NUCLEAR WASTE MANAGEMENT ORGANIZATION
SOCIÉTÉ DE GESTION DES DÉCHETS NUCLÉAIRES

# Phase 2 Preliminary Assessment

# Potential for Partnership

## TOWN OF BLIND RIVER, CITY OF ELLIOT LAKE AND AREA, ONTARIO

**SR-2017-06**

**NOVEMBER 2017**

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# Phase 2: Preliminary Assessment – Potential for Partnership

City of Elliot Lake and Town of Blind River and Area

November 24, 2017

## Phase 2: Preliminary Assessment - Potential for Partnership

## City of Elliot Lake and Town of Blind River and Area

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# 1.0 Introduction

The Nuclear Waste Management Organization (NWMO) is responsible for implementing Adaptive Phased Management (APM), Canada's plan for the safe, long-term care of used nuclear fuel. APM involves the development of a large infrastructure project spanning many decades that will include a deep geological repository and Centre of Expertise for technical, environmental and community studies.[1]

The NWMO is currently in the site selection phase of implementing APM, (Step 3 - Phase 2 of a 9-Step process). The current plan is to select one community/area to host the APM project by 2023 which then marks the beginning of the fourth step of APM implementation.[2] This report summarizes the current understanding of the potential for partnership between Elliot Lake and Blind River and area and the NWMO. This preliminary report is based on five years of engagement and dialogue in the area. Phase 1 of this siting Step involved documentation of the current socio-economic conditions in the communities and then postulating what might be the possible implications of the APM project on community well-being (CWB) for each community and the wider area.[3] Leveraging this knowledge, Phase 2 activities focused on evolving our understanding of the potential for partnership with those comunities and in the broader area using key factors that are described in the following section.

It is important to note the focus of this work was to engage community and area leaders and residents at multiple levels as a means to gather evidence and understanding/knowledge. This allows us to derive preliminary assessments of the potential for achieving a partnership arrangement in the area with the NWMO to jointly implement APM.

The information and insights presented in this report, although based on extensive in-community/area engagement with community leaders, groups and residents over many years, are qualitative in nature. No surveys or statistical analyses have been performed at this early stage in the siting process. Rather the focus has been on engaging, listening and synthesizing what people have said during these dialogues.

The community and area engagement process and Phase 2 studies is ongoing. More is to be learned by both the communities and the NWMO. Therefore, this report represents our understanding of the potential for partnership in the area at this point in time.

Please note that this report focuses on municipalities and other communities in the area.

[1] Nuclear Waste Management Organization (2017), *Implementing Adaptive Phased Management 2018 to 2022*. Page 5.
[2] Nuclear Waste Management Organization (2017), Triennial Report 2014 to 2016. Page 77.
[3] Hardy Stevenson and Associates Limited, 2014. CWB Assessment: City of Elliot Lake. Prepared for NWMO. Hardy Stevenson and Associates Limited, 2014. Community Well-Being Assessment: Town of Blind River. Prepared for NWMO.

# 2.0 Approach and Methods

The approach and methods used to understand the potential for partnership between the area and the NWMO was based on an extensive engagement program with multiple levels of leaders and residents. This section summarizes the key indicators relied on to assess the potential for partnership followed by an overview of the engagement program.

## 2.1 Partnership Assessment Criteria and Indicators

Over the course of all engagement activities in the area, the focus was on the following key criteria and indicators:

A. Support for the project
   i. Measured at three levels namely the community leadership, community grassroots and the leadership and/or grassroots of neighbouring communities.
   ii. Confidence in the safety case as measured by the degree to which any or all levels of the community understand the safety case and what is their degree of confidence/acceptance of it.
   iii. Support for field studies as measured by the degree of social acceptance of test boreholes.

B. Potential to identify a socially acceptable repository site as measured by the degree to which community members are willing to discuss options and exchange ideas on the topic.

C. Potential for the APM project to align with community and area aspirations for community well-being and development.

## 2.2 Community Engagement and Other Sources of Information and Insight

The following is an overview of engagement activities conducted for Step 3, Phase 2 studies in the area in 2015 to 2017. These activities provide insight for understanding the potential for partnership in the area. In addition to ongoing learning, the key focus of engagement activities was on preparation for field studies and input on the social considerations and community preferences for identifying potential test borehole drilling locations. It should be noted that the candiate borehole sites are also considered potential repository sites. In addition, activities extended beyond the communities, to engage in an initial way, those having knowledge of/interests in the study areas (e.g., trappers, camp owners/operators, forestry organizations), and the leadership of municipalities in the surrounding area.

### 2.2.1 Ongoing Learning

There was a continuing stream of community engagement activities in Elliot Lake and Blind River in addition to engagement in the wider area. A wide variety of engagement mechanisms have been used to inform the communities about the project and in turn, listen to interests and opinions. Communication and community engagement methods employed by the NWMO over the past five years included the following:

- An extensive and routinely updated NWMO project website;

- Direct mail and email distributions on the project and NWMO sponsored events;
- Monthly CLC meetings in Elliot Lake and Blind River that are advertised, have a public agenda, and are covered by the local media;
- Council updates with public agendas and media coverage;
- CLC sponsored websites;
- Local initiative programs;
- Advertising in local newspapers for: the NWMO Learn More Centres; monthly Ask the NWMO advertisements and notification of NWMO open houses and open office events;
- Radio advertising for open houses;
- Email blasts and newsletters from the municipalities;
- Written responses to dozens of topical questions from community members;
- The setup and operation of project Learn More Centres at storefront locations in Elliot Lake and Blind River;
- Community 'learn more' briefings and community member site tours of the Darlington and Pickering Waste Management Facilities, McMaster University Research Reactor, and NWMO's proof test facility;
- Community briefings to service clubs and community organizations;
- Attendance at community events including annual dinners and festivals with pop-up booths and displays;
- Many one-on-one interviews with community leaders about the project; and
- Community leadership participation at several national and international nuclear-focused conferences.

### 2.2.2 Site Selection for Borehole Testing

The following is a summary of the engagement activities that the NWMO undertook for Phase 2 from the spring of 2017 to present. The fieldwork, site selection and borehole drilling engagement approach to date has been focused on borehole drilling in the Mozhabong withdrawal area (in relation to the City of Elliot Lake and the Town of Blind River) and the siting process for a deep geological repository. The NWMO's ongoing fieldwork engagement activities have also included the surrounding communities of the Town of Spanish, the Municipality of Huron Shores and the Township of The North Shore.

The NWMO gathered public comments regarding the acceptability of the withdrawal area[4] through a series of one-on-one meetings, meetings with community groups, attendance at local and area events, Community Liaison Committee (CLC) meetings, and open houses/open office events.

Major NWMO engagement activities are detailed below:

[4] The withdrawal areas have been temporarily withdrawn from staking for mineral claims to provide an opportunity for initial field studies to proceed.

## I. Initial and preliminary engagement activities conducted to solicit public comments.

In 2016, the NWMO began to discuss the plan for geological and environmental fieldwork that helped identify potential social, economic and cultural considerations related to the withdrawal areas. The airborne surveys were discussed at 2016 CLC meetings and open houses and through other engagement activities in the area. CLC members also discussed the planned work to observe general geological features and geophysical and environmental mapping. At these very preliminary stages, engagement also occurred informally on a one-on-one basis as well as with small group meetings.

## II. Formal presentation of plans for borehole drilling.

For the April 18 and 19, 2017 CLC meetings in Elliot Lake and Blind River, CLC members participated in a mapping conversation to identify features within the Mozhabong withdrawal area. Both CLCs' members asked questions about the borehole drilling process, the location of access roads, NWMO timelines and the technical studies.

Open houses were held in Elliot Lake and Spanish (April 24 and 25, 2017), and Blind River and the Township of the North Shore (April 27 and 28, 2017). Mail drops occurred and advertisements were placed in local newspapers to promote the events. Each member of the public was provided information about the environmental, social, technical and geologic characteristics of the area and participated in a mapping exercise to identify features in the withdrawal area. The NWMO also conducted a series of one-on-one interviews and group meetings based on recommendations from the community on who to talk to.

At the CLC meetings, open houses, one-on-one meetings and group meetings, participants were asked to consider three guiding questions while referring to a map of the Mozhabong withdrawal area:

- Are there social, economic, cultural or natural environmental considerations that need to be understood as we advance geological studies in the area?
- Are there activities that occur on the land that we need to be aware of in planning the mapping studies?
- Is there anyone else NWMO should contact who may have an interest in the area?

## III. Engagement activities to receive more detailed information on the Mozhabong withdrawal area.

Open office events were held in Elliot Lake (July 25 and 26, 2017) and Blind River (July 26 and 27, 2017). Mail drops occurred and advertisements were placed in local newspapers to promote the events. Most participants had little knowledge of the withdrawal area since it is remote and some distance from Blind River and Elliot Lake. Participants were able to provide the names of those who they thought would have more detailed information on the Mozhabong area. Based on this information from the community, the NWMO also conducted a series of one-on-one interviews and group meetings with people who were aware of the area.

The NWMO refined the questions that were asked of participants during the open houses as well as the interviews and group meetings:

- What is important to know about each of the potential borehole drilling areas identified on the map, before decisions are made about where to focus borehole drilling at or near a potential repository site?
- What about each area would make it a good site to drill a borehole? What, if any, concerns would you have?
- Are some of these areas preferred over others for initial boreholes? Which ones? Why?

In general, there were few participants at the open houses, open office events and meetings who were able to provide comments specific to the withdrawal area and sites for potential borehole drilling. The one-on-one interviews yielded comments from people who had knowledge of the area and overall there was support for borehole drilling.

See **Appendix A** for the map that was used for the CLC meetings and open houses and **Appendix B** for the borehole drilling brochure.

# 3.0 Potential for Partnership – Foundation Assessment

## 3.1 Support for the Project

Overall support for the APM project in the communities of Elliot Lake, Blind River and surrounding communities is strong. Evidence to support this assertion comes from three perspectives:

1. Support for the project can be demonstrated at multiple levels;
2. There is widespread confidence in the safety case for the project; and
3. Support for field studies and the potential to identify socially acceptable test boreholes within the communities.

The following describes the evidence that supports each of these perspectives.

### 3.1.1 Support for the Project at Multiple levels

Three levels of support were examined:

1. Leadership (e.g. Mayor, Council, staff, key community influencers)
2. Community members (e.g. local residents)
3. Neighbouring Communities (e.g. The Town of Spanish and The Township of The North Shore)

The Councils of Elliot Lake and Blind River continue to provide strong support for involvement in the Learn More process. Both communities have familiarity with radioactivity related activities in the area (e.g. Elliot Lake's history of uranium mining and current tailings management activities and the Blind River's Cameco uranium refinery).

Elliot Lake and Blind River have built and demonstrated the support of their political leadership. There is a high degree of awareness from Elliot Lake and Blind River leaders who have received one-on-one project updates from the NWMO. Elliot Lake's Mayor and Councilors have worked with local and

regional organizations (e.g. ELNOS Corporation and the Elliot Lake Chamber of Commerce) to gain support for the Learn More process. Some local Elliot Lake leaders (businesses, community members, etc.) have also provided their support. Blind River political representatives and community leaders continue to be supportive of APM. Many leaders of other Blind River community organizations are also supportive. The NWMO continues to receive political and Council support from the Township of the North Shore and the Town of Spanish.

The Blind River and Elliot Lake CLCs continue their interest in APM. Leadership support and interest in the project has been demonstrated through community involvement with the CLC. Many community members regularly attend CLC meetings as observers. Some groups (comprised of residents, CLC members and other community leaders) from Blind River and Elliot Lake have attended facility tours which have helped to increase project understanding and support. Residents and politicians have attended conferences such as the Canadian Nuclear Society conference and International Conference on Geologic Repositories. They express interest in attending future learning events. Participants have learned from the visits and relay information back to the community further strengthening community support for the project. The NWMO Learn More Centres in Elliot Lake and Blind River help raise the profile of the APM project and demonstrate NWMO's commitment to the siting process. Township of The North Shore, the Town of Spanish, and the Municipality of Huron Shores officials have attended the Elliot Lake and Blind River CLC meetings to show their support. These actions and events have resulted in expressions of support for the project at the leadership level.

There is support in Elliot Lake and Blind River at the community level. There have been many community engagement events resulting in good attendance at open houses, visits to the Learn More Centres, and one-on-one interviews. These residents have interacted and learned about the APM project. There is evidence that these residents accept the advancement of the project in the area. That said, the NWMO engagement process has not involved communities such as Massey (Township of Sables-Spanish Rivers) although some residents have attended open houses and other engagement events. Municipality of Sables-Spanish Rivers (Massey) Councilors expressed opposition to the project in the past. More engagement would be needed to better understand their perspective in relation to studies in the Mozhabong area. The Municipality of Huron Shores' community leaders appear to be supportive.

NWMO staff has been present at many community events and support for the project has been voiced by most attendees. The NWMO recently attended high school graduations as well as many other events (e.g. pancake breakfasts, Blind River Senior's Games, Voyageurs Days, air cadet events, etc.). Several classes of school aged children have visited NWMO open houses.

Local and non-local NGOs have expressed limited opposition, mostly on-line. Few people who are opposed have attended an open house.

### 3.1.2 Confidence in the Safety Case

Overall, there is acceptance and a high level of trust regarding the safety of the project at both the community resident and leadership levels in Elliot Lake and Blind River. Community leaders can talk authoritatively and accurately about APM. This is expected from the residents of communities with

strong nuclear, uranium and radiation knowledge. Elliot Lake and Blind River residents who are engaged in the Learn More process are informed about safety and accept advancement as a preferred repository site. This also is the case for the Town of Spanish and the Township of The North Shore.

Elliot Lake has a strong radiation-aware culture having been a uranium mining community in the past. Tourist exhibits in Elliot Lake centre on their proud uranium mining history. Uranium mine tailings have been well managed by Denison Environmental and risk communications programs are in place that build trust and confidence. Protecting the natural environment as well as preserving natural areas is an important desire of community members.

Cameco is the largest private sector employer in the area and many residents are trained nuclear workers. Those engaged during open houses and other engagement activities accept that APM can be managed safely. The exception, over the course of the NWMO engagement program, is that some community members have raised questions about the potential effects of the APM project on the natural environment (e.g. contamination of water and land) over the lifespan of the facility.

In terms of understanding the borehole drilling process, residents are aware of the technical requirements needed due to the mining history in the area. The public has been informed that the withdrawal area and borehole location may be the future repository site. Some residents are miners and have knowledge of drilling. There is more interest in the specifics of the borehole drilling process (e.g. timing, nature of the core samples) than concerns around safety.

### 3.1.3 Support for Field Studies and Potential to Identify Socially Acceptable Test Borehole Sites

The communities have shown support for the borehole field studies. This has been illustrated in the communities' positive reception and feedback given during the engagement activities regarding the airborne surveys, observing general geological features and geophysical and environmental mapping. Elliot Lake and Blind River leaders are aware of the borehole drilling field studies and have been engaged by NWMO staff in one-on-one conversations. CLC meetings in the spring of 2017 focused on fieldwork including the environment and borehole drilling process. The information presented at these engagement events has been well received and there was general support for the borehole selection process from those in attendance.

Publicly advertised open houses and open office events were held in the communities in April 2017 (Blind River, Elliot Lake, Spanish and the Township of The North Shore) and July 2017 (Elliot Lake and Blind River only). Many community residents were in attendance at engagement activities and visits to the Learn More Centres during the borehole drilling engagement process where most expressed support for the fieldwork. Fieldwork has been part of the conversation for several years and NWMO staff talked to the CLCs about the geology, the natural environment and borehole drilling in 2016 and 2017. The consensus at the events was support for the fieldwork for the project to progress.

Although leaders, CLC members and community members from Blind River and Elliot Lake are generally not familiar with the Mozhabong area, they are supportive of the borehole drilling process. The Town of Spanish and the Township of The North Shore residents who have engaged with the NWMO are also supportive of borehole drilling. Attendees at the CLCs and open houses suggested other people for the

NWMO to speak to in the region that would have knowledge of the withdrawal area. Additionally, a few neighbouring community residents from further afield (e.g. Massey) became engaged by participating in the open houses and learning about the field studies. Gathering more input from residents and community leaders in the Massey area is required to better understand support for the project and the field studies in the area.

## 3.2 Potential to Identify a Socially Acceptable Repository Site

Elliot Lake and Blind River leaders have been engaged during borehole discussions and are supportive of the choice of the Mozhabong area for drilling. There has been a high willingness to engage from Elliot Lake and Blind River residents in regards to identifying a potential site in the Mozhabong area. Strong community participation in the CLC and open house/open office event's mapping exercises supported sites within the Mozhabong area.

From those people engaged in the area, there were no concerns identified during the borehole drilling community events. Most people (e.g. CLC members and open house participants) noted that the withdrawal area was far removed from their communities and thus, they had little knowledge about activities and potential social considerations in the area. Moreover, because of low awareness of the area (due to its remoteness), leaders stated that they would be supportive of any repository site in the Mozhabong area. Moreover, the distance of the Mozhabong area from Elliot Lake and perhaps the naming of the area as the 'Mozhabong area' is expected to be welcomed by local organizations and businesses who profile the natural environmental attributes of Elliot Lake.

From the CLC meetings and open houses, the NWMO received recommendations on whom to speak with about users in the withdrawal area to help expand engagement. The field studies found a handful of recreation users, foresters and trappers who have knowledge. The MNRF's Resource Management Action Committee and Local Citizens Committee were engaged by the NWMO during the interview process. Members raised few concerns about borehole drilling and the APM project.

Other informed citizens state the withdrawal area was once used for logging and hosted a granite quarry. The area currently has fly-in fishing and hunting. There are temporary camps and outdoor activities such as fishing, hunting, hiking, canoeing, snowmobiling and ATVing. There are no Local Services Boards and the logging companies conduct active road maintenance. Other people commented on the potential benefits of improved road access to the area due to the NWMO.

There are some concerns about road use and the potential for increased activities on the lakes. Specifically, some stakeholders are concerned that NWMO activities in the withdrawal area could further open the area (by way of the development of roads and access by ATV) when some users were previously reliant on fly-in operations. These people are concerned about the potential effects on their businesses, harvesting activities and road maintenance. Some expressed There were also concerns that, with the APM facility potentially being in the withdrawal area, there may be less ability for businesses to market the 'pristine wilderness' experience for eco-tourism. Some expressed concerns about interactions between trucks transporting radioactive materials with logging trucks.

## 3.3 Potential Alignment of Project with Community (and Area) Aspirations

There continues to be evidence that community leaders agree that the APM project will foster community well-being in Elliot Lake and Blind River and the area. They are eager to work with the NWMO to advance economic development activities. Both Elliot Lake and Blind River have strategic plans and are prepared to proceed with enhanced economic development, both for the local communities and regionally. The key challenge for Elliot Lake and Blind River, as identified through the various engagement activities, is to create a unified community and regional vision as well as create diversification of the economy by adding additional industry.

Leaders believe there may be opportunities for all the communities to work together in sharing APM economic and community well-being opportunities. Their perception is that even a portion of the benefits of the APM project would be advantageous to any community in the area. They believe that they would be able to capture benefits no matter where the facility is located.

Most people believe the Project offers much potential to foster significant community well-being in the area. There are desires for changes to the well-being they are currently experiencing and they want local growth. Moreover, people are generally quite positive about the APM project and the NWMO. Residents believe that the APM project will contribute to a robust economy over a long period. Residents want to see positive economic changes come to Elliot Lake and Blind River and the area, particularly changes that will attract people to live in the community, especially younger people.

Elliot Lake and Blind River are familiar with the multiple components of a large-scale project due to their past experience with the uranium mines. Community leaders understand the growth and benefits that the APM project will bring to the area and are supportive. The ELNOS Corporation, for example supports economic development efforts across the region.

Some community members indicated that they were concerned about the effects of the project on the marketing efforts of eco-tourism and the new cottage lot developments. Several community members questioned whether new nuclear activities in the community would influence the 'living with nature' Retirement Living model.

# 4.0 Summary

There is strong potential for achieving partnerships with Elliot Lake and Blind River and some surrounding area municipalities sufficient to advance the project in the area.

These communities, through their experience gained with the ELNOS Corporation, are well prepared to develop partnership agreements and grow, particularly regionally. Elliot Lake is well versed in creating partnerships for smaller to moderate sized economic endeavors. Partnerships on a larger scale would require some assistance from the NWMO. Overall, there continues to be strong support or passive disinterest for entering into a partnership with the NWMO amongst Blind River residents. Community leaders have commented that the partnership can be more fully developed through greater community involvement in the project.

In summary, the key evidence is:

- The leadership (Mayors, Councillors, senior administrators, CLCs, etc.) of both Elliot Lake and Blind River have publicly expressed their support;
- There is support for the safety case for APM in Elliot Lake and Blind River. The neighbouring communities of Spanish and the Township of The North Shore have also been engaged and are generally positive and supportive;
- At the current time there is strong support for activities relating to the process for identification of a borehole location in the Mozhabong area. Residents were engaged regarding borehole drilling in the spring and summer of 2017, and the leadership of both Elliot Lake and Blind River wish to move forward with actions that demonstrate progress; and
- The project would go far to address many of the common economic development and social priorities and aspirations for Elliot Lake and Blind River and they see the opportunities to enhance their well-being. They recognize the regional implications and opportunities associated with the APM project and are supportive of continuing to learn more in the future. They believe that these opportunities will encourage people to stay in the communities and attract a younger population.

More information would be needed if a decision were to be made to proceed in the area. Necessary information includes:

- Further engagement with the Township of Sables-Spanish Rivers (e.g. Massey) is needed to understand questions and concerns;
- Successfully managing the relationship with other municipal and First Nations neighbours;
- The need for stronger outreach to people who do not generally have an opinion on any issues;
- A greater understanding of how Elliot Lake, Blind River and other organizations are advancing to develop a regional economic development strategy;
- Community perspectives on potential project configuration and distribution of components, including the Center of Expertise, which will provide a meaningful basis for dialogue going forward;
- Engagement with the surrounding area communities (leadership and residents) and regional organizations will contribute to further understanding of the regional context in the area and how the project might be planned and implemented with the host community and its neighbours;
- Further insight into what is needed to bring required economic development, infrastructure, and to grow the population in the communities will assist in understanding what various partners at a local and regional level may need to do in terms of project planning and implementation; and
- The NWMO needs to further understand the specific needs of municipalities in terms of the capacity (including technical expertise) needed to participate effectively and meaningfully in the APM siting process as it becomes more intensive.

## Appendix A Map of the Withdrawal Area

## Will drilling and testing cause any impact to the environment?

Drilling activities will be managed to minimize impact on the environment. During all stages of fieldwork, the natural environment will be protected.

A source of water and a drill water management system will be required. The NWMO may bring water to the site or source it from a nearby body of water.

Water will be recycled on-site during drilling to minimize use and release to the environment. Drilling water and cuttings will be managed safely in accordance with provincial regulations. This may involve on-site management or transportation off-site.

During preparation of access routes and use of water, drilling fluids and solids will be managed in accordance with provincial regulations. The NWMO will work with communities in the area to confirm plans, including how it will minimize the impact of these drilling activities on the local environment.

## How deep will the boreholes be?

Boreholes will be drilled and cored to a depth of about one kilometre. It is anticipated that the deep geological repository in the type of geology found in the area (crystalline rock) would be developed at a depth of approximately 500 metres below ground surface. Deep boreholes are required to assess suitability of the host rock at depth.

## What kind of testing is conducted?

Testing will be used to develop a more detailed understanding of the geological suitability of the rock in the area. Testing includes:

- Logging of the rock core, which involves a geologist inspecting the core to find out the main rock types present, as well as the location and direction of any natural breaks in the core (fractures or faults), and recording this information;
- Geomechanical measurements, which involve testing rock core samples taken from the borehole to provide information about rock strength;
- Geophysical measurements made along the length of the borehole to provide information on minerals, fractures and zones of groundwater flow present within the rock;

Example of geomechanical testing

- Hydraulic conductivity measurements made at selected locations along the length of the borehole will provide information on groundwater flow conditions at the location being tested; and
- Chemical and isotopic analyses of groundwater samples collected from within the borehole, to determine the nature of the groundwater (e.g., whether it is fresh or saline) and to begin to understand how the groundwater has changed over time.

As field studies progress, the NWMO will work with people in the area to share information and build awareness and understanding.

## How long will it take to complete the borehole drilling and testing?

For a borehole approximately one kilometre deep, the entire process can last about 90 days, depending on the number of shifts worked each day.

Once initial borehole drilling and testing is complete, geoscience, environmental, engineering, and repository safety specialists will need several months to review the data and share the findings with an expert group for peer review. Once that is complete, the NWMO will share findings with the communities. The findings, along with those from earlier studies, will guide the NWMO in working with communities in planning any future study activities.

## What happens to the borehole once drilling and testing is complete?

Upon completion of the planned tests, drilled boreholes will be sealed on a temporary basis using hard rubber plugs.
The NWMO will review findings and reflect on whether or not to continue with further studies with people in the area, including the interested communities, and First Nation and Métis communities.

If the decision is taken not to conduct further studies at a borehole location, the temporary seals will be removed, and the borehole will be permanently sealed along its entire length in accordance with MNRF requirements.

If the decision is taken to proceed with further studies in the area, then the temporary plugs could be removed, and the boreholes instrumented.

Instrumentation would be installed in the open borehole to measure and record bedrock properties, such as the water pressures over time frames of months to years. These types of measurements provide additional information about the characteristics of the groundwater systems.

## When will a site be selected for a repository?

Confirming a safe site will take several years of progressively more detailed technical, scientific, social, cultural, and economic studies, as well as engagement of people from the area, including the interested community, and First Nation and Métis communities. The NWMO is conducting studies to explore suitability to host the project in a number of areas in Ontario, including both crystalline rock sites like those found in this area and sedimentary rock formations such as those found in southern Ontario.

If findings from drilling and testing initial boreholes provide additional confidence that a location may be potentially suitable to host a repository, the communities and the NWMO may decide together to further advance studies at that location by drilling and testing additional boreholes.

If these additional studies increase confidence that the location may be suitable, and if strong partnerships reflecting area support can be developed, detailed site characterization activities could be conducted and would require several more years. During site characterization, the NWMO would collect additional information and complete analyses required to assemble a safety case for a deep geological repository at that location.

Ultimately, the preferred site will need to meet robust technical requirements focused on safety. The implementation of the project must also foster the well-being of the area as defined by people who live there, and will need to be supported by strong partnerships. The project can only proceed with the involvement of the interested communities, First Nation and Métis communities in the area, and surrounding communities.

# Be Involved

Be involved in this initial borehole drilling phase of work as we select borehole drilling sites, plan, and complete these studies together.

Drop by your local NWMO community office, and participate in upcoming events such as meetings and open houses.

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