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# Long-term Management of Canada's Used Nuclear Fuel: Progress Update

Presented to: Ontario Power Generation: Pickering Community Advisory Council

Presented by: Jo-Ann Facella, Director, Community Well-Being, Assessment and Dialogue

April, 2017

# Overview

- Triennial report published
- Working collaboratively with communities to advance site selection
- The project will only proceed with the involvement of the interested community, First Nation and Métis communities in the area, and surrounding communities, working in partnership to implement it
- Drilling of initial boreholes may begin Summer 2017



# Triennial Report 2014 to 2016

- Submitted *Progress Through Collaboration – Triennial Report 2014 to 2016* to the Honourable James Gordon Carr, Minister of Natural Resources



## Progress Through Collaboration

Triennial Report  
2014 to 2016

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# **Status of the Site Selection Process**

SASKATCHEWAN

1

2

3

MANITOBA

ONTARIO

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QUEBEC

### ● Communities in Step 3

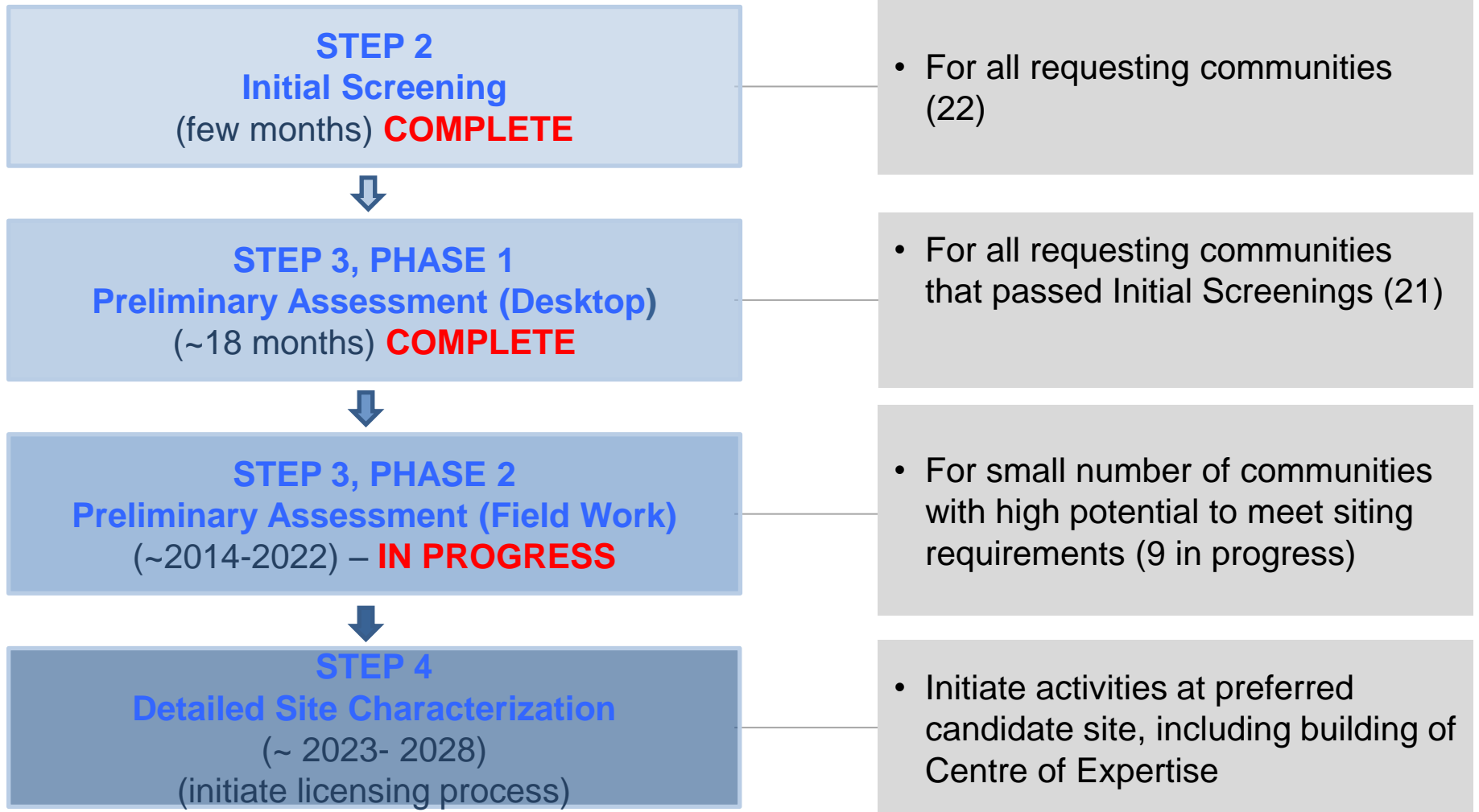
#### *Preliminary Assessments*

- |                 |                   |
|-----------------|-------------------|
| 5. Ignace       | 14. Elliot Lake   |
| 9. Manitouwadge | 20. Huron-Kinloss |
| 10. Hornepayne  | 21. South Bruce   |
| 11. White River | 22. Central Huron |
| 13. Blind River |                   |

### ● Communities not identified for further study

- |                                  |                     |
|----------------------------------|---------------------|
| 1. English River<br>First Nation | 8. Schreiber        |
| 2. Pinehouse                     | 12. Wawa            |
| 3. Creighton                     | 15. The North Shore |
| 4. Ear Falls                     | 16. Spanish         |
| 6. Nipigon                       | 17. Arran-Elderslie |
| 7. Red Rock                      | 18. Saugeen Shores  |
|                                  | 19. Brockton        |

# Multiple Stages of Assessment and Dialogue



*Timelines are illustrative, to guide planning. Actual timelines may vary.*

# Objective of Phase 2 Assessments of Sites:

To develop confidence on selection of a preferred location to take into detailed site characterization

## Safety

Confidence a deep geological repository can be developed with strong safety case at that location

## Transportation

Confidence a safe, secure and socially acceptable transportation plan can be developed

## Partnership

Confidence a strong partnership can be developed – with interested community, First Nation and Métis communities in the area, and surrounding communities

# Engagement

- Community driven to explore learning, guide field studies and build partnership
- Ongoing engagement with municipalities and Aboriginal communities in potential siting areas
- Expanded regional engagement





# Working With Communities



# 2017 Engagement on Transportation

- September 2016, NWMO published discussion document to support ongoing public learning and conversations about APM transportation and development of a planning framework



# Technical Studies

# Phase 2 Field Studies – Approach varies with the geological setting

## Northern Ontario – Crystalline Rock

### Initial General Field Studies

- Airborne geophysical surveys
- Observing geological features
- Detailed geological field mapping and, environment surveys

## Southern Ontario – Sedimentary Rock

### Initial General Field Studies

- Initial borehole drilling to advance understanding of the general geology
- Borehole locations not expected to be repository sites

Review findings with communities.

NWMO further narrows study areas to those with strongest potential.

### Repository-Scale Field Studies

- Borehole drilling and testing focused on potential repository sites
- Environment studies

### Repository-Scale Field Studies

- Borehole drilling and testing focused on potential repository sites
- Seismic reflection surveys and mapping
- Environment studies

**Field studies will be planned and implemented in collaboration with communities.**

# Approach for Initial Borehole Drilling in Northern Ontario

- Drill initial boreholes **at** or **near** a potential repository site to further advance understanding of geology
- Select a preferred location for initial borehole drilling based on integration of technical studies and input from people in the area



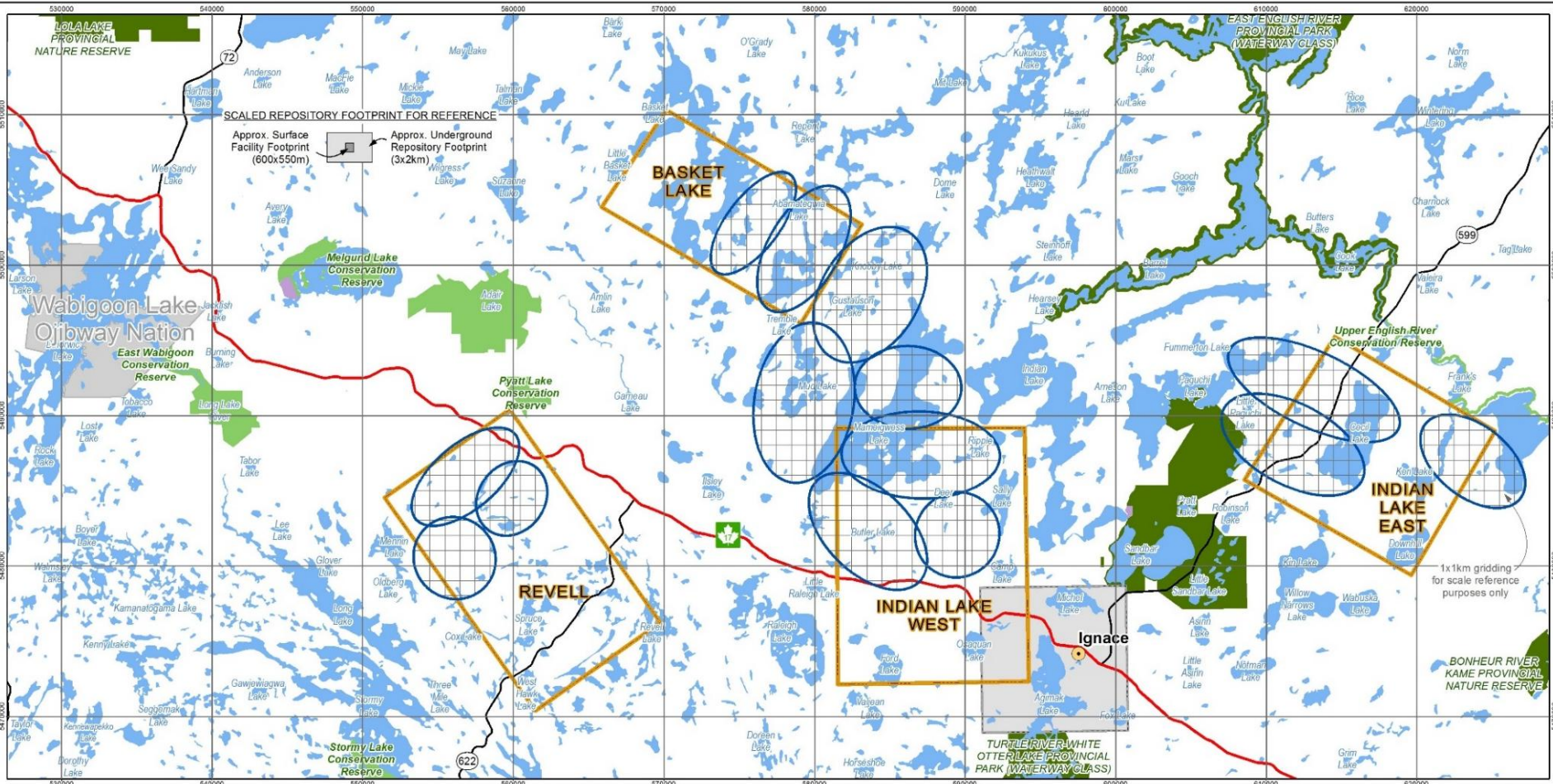
# Interweaving Indigenous Knowledge

- Traditional Knowledge
- Land use and occupancy
- Ceremony
- Asserted and Established Aboriginal and Treaty rights
- Trap lines

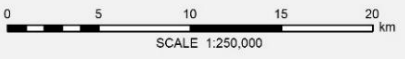
Indigenous intellectual property is protected as agreed with the people who choose to share that knowledge

*NWMO Aboriginal Policy and Indigenous Knowledge Policy*

# Areas Near Ignace discussed with people in the area



- LEGEND**
- Potentially Suitable Repository Area
  - Trans Canada Hwy
  - Highway
  - Provincial Park
  - Conservation Reserve
  - Forest Reserve
  - Wabigoon Lake Ojibway Nation
  - Ignace Municipal Boundary
  - Withdrawal Area
  - Waterbody



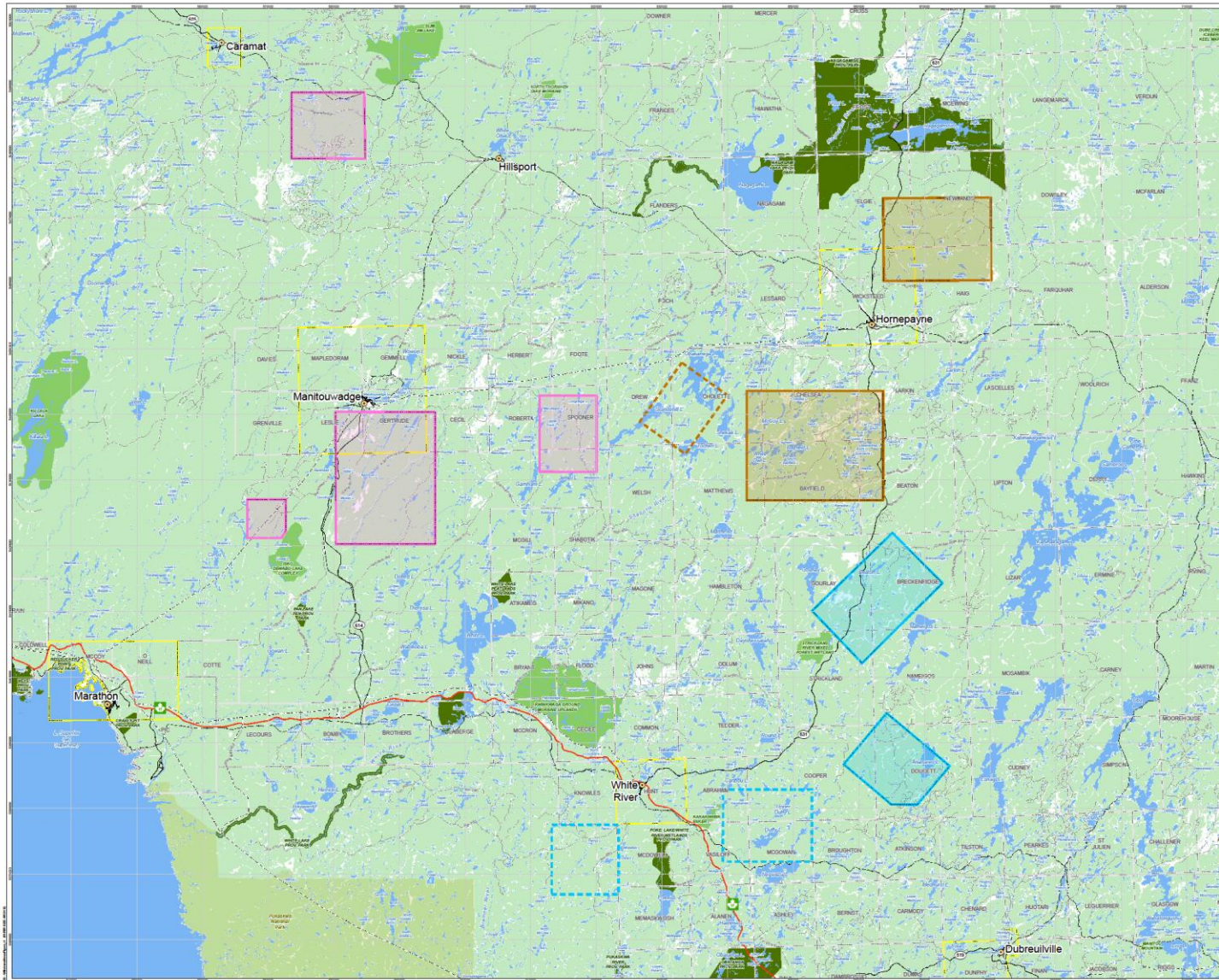
REFERENCES  
Base Data - MNR LIO, obtained 2009-2015, CANMAP v2006.4

Projection: Universal Transverse Mercator  
Datum: NAD83 Coordinate System: UTM Zone 15N



**IGNACE AREA**

# Areas Near Hornepayne, Manitowadge and White River



## NORTH OF SUPERIOR - WITHDRAWAL AREAS -



0 5 10 15 20  
km  
SCALE 1:250,000

### REFERENCES

Base Data - MNR LIO, obtained 2009-2015, CANMAP v2006.4

Projection: Universal Transverse Mercator  
Datum: NAD83 Coordinate System: UTM Zone 18N



### AREAS FOR GEOLOGICAL MAPPING\*

- Hornepayne
  - White River
  - Manitowadge
- \*Mapping involves visiting areas where rock is visible at surface

### AREAS NOT COVERED BY AIRBORNE SURVEY IN 2015

- Hornepayne
- White River

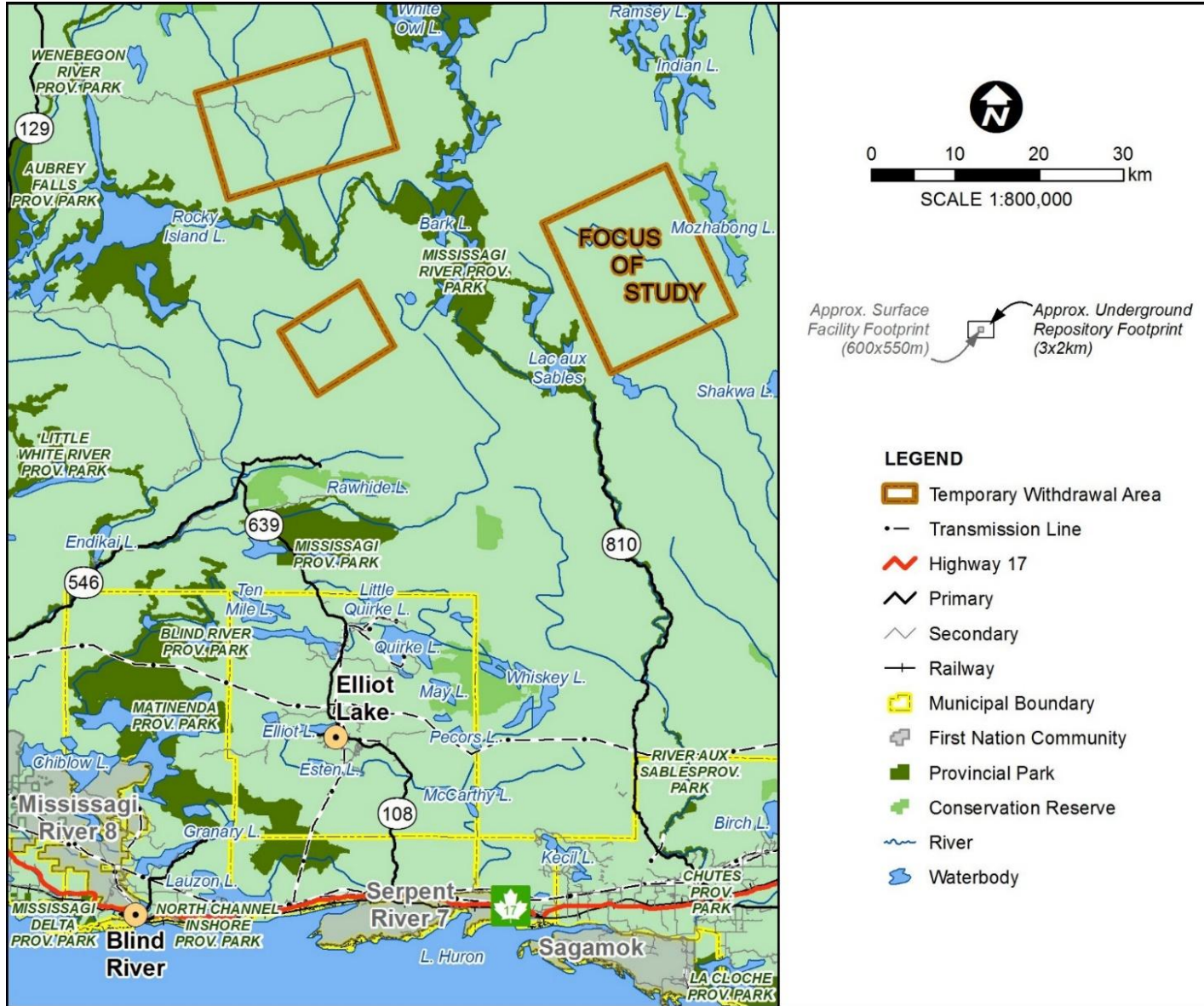
- ### LEGEND
- Community
  - Transmission Line
  - Highway 17
  - Road - Primary
  - Road - Secondary
  - Railway Active
  - Municipal Boundary
  - Geographic Township
  - National Park
  - Provincial Park
  - Conservation Reserve
  - Forest Reserve
  - Wounded Area
  - Waterbody

Approx. Surface Facility Footprint (dashed)

Approx. Underground Facility Footprint (dotted)



# Areas Near Elliot Lake and Blind River



# Southern Ontario

- Municipally owned land parcels are being reviewed for their suitability for initial research borehole
- Initial borehole is for research purposes only and is not expected to be a repository site



# Next Steps

- Continue to advance field studies
- Work to develop a supportive partnership in siting areas involving interested community, First Nations and Métis communities in the area
- Continue to narrow down the number of study areas through ongoing stock-taking of assessment findings
- Advance development of planning framework for transportation

# Questions