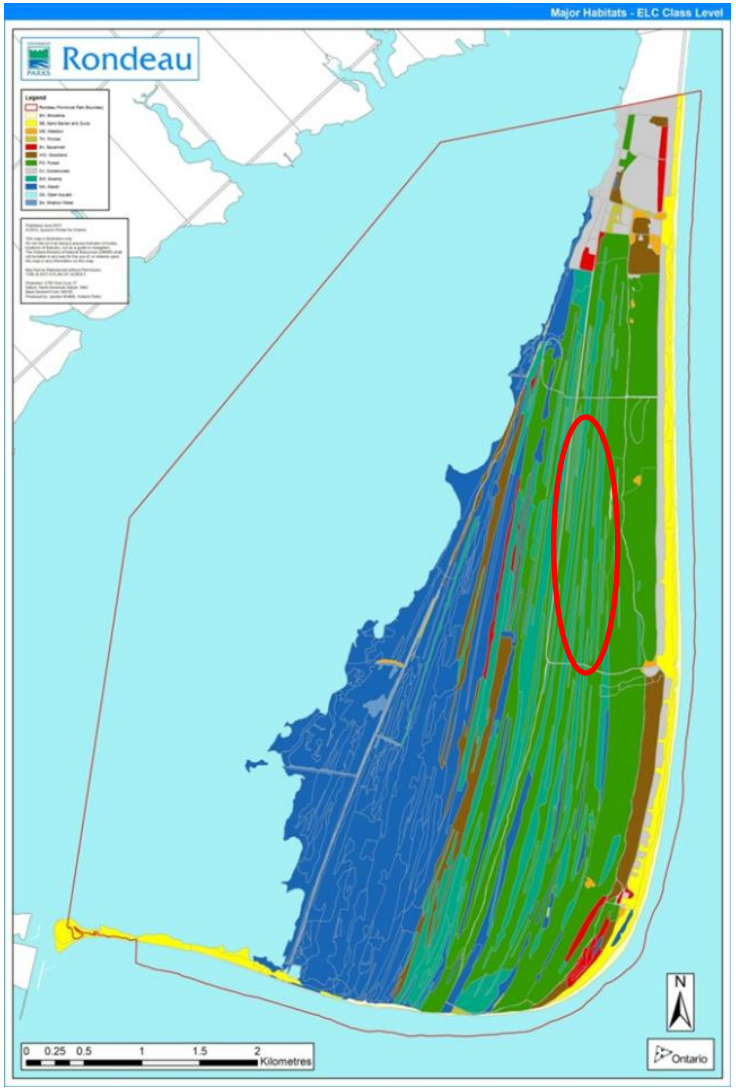
Rondeau Provincial Park – Road Closures



Rondeau Park Stakeholder Group Comment on road closures:

"*All too often roads are closed to traffic in the Park for a variety of reasons, thereby consistently denying access to many seniors and handicapped visitors who may not be able to walk or ride a bicycle, thus diminishing their enjoyment of the Park*"

Long Point Causeway Ecopassage

Presqu'ile Provincial Park Road Research: Laurentian University

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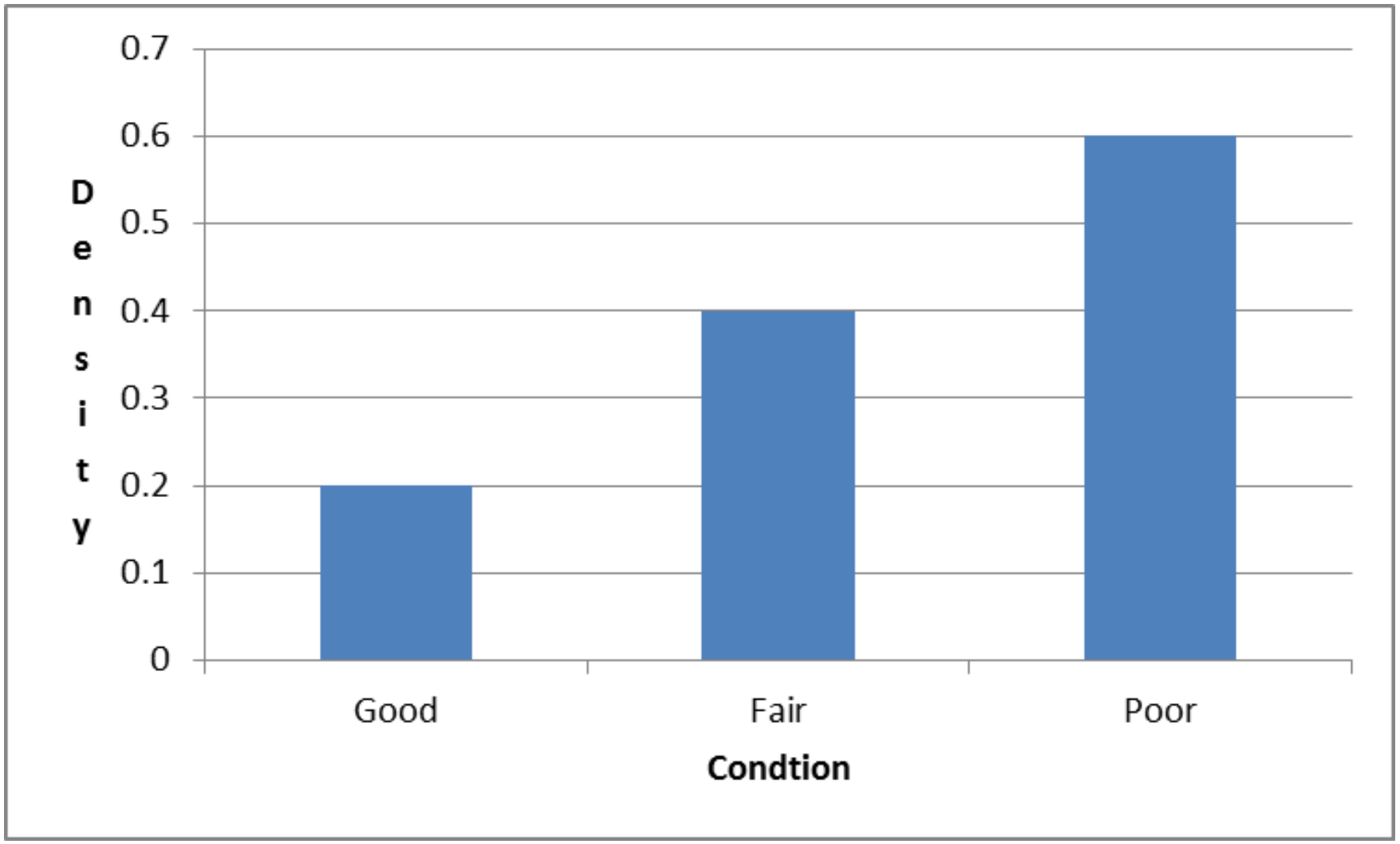
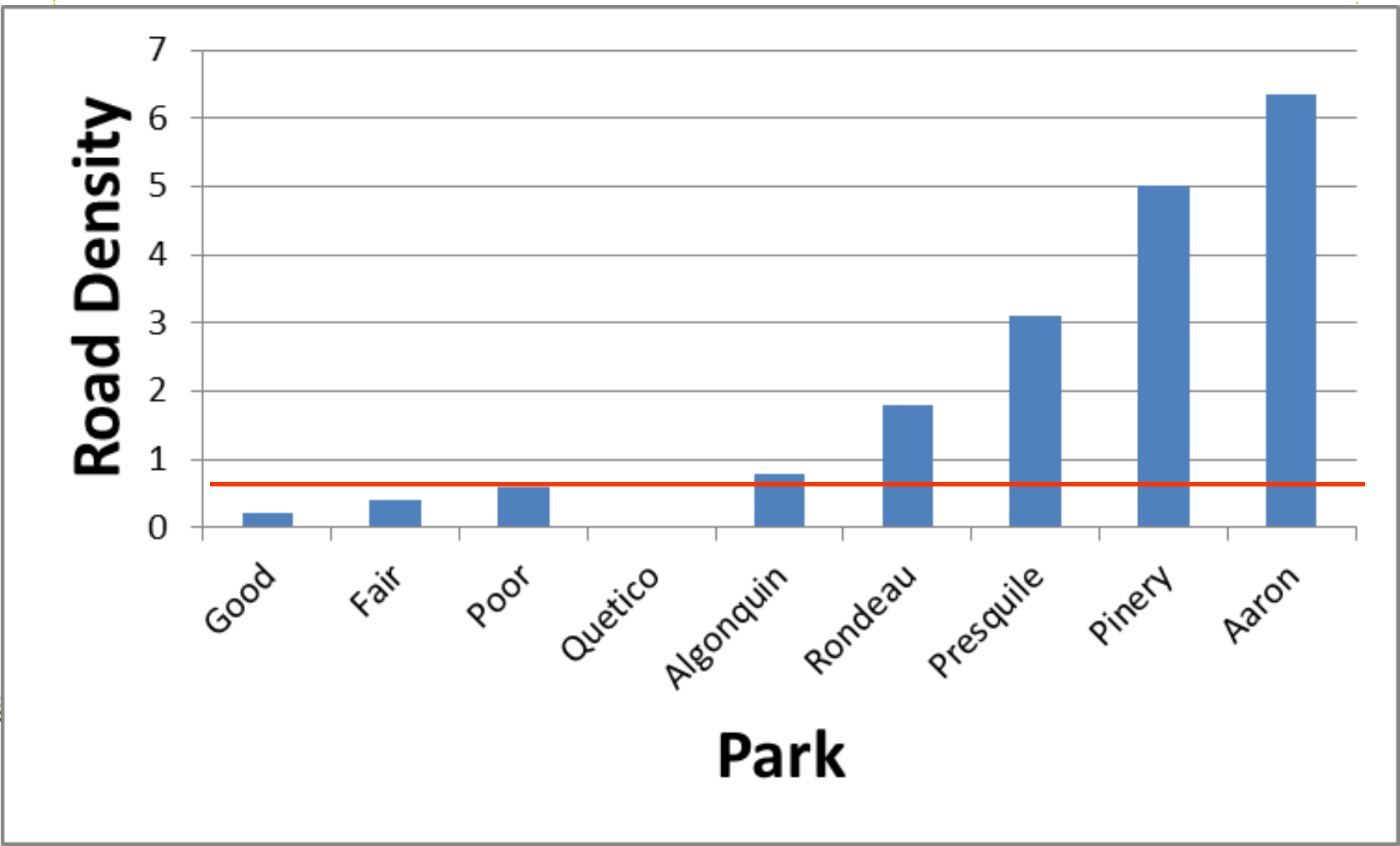
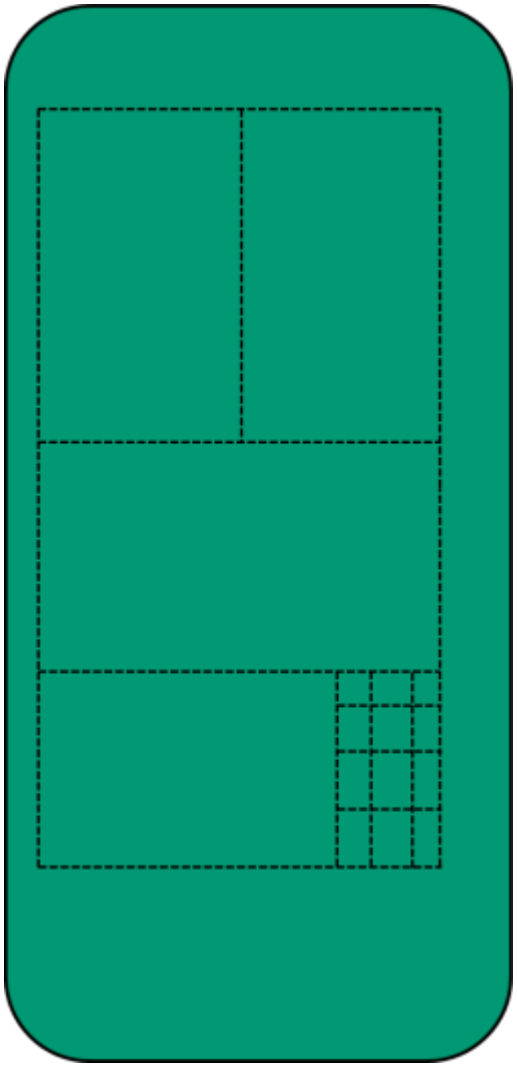
Road Density as an indicator of EI (Parks Canada)



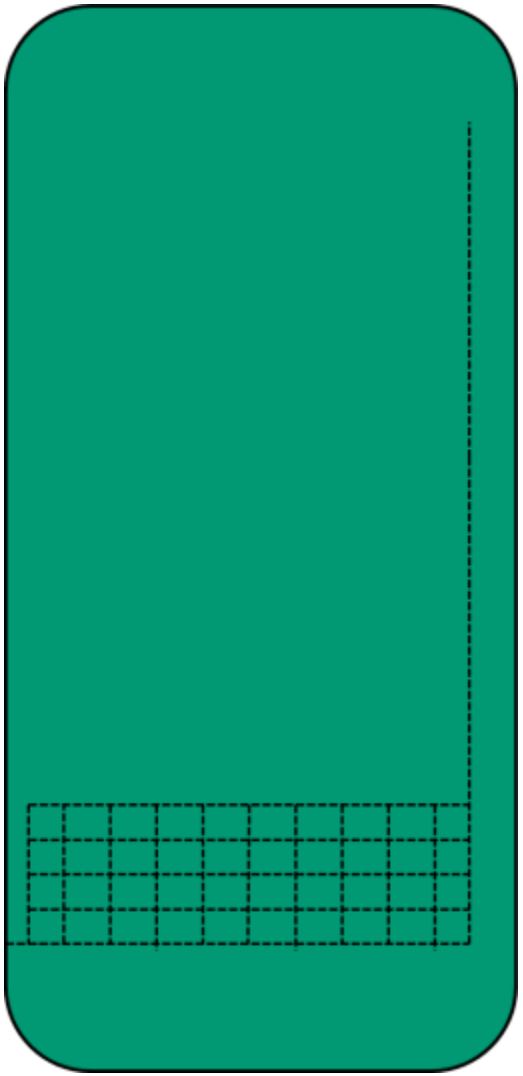
Road Density in select Provincial Parks



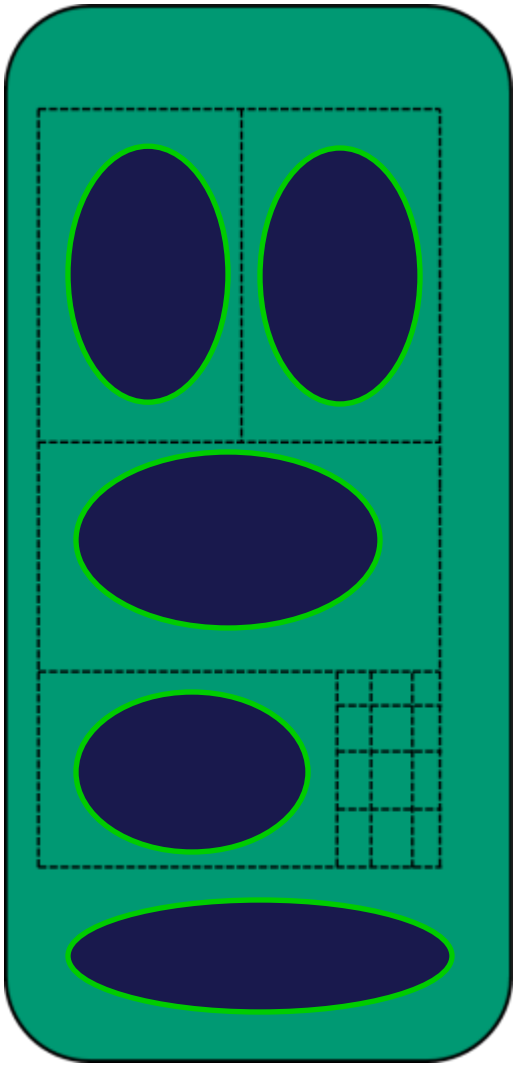
Park “A”



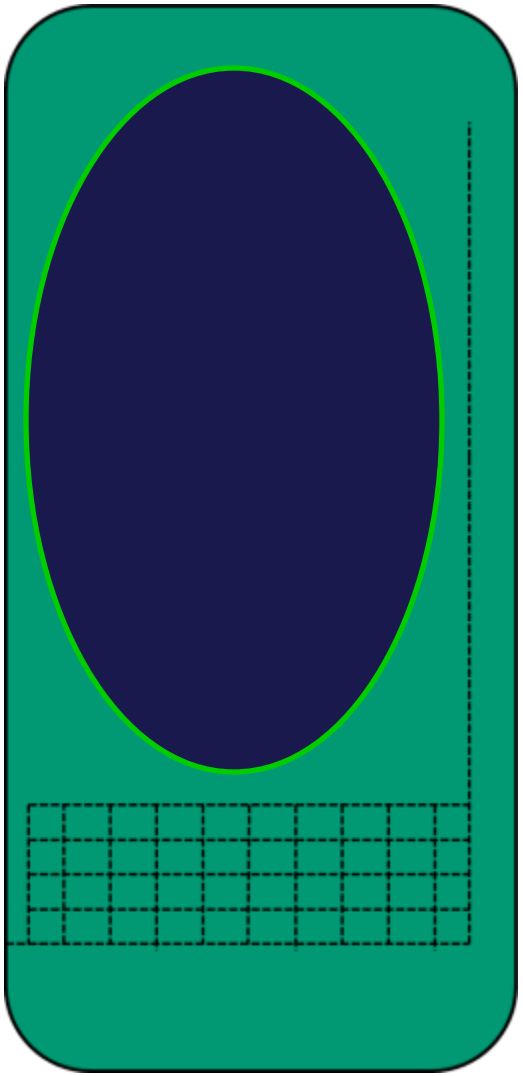
Park “B”



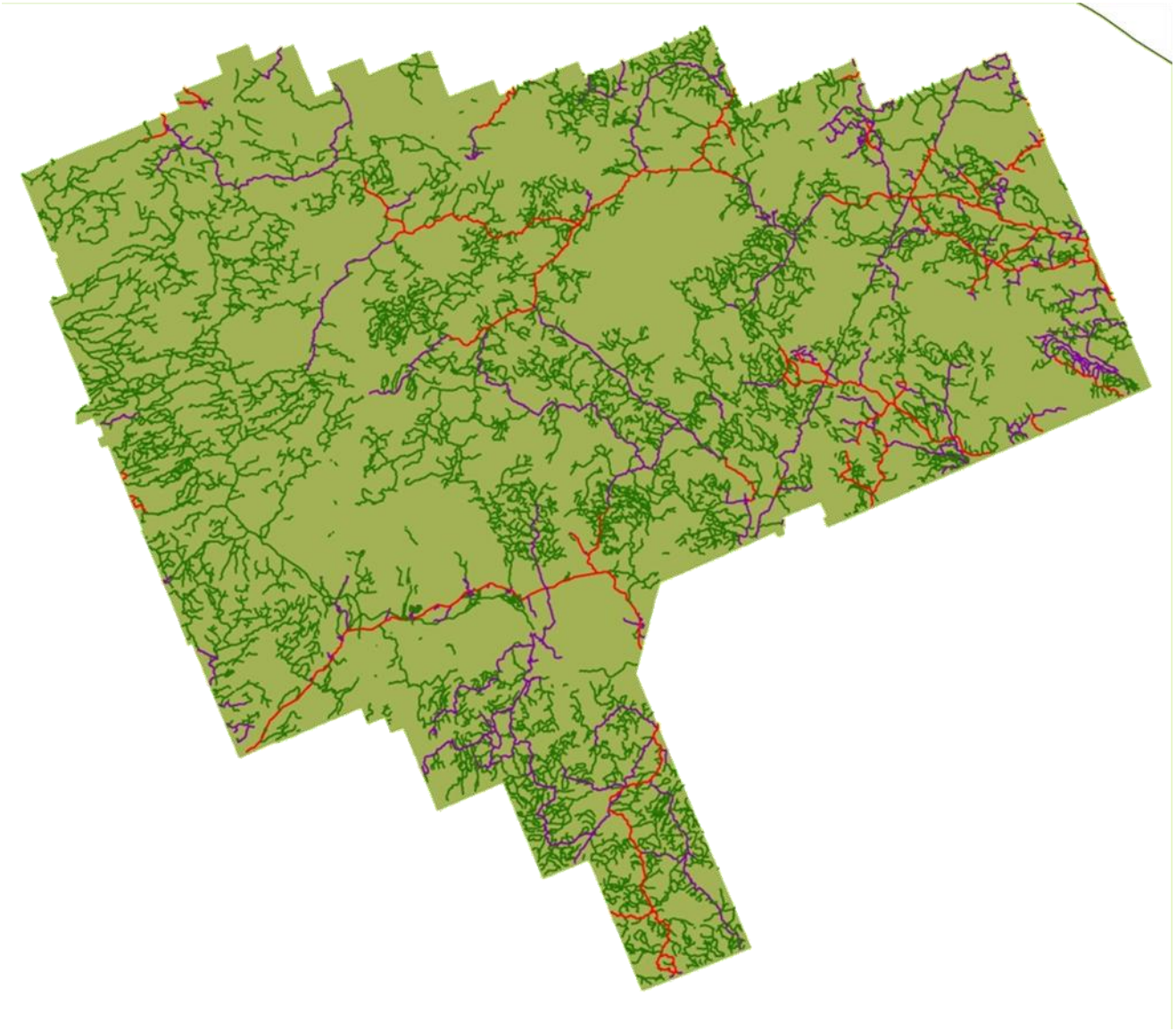
Park “A” **Park “B”**



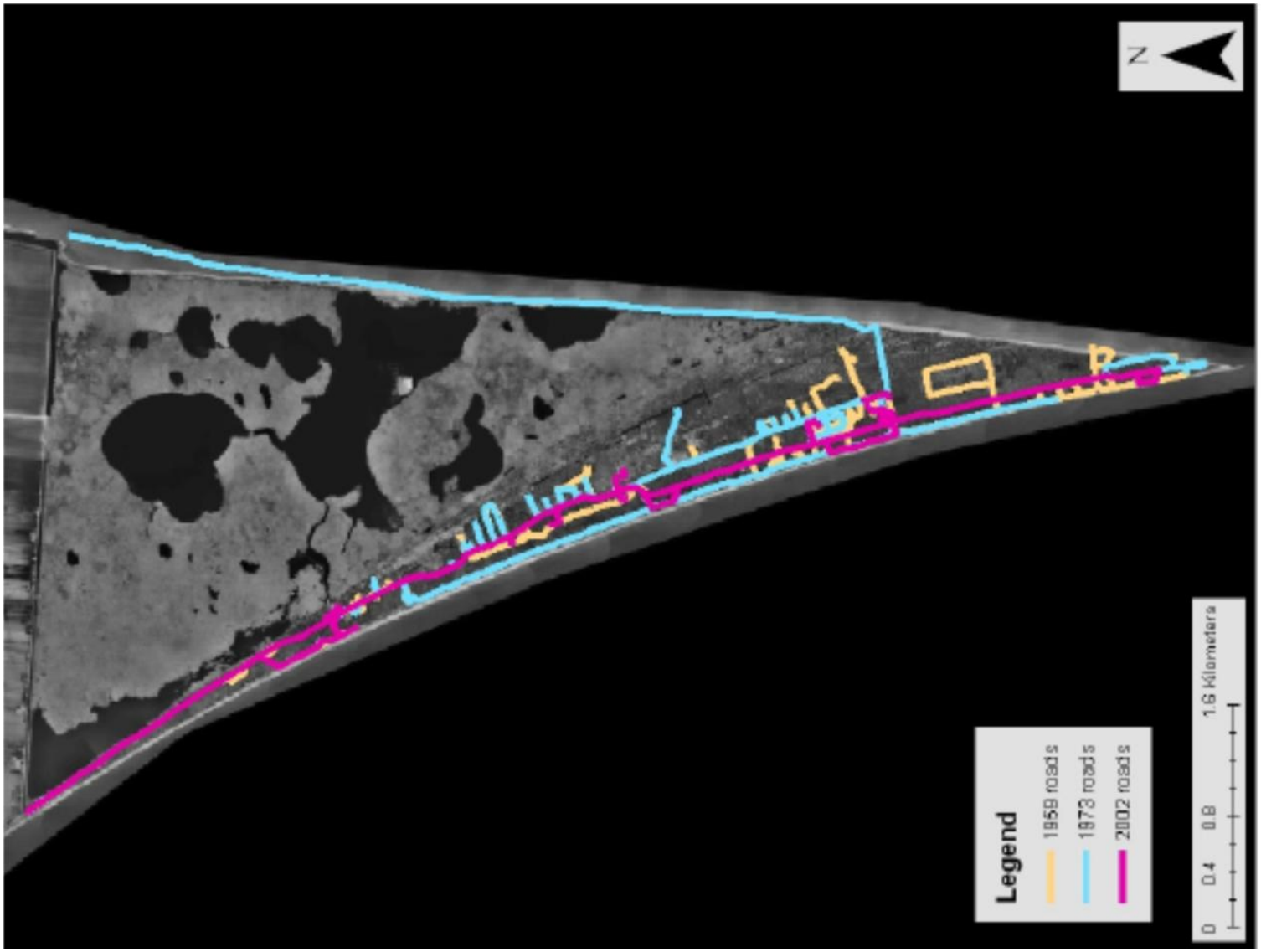
Core Area



Algonquin Park Roads



Point Pelee National Park infrastructure reduction



Select BMP's for roads in protected areas

- Every management plan or statement should include a review of the impact of roads on park values -including connectivity - and identify and enable opportunities for improvement.

- Part of this review should include a road rationalization process that highlights opportunities to reduce road density.

- Maintain a prioritized list of roads in protected areas that pose a threat to park values - including connectivity. Identify these areas for mitigation and budget accordingly.

- Every park superintendent should know the road density for their park, and have a target road density based on the maintenance and restoration of ecological integrity.

Class EA-PPCR

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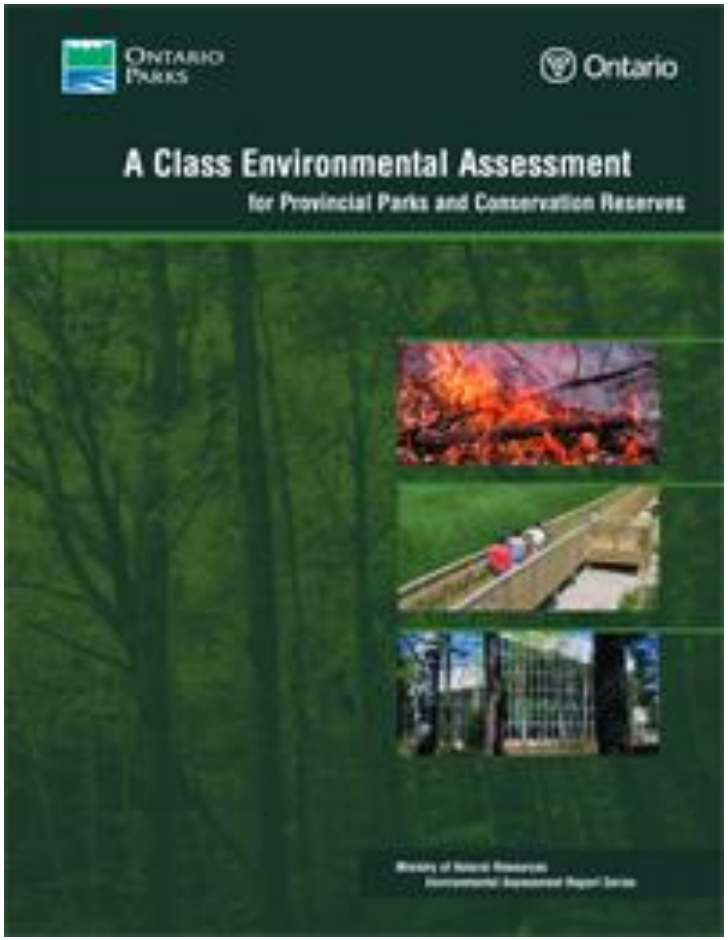

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Select BMP's for roads in protected areas

- Every superintendent/CR manager should have a map outlining core areas of their protected area. This map should also highlight corridors for wildlife movement and habitat of road sensitive species at risk.

- Environmental assessment processes involving roads (eg. Repaving, watercrossing installations) should **enhance** connectivity (and thus ecological integrity)

- A portion of all capital or operational funding spent on road maintenance/building should be applied towards mitigation of ecological impacts.

- A list of research opportunities and partners should be available to encourage scientific advancement and improve park management.

Summary:

Roads are one of the biggest threats to the ecological integrity of protected areas*.

This threat should be prioritized in planning and management decisions.

There are a variety of tools to help accomplish this at both a planning and operational level.

There is improvement, but it isn't quite 'normal' yet.

*within the boundary of protected areas

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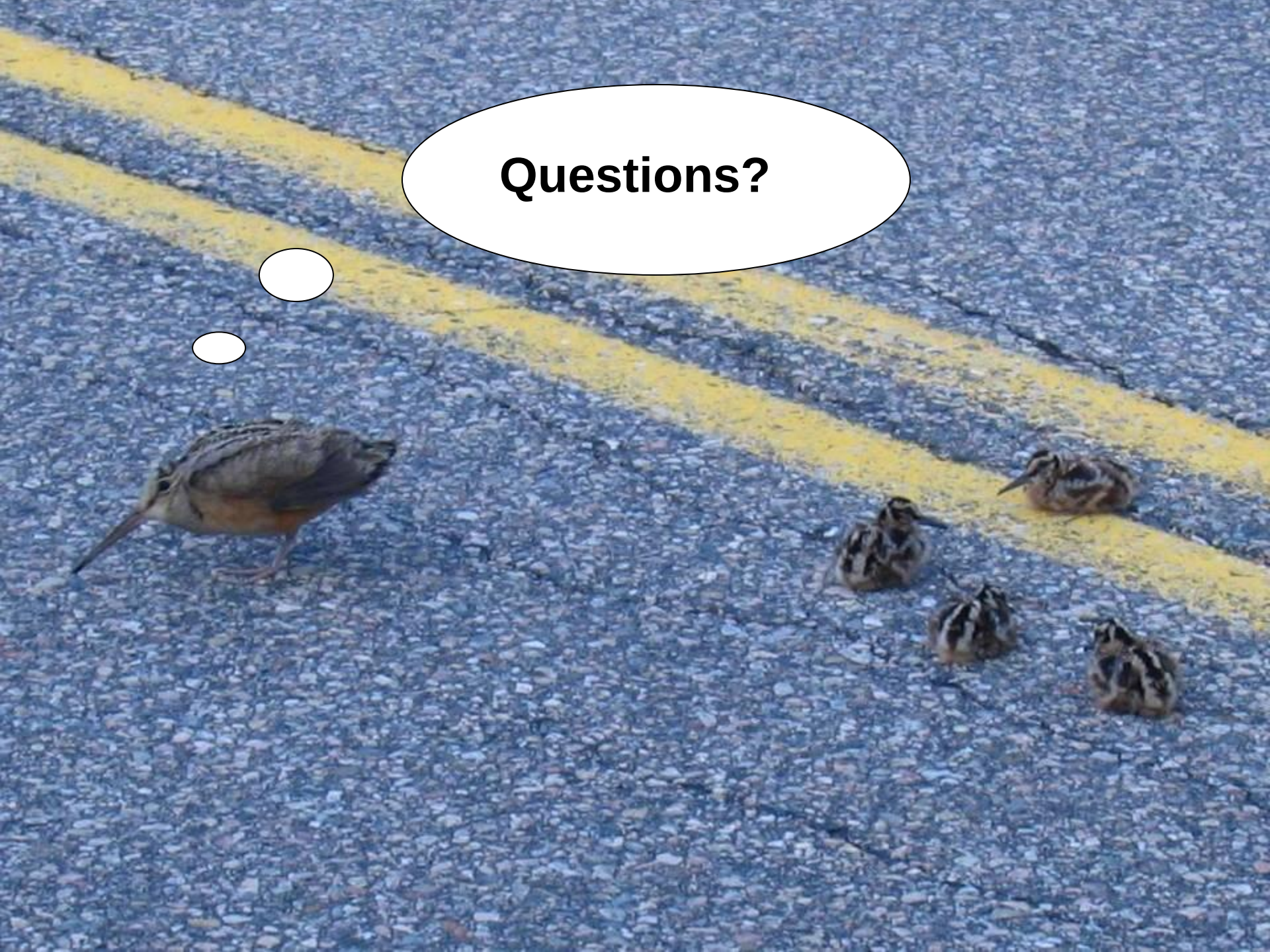
Questions?