

» Nuclear Waste Management Organization

Canada's Plan

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March 12, 2025

nwmo

NUCLEAR WASTE
MANAGEMENT
ORGANIZATION

SOCIÉTÉ DE GESTION
DES DÉCHETS
NUCLÉAIRES



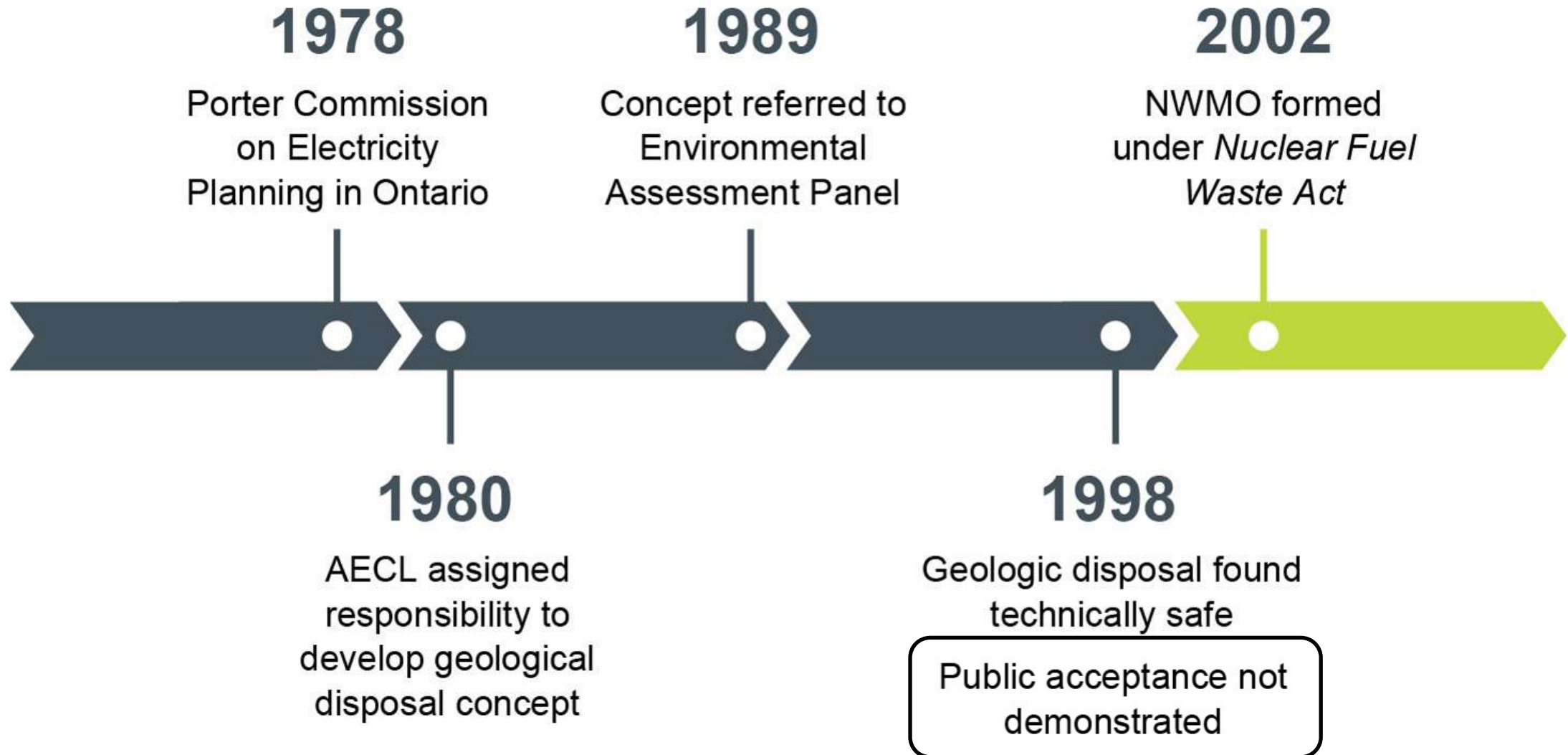


Land acknowledgment

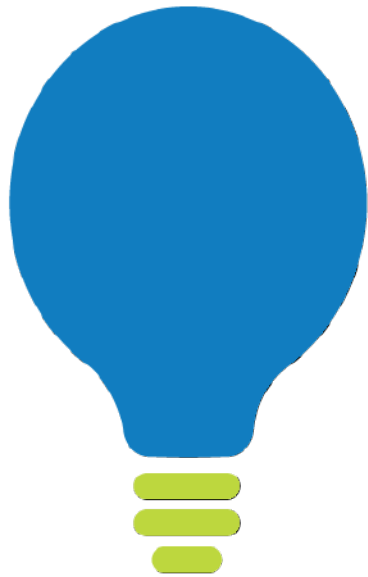
STION

A photograph of four workers in a snowy forest. They are wearing high-visibility orange and yellow safety vests over dark clothing. One worker in the center is holding a device, possibly a scanner or camera, and looking towards the others. The background is a dense forest of tall evergreen trees under a grey sky. The ground is covered in snow with some fallen branches.

**We are the
Nuclear Waste
Management
Organization.**



Here to implement a safe, long-term plan



Created in 2002

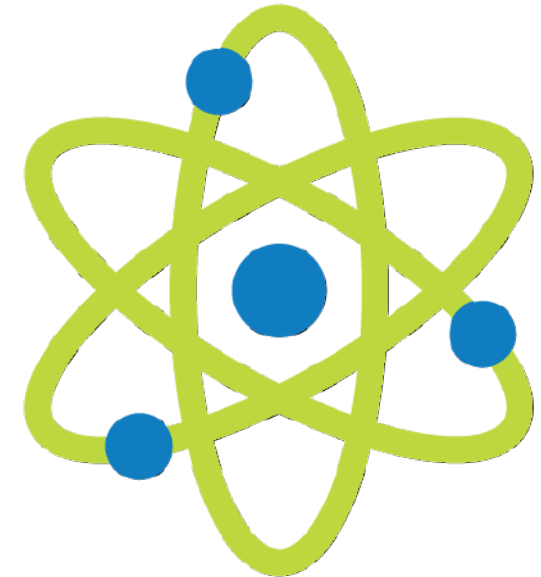
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NUCLEAR WASTE
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Through dialogue with
Canadians and Indigenous
peoples, Canada's plan
emerged



A non-profit organization
funded by waste owners

Common ground in public priorities



Safety and security must be preeminent



Assume responsibility now, in this generation



Aligns with international best practice



Approach must be adaptable

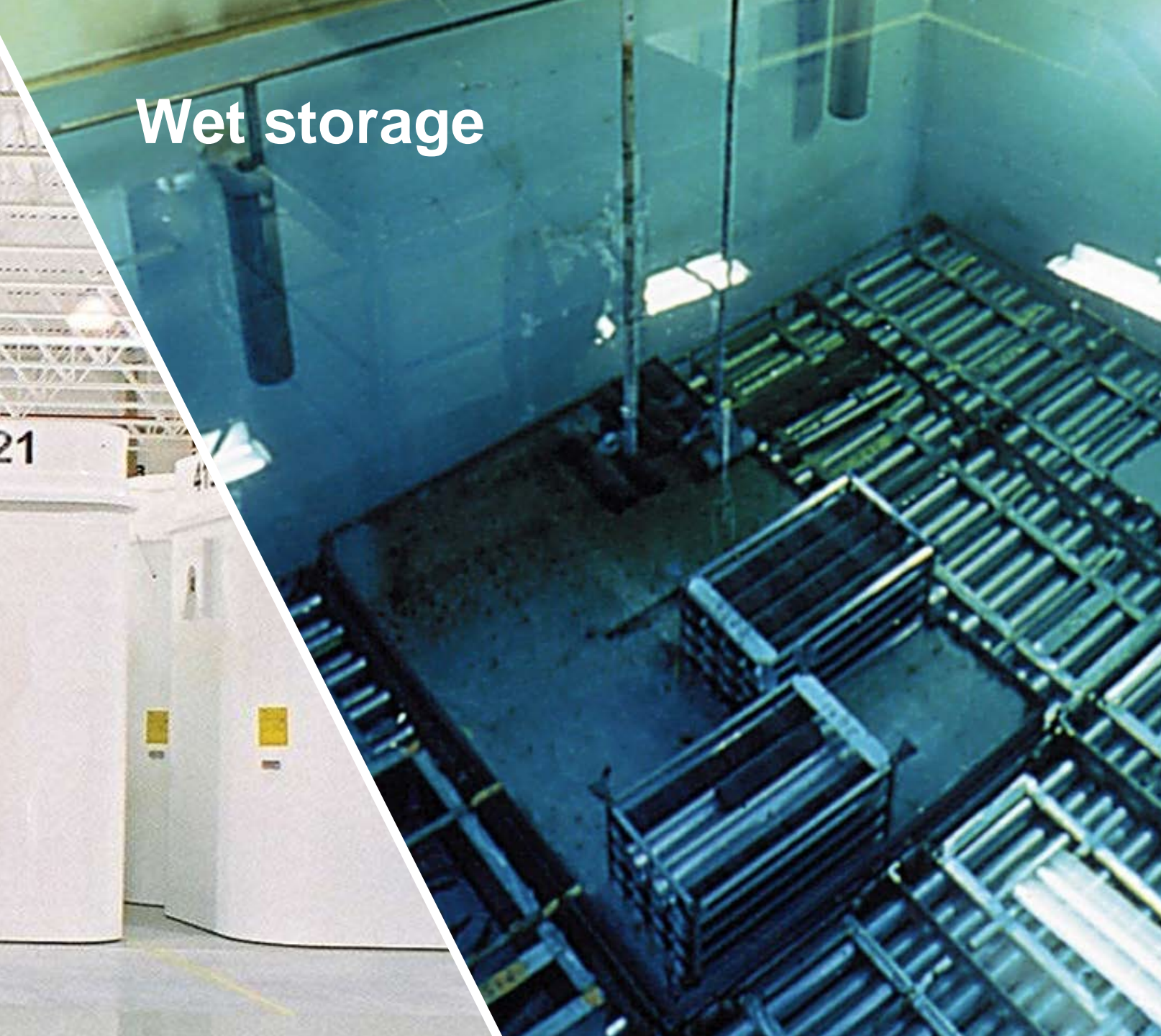
What is Canadian Nuclear Fuel?



Dry storage



Wet storage



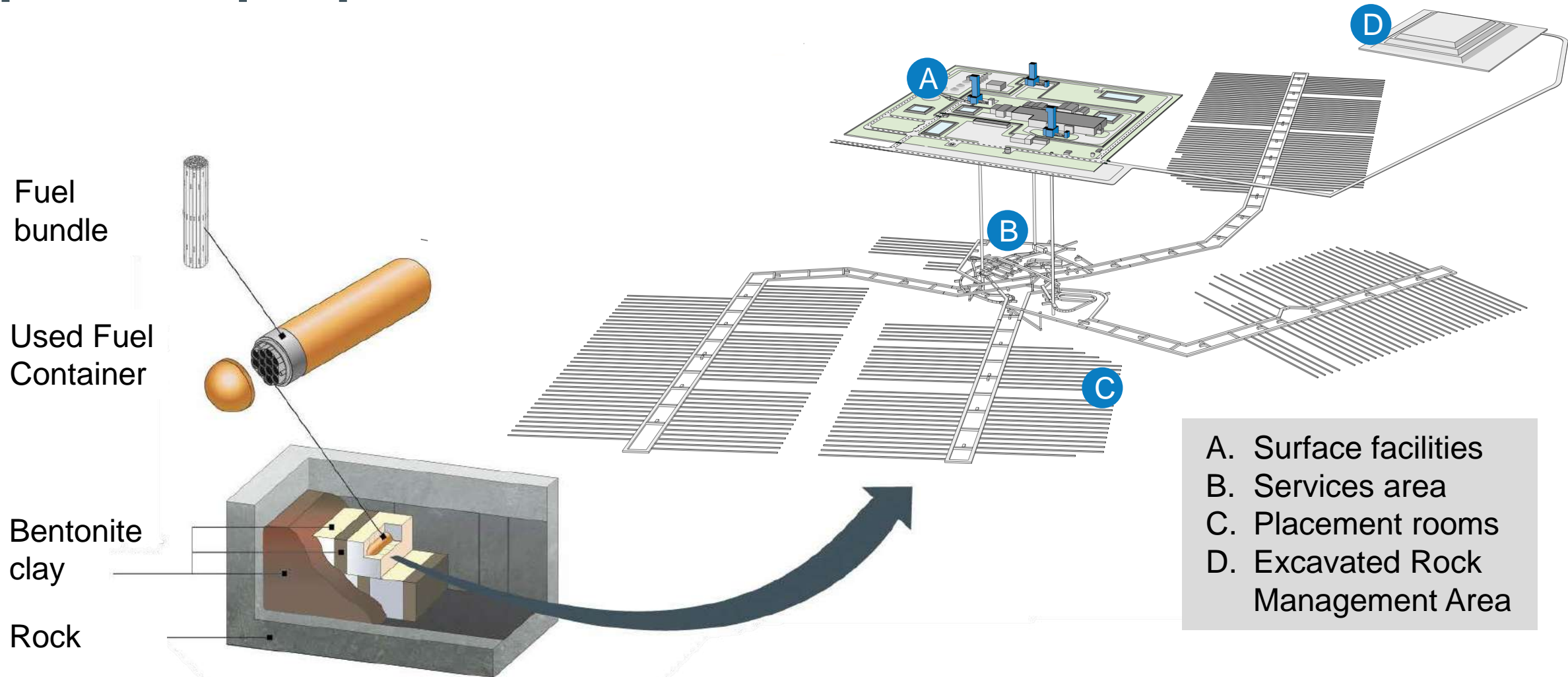


**Canada's plan is
adaptive. We call it
*Adaptive Phased
Management.***

Canada's plan will ensure the
safe, long-term management
of used nuclear fuel inside
a deep geological repository.

The NWMO exists to implement
that plan in a manner that will
protect people and the environment
for generations to come.

How a deep geological repository protects people and the environment



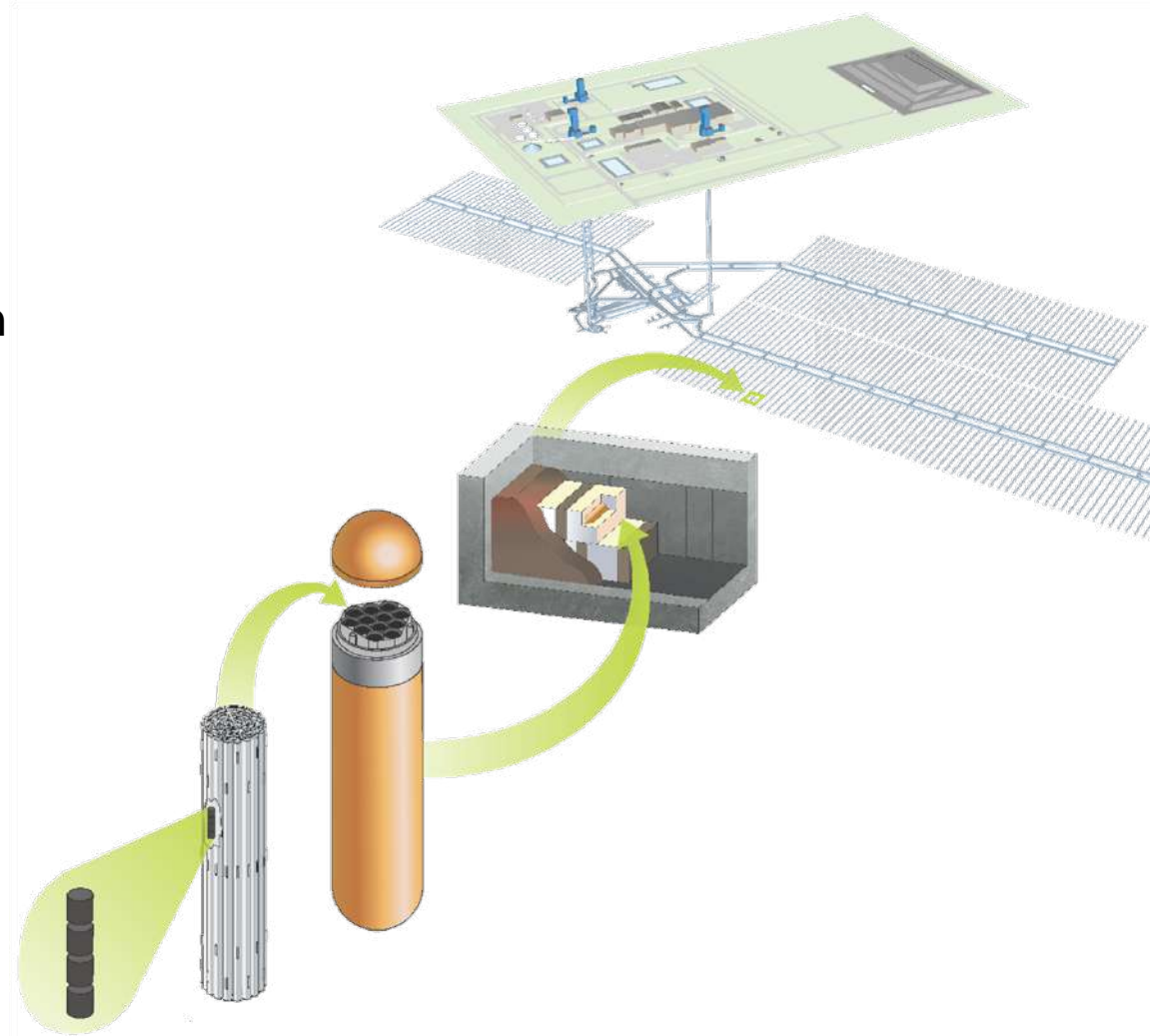
Safety Strategy

Isolated, stable and predictable

- Deep rock, old groundwaters
- Low seismicity, minimal glacial perturbation

Multiple barriers

- Durable waste form
- Robust corrosion-resistant container
- High-density bentonite seal
- Low-permeability rock



Site Selection Process Initiated May 2010

Seeking an informed and willing host with a suitable geologic formation

- Multi-stage technical and socio-economic assessment approach
- Phased process over many years
- Communities express interest to participate
- Communities can choose to leave the process

The project will only proceed with interested community, First Nation and Métis communities and surrounding municipalities working in partnership.

Learn More Program





■ **Host communities for selected site**

5. Ignace and Wabigoon Lake Ojibway Nation

● **Other communities that expressed interest in the site selection process**

- | | |
|-------------------------------|---------------------|
| 1. English River First Nation | 12. Wawa |
| 2. Pinehouse | 13. Blind River |
| 3. Creighton | 14. Elliot Lake |
| 4. Ear Falls | 15. The North Shore |
| 6. Red Rock | 16. Spanish |
| 7. Nipigon | 17. Saugeen Shores |
| 8. Schreiber | 18. Arran-Elderslie |
| 9. Manitouwadge | 19. Huron-Kinloss |
| 10. Hornepayne | 20. Brockton |
| 11. White River | 21. South Bruce |
| | 22. Central Huron |



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Phase 1 Activities

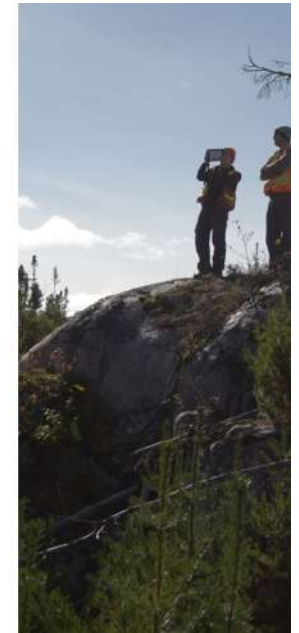
- **Agreement to proceed**
NWMO and accountable authorities
- **Safety**
Desktop studies of geology, environment, safety, engineering, transportation
- **Community well-being**
Desktop studies and engagement
 - Municipal
 - Aboriginal
- **Stock-taking**
Review findings about potential suitability, identify areas for further study



Technical Evaluation Criteria

Six safety functions

1. Safe containment and isolation of used nuclear fuel
2. Long-term resilience to geological processes and climate change
3. Isolation of used nuclear fuel from future human activities
4. Amenable to site characterization and data interpretation activities
5. Safe construction, operation and closure of the repository
6. Safe, secure transportation routes



Phase 2 - Initial Studies

- Dialogue and planning with interested community, First Nation and Métis communities and surrounding municipalities
- Airborne geophysical surveys
- Observing geological features
- Incorporating local and Aboriginal knowledge
- Environmental surveys
- Identification of preliminary study areas
- More intensive learning



Phase 2 - Further Engagement and Focussed Field Work

- Engagement activities to improving understanding of the study area
- Detailed geological and environmental mapping
- Explore potential for partnership with:
 - local community
 - First Nation and Métis communities
 - surrounding communities
- Borehole drilling and testing in study area

Review findings, conclude work
in areas with low potential





**Wabigoon Lake
Ojibway Nation-
Ignace area**



**Saugeen Ojibway
Nation-South Bruce
area**

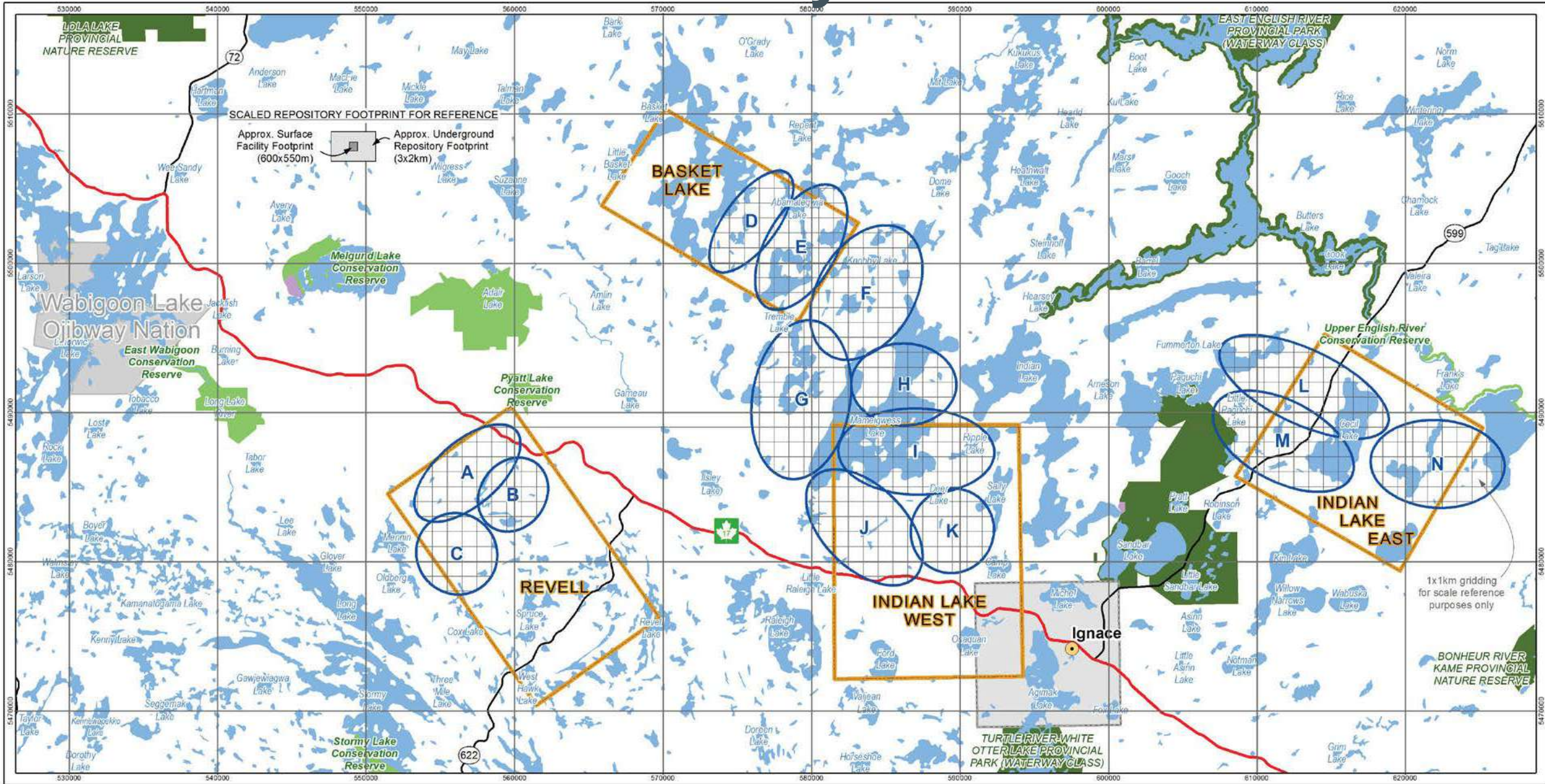
Site Investigation: Wabigoon Lake Ojibway Nation - Ignace



Site Investigation: Saugeen Ojibway Nation - South Bruce



The Study Areas



The Revell Batholith (BH-04)



Canada's plan will only proceed in an area with *informed* and *willing* hosts, where the municipality, First Nation and Métis communities, and others in the area are working together to implement it.

We cannot and will not do this without Canadians and Indigenous peoples working together to implement Canada's plan.

Where Did We Want To Be By 2024?

**Strong
Aligned
Partnerships**





In-Person Engagement

Learn More About the Safe and Secure Trans

Transportation

Transporting radioactive materials is a complex task that is strictly regulated in Canada and around the world. Au cours des 50 dernières années, plus de 20 000 applications de combustion nucléaire ont été affectées en toute sécurité dans le monde. Le colis doit lui-même suivre une série d'étapes de sécurité et répondre aux exigences réglementaires.

- Package
- Testing
- Colis
- Epreuves
- International Experience
- Règlements

Active Listening



nwmo

Please select the video you wish to

Videos in English:	Videos in French:
IK Policy	IK Policy
Reconciliation: Tieser	Reconciliation: Tieser
Voices of Reconciliation	Voices of Reconciliation
Voices of Reconciliation (2)	Voices of Reconciliation (2)
Reconciliation Statement	Reconciliation Statement

MULTIPLE-BARRIER SYSTEM
SYSTÈME À BARRIÈRES MULTIPLES

THE COUNCIL OF ELDERS AND YOUTH
LE CONSEIL DES ANES ET DES JEUNES

Community Liaison Committees





Tours

Fostering Community Well-Being



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

Why 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



Centre of Expertise



At or near the repository site, a Centre of Expertise will be built to support our work – initially by facilitating safety-oriented testing and assessment, but also by serving as a hub for community interests and innovation.

Hosting Agreements

- Developed later in the site selection process
- Involved the two final siting areas (both Municipal and Indigenous)
- Communities utilized independent lawyers and consultants
- NWMO reimbursed communities for all negotiations (communities should not be out of pocket for having participated in the process)

Hosting Agreements

- **Ignace** Hosting agreement \$169M over life of project
- **Wabigoon Lake Ojibway Nation** (A Sovereign Nation) negotiated with NWMO but not made public
- **South Bruce** hosting agreement \$418M over life of project
- **Saugeen Ojibway Nation** (A Sovereign Nation) did not negotiate a hosting agreement

Ignace

“The Parties of this Agreement agree that the purposes of this Agreement include;

1. A path forward if the Municipality is selected as the host community and a path forward if the Municipality is not selected as the host community.
2. Facilitate effective communication between the Parties through either process through the sharing of relevant information, on a regular and ongoing basis, during the Term;
3. Develop and maintain a strong working relationship between the Parties throughout the Term;
4. Align the interests of the Parties in respect of the Project;
5. Setting out the process and manner by which willingness and support for the Project by the Municipality shall be evidenced prior to the Commencement Date;
6. Evidence the Municipality’s Agreement to be a Willing Host, if that is the outcome of the Municipality’s Willingness Process and the Project Area is selected as the site for the Project;
7. Describe the Project, including NWMO’s process for advancing the Project design in accordance with Applicable Laws and the Regulatory Approvals; and
8. Establish a framework for the Municipality’s participation in the Regulatory Approvals processes for the Project, as if the Municipality is selected as the site for the Project.

South Bruce

“This Hosting Agreement maps out what happens if South Bruce decides it is a willing host and selected for the NWMO Project to safely store Canada’s used nuclear fuel. It also sets out how South Bruce would exit the process if it is not a willing host or it is not selected by the NWMO.

The agreement is based on 36 Guiding Principles developed in consultation with the South Bruce community in 2020. The Principles reflect the community's shared expectations and priorities for the Project.”

Compelling Demonstration of Willingness (Test of Public Support)

Ignace

- “Deliberative Democracy” – multiple indicators including vote
- Used third-party consultant to remove any bias
- 77.3% in favour of hosting the site

Wabigoon Lake Ojibway Nation

- did not disclose vote method or results, but indicated publicly the yes vote exceed the results of the Ignace “vote”

Compelling Demonstration of Willingness (Test of Public Support)

South Bruce

- Public referendum (6 months notice)
- Results: 51.7% in favour of hosting the site
- A binding decision for municipal council

Saugeen Ojibway Nation

- Did not advance a willingness decision

“WLON views our role as the potential host for Canada’s used nuclear fuel as one of the most important responsibilities of our time. We cannot ignore this challenge and allow it to become a burden for future generations.”

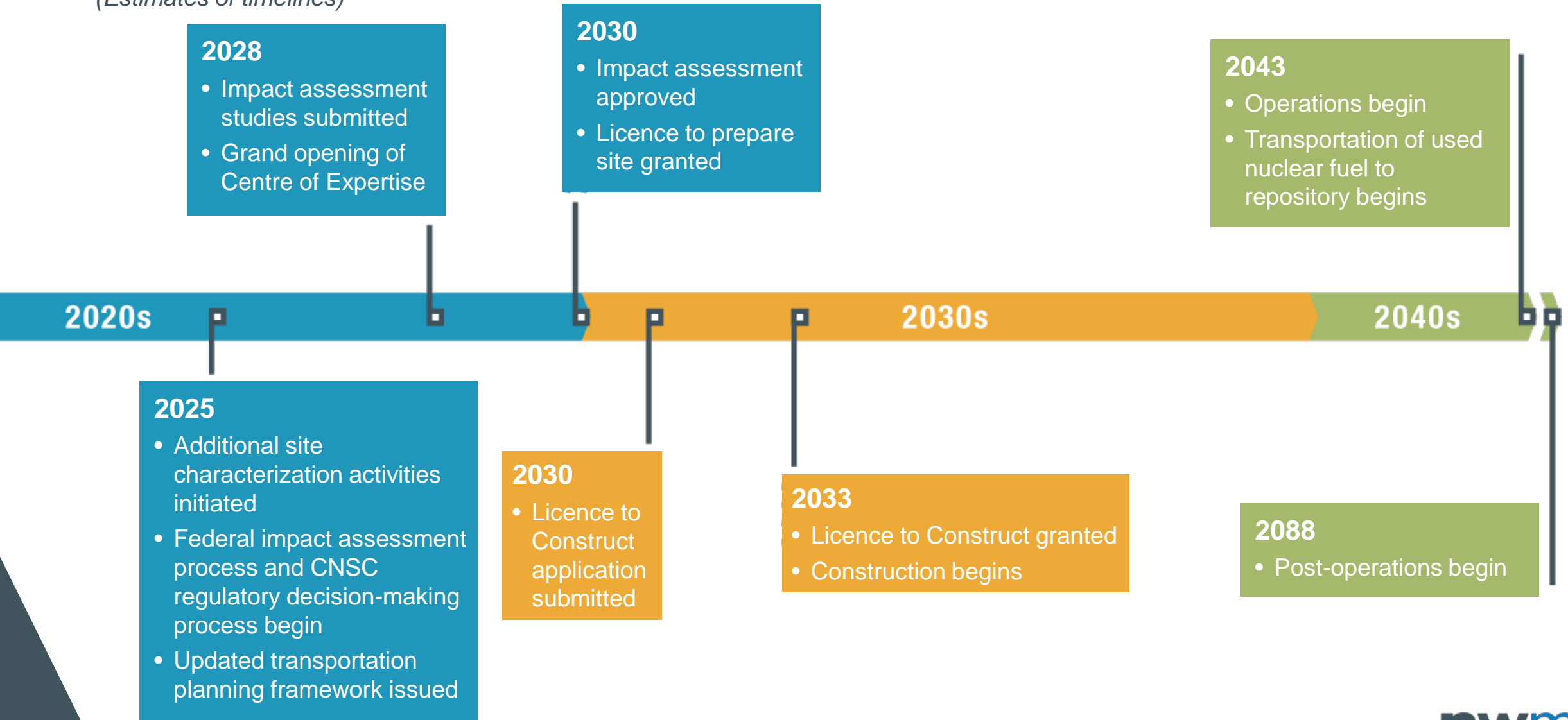
Chief Clayton Wetelainen,
Wabigoon Lake Ojibway Nation

“Today’s announcement marks the beginning of the future of this community, for its residents, our youth and for generations to come.”

Mayor Kim Baigrie,
Township of Ignace

What's next?

(Estimates of timelines)



Thank you

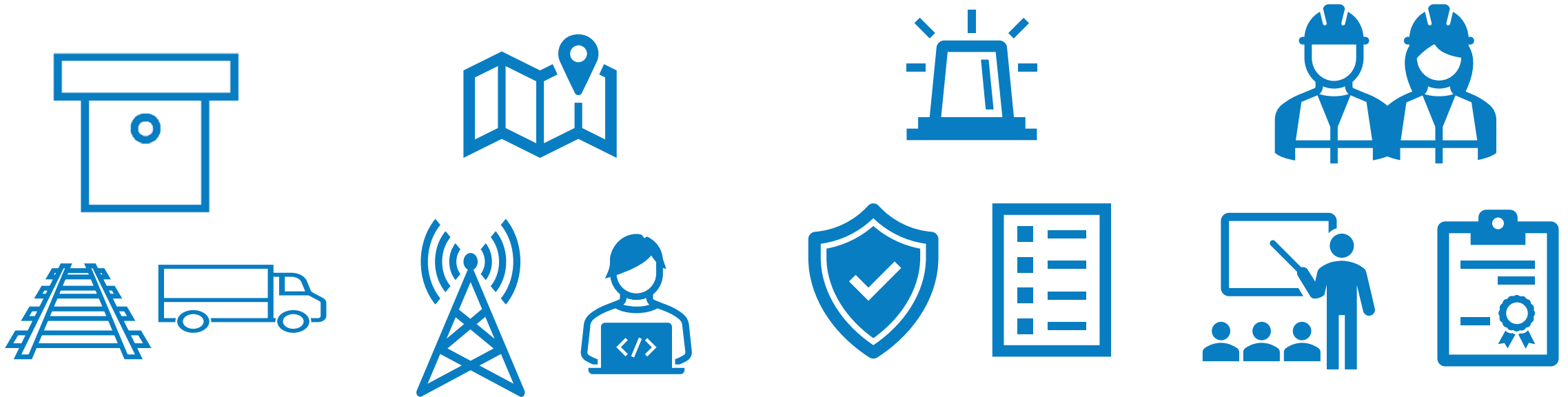
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 www.nwmo.ca



Multi-Layered Safety in Transport



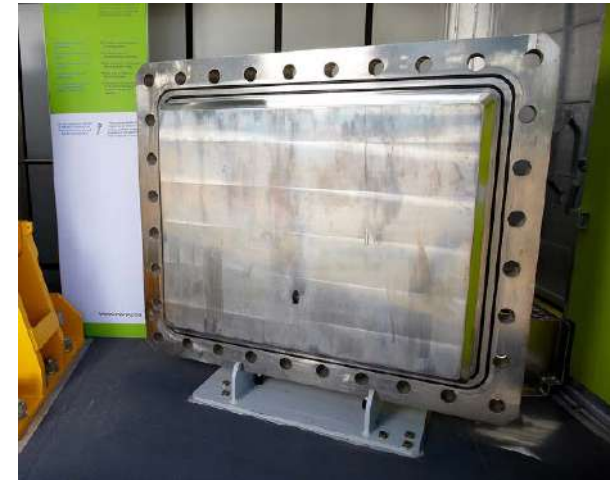
Certified and registered packages

Operational controls

Security and emergency management

Management System and Compliance Assurance

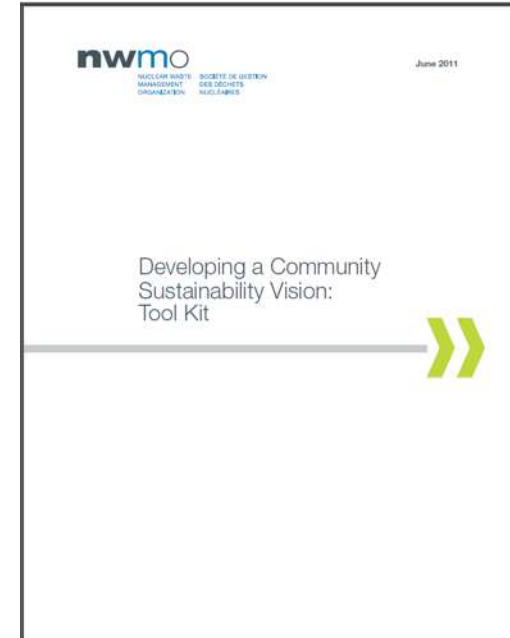
Multi-Layered Safety in Transportation





Community visioning

- Approach
 - Introduce visioning in the context of NWMO's project
 - Financial support offered
 - NWMO offered a toolkit to support communities visioning efforts
- Experience/lessons
 - Independent vs. collaborative exercise
 - Unfamiliar process to most
 - Give the process the time it needs (Phased approach, many workshops)
 - Allow time for reflection
 - Utilize skilled facilitator/consultants to support
 - Not easy to solicit broad community input
 - Visioning sets a foundation, the visions will evolve over time



Community Engagement Activities

- Create awareness and understanding
 - Open houses, “Learn more” centre, Mobile Learn More exhibit
 - Walk the land with NWMO, visit borehole sites, attend trade shows and conferences
 - Delegations to Councils, kitchen table talks, meat BINGO
- Increase confidence in safety
 - SME speakers
 - Comprehensive reports
- Increase understanding of improvements well-being:
 - Identify key questions still to be addressed for community
 - Review and interpret new information
 - Explore potential to foster well-being of surrounding area

Lesson Learned:

- Plain language learning materials a must
- Trust is key and takes a time to develop
- Real world experience (dry storage tours) – “...it’s not what I thought it was”
- Don’t rely on “snore more” slide deck

Youth Engagement

- Approach

- Priority for NWMO, Communities, Advisory bodies
- Dedicated learning opportunities – not just nuclear, but STEM
- Involve in community visioning activities
- Learning resources provided to communities to promote skills development
- Publish annual youth engagement report

- Experience/lessons

- Hands on youth activities in Learn More office
- (Scientists in schools, Science North, SHAD)
- Age appropriate learning materials necessary
- Some reluctance from school boards to participate



“Community Liaison Committees”

- Approach

- Municipality is “Accountable Authority”
- CLC a volunteer led committee of Council
- CLC is connection between NWMO and elected officials and citizens
- CLC not formal decision makers

- Experience/lessons

- Terms of reference – committee make up, activities, term length (long process!!)
- Capable, trusted chair
- Membership open to all points of view, youth, marginalized members of society
- Meetings open to the public, minutes posted online
- Community benefits from having a paid CLC coordinator
- Provide opportunities for committee learning (capacity building – technical, communications, board training)