

**nwmo**

NUCLEAR WASTE  
MANAGEMENT  
ORGANIZATION

SOCIÉTÉ DE GESTION  
DES DÉCHETS  
NUCLÉAIRES



# Overview of the NWMO and the Site Selection Process

Jo-Ann Facella

Director of Community Well Being, Assessment & Dialogue

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# NWMO: Who We Are

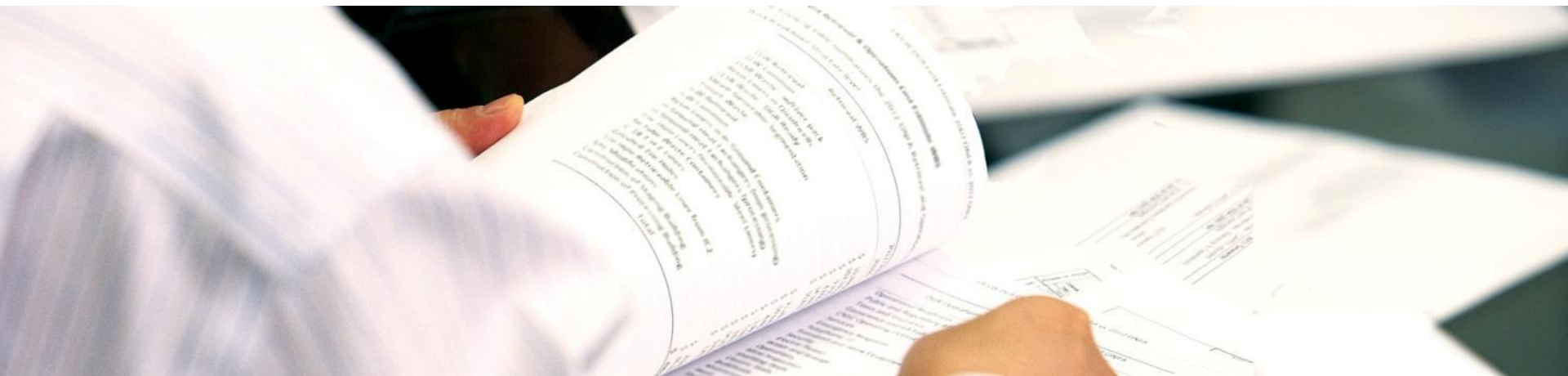
- Formed in 2002 as required by *Nuclear Fuel Waste Act*
- Funded by Canada's nuclear energy corporations
- Operates on a not-for-profit basis

**Our mission is to develop and implement collaboratively with Canadians, a management approach for the long-term care of Canada's used nuclear fuel that is socially acceptable, technically sound, environmentally responsible, and economically feasible.**



# What Canadians Told Us

- Safety and security is top priority
- This generation must take action – we owe it to future generations
- Be consistent with best international standards and practices
- Approach must be adaptable – allow improvements based on new knowledge or societal priorities



# Adaptive Phased Management (APM)

APM emerged from dialogue with citizens and experts – best met key priorities

## A Technical Method

- » Centralized containment and isolation of used nuclear fuel in a deep geological repository
- » Continuous monitoring
- » Potential for retrievability
- » Optional step of shallow underground storage\*

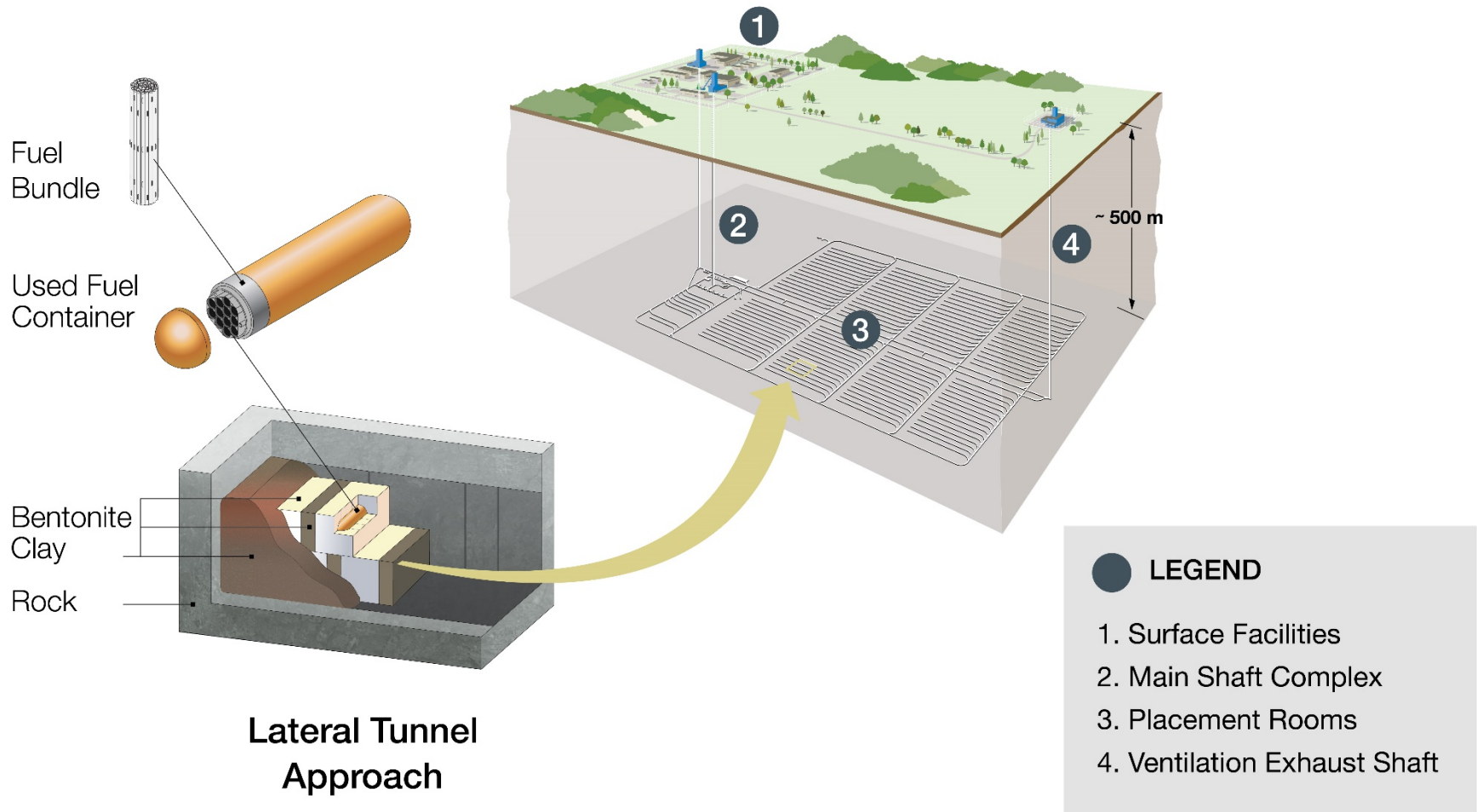
\* Temporary shallow storage at the deep geological repository is optional and not currently included in the NWMO's implementation plan.

## A Management System

- » Flexibility in pace and manner of implementation
- » Phased and adaptive decision-making
- » Responsive to advances in technology, research, Indigenous Traditional Knowledge, societal values
- » Open, inclusive, fair siting process – seek informed, willing host community
- » Sustained engagement of people and communities throughout implementation

APM selected by Federal government June 2007

# Deep Geological Repository (DGR)



<1%

MANITOBA

~90%

ONTARIO

~2.8 Million Fuel Bundles Safely Stored

~5%

QUEBEC

NEW BRUNSWICK

~5%

1

2

3

4

5

6

7

### Interim Storage Facilities

1. Whiteshell Laboratories, Manitoba
2. Bruce Nuclear Generating Station, Ontario
3. Pickering Nuclear Generating Station, Ontario
4. Darlington Nuclear Generating Station, Ontario
5. Chalk River Laboratories, Ontario
6. Gentilly Nuclear Generating Station, Quebec
7. Point Lepreau Nuclear Generating Station, New Brunswick



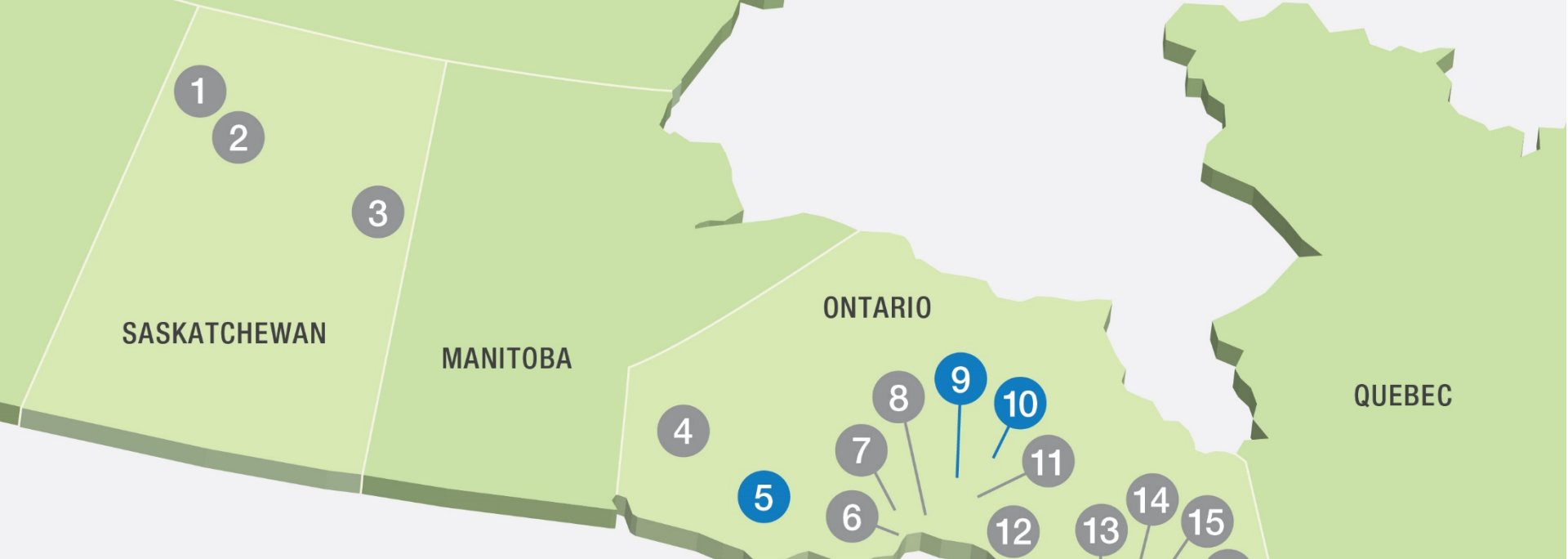
# Site Selection Process: Initiated May 2010

## Seeking an informed and willing host with a suitable geologic formation

- Developed through two-year public dialogue
- Multi-stage technical and socio-economic assessment
- Phased process over many years
- Communities expressed interest to participate
- Communities can choose to leave the process at anytime

**The project will only proceed with the involvement of the community, First Nation and Métis communities in the area, and surrounding communities working together to implement it.**





## Communities That Expressed Interest in the Site Selection Process

### ● Assessments Underway in the Area

- 5. Ignace
- 9. Manitouwadge
- 10. Hornepayne
- 19. Huron-Kinloss
- 21. South Bruce

### ● Communities Not Identified for Further Study

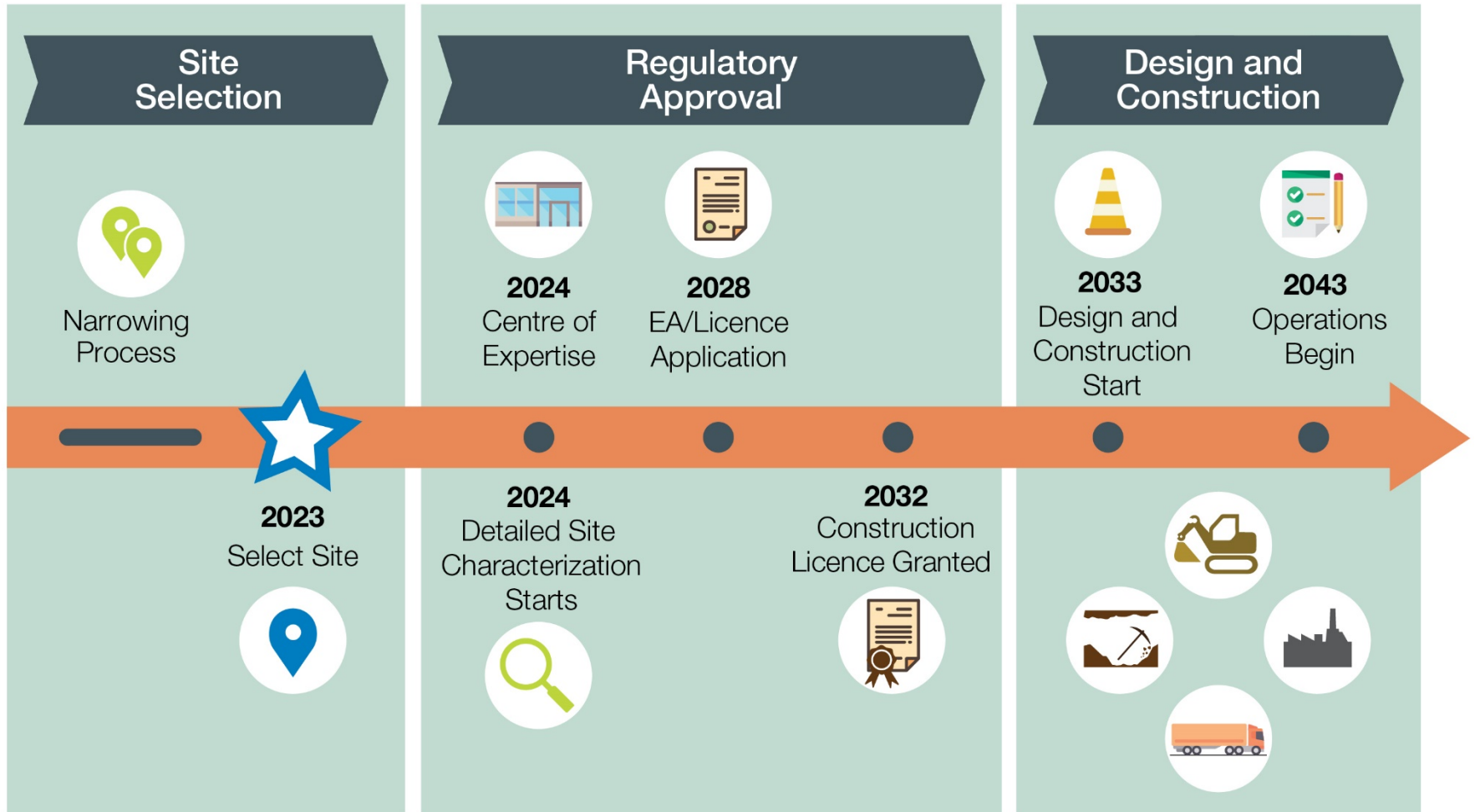
- 1. English River First Nation
- 2. Pinehouse
- 3. Creighton
- 4. Ear Falls
- 6. Red Rock
- 7. Nipigon
- 8. Schreiber
- 11. White River
- 12. Wawa
- 13. Blind River
- 14. Elliot Lake
- 15. The North Shore
- 16. Spanish
- 17. Saugeen Shores
- 18. Arran-Elderslie
- 20. Brockton
- 22. Central Huron







# Project Timelines



# 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



# Technical Site Evaluation Process

- Designed to protect people and the environment
- Progressive and thorough:
  - Desktop studies
  - Observing geological features
  - More focussed field work
- Comprehensive evaluation criteria
- Community involvement at every step
- Subject to third-party reviews



# Community Well-Being

- Project commitment to contribute to long-term well-being
- Communities encouraged to consider project in context of long-term interests
- Community needs to be involved to help plan in a way that enhances well-being
- The extent to which the project contributes to the community's vision is a matter for the community to discuss and assess



# Many Dimensions of Well-Being



Communities will want to consider the APM project from all dimensions of long-term sustainability





# Proposed Roadmap to Explore Partnership (2017-2022)



# Next Steps

- Advance community learning and reflection on the project
- Prepare for next step on Partnership Roadmap – Vision for the project
  - Take stock of existing information
  - Identify additional information which will be needed to begin discussions
  - Consider what the project may look like if it were to come to Huron-Kinloss
- Begin discussions on siting in the area
  - Potential locations
  - Engaging the community
- NWMO ongoing stock taking