



What we heard:

Implementing Canada's plan in 2023

JUNE 2024

nwmo

NUCLEAR WASTE
MANAGEMENT
ORGANIZATION

SOCIÉTÉ DE GESTION
DES DÉCHETS
NUCLÉAIRES

Land acknowledgment

The Nuclear Waste Management Organization (NWMO) acknowledges that we have worked in many different Indigenous territories since the inception of the organization. We are grateful to the Indigenous and municipal communities that have worked with us over the past 20 years.

We further acknowledge that today we are working in northwestern Ontario in the traditional territory of Wabigoon Lake Ojibway Nation with the communities of Wabigoon Lake Ojibway Nation and the Township of Ignace.

In southern Ontario, we are working in the traditional territory of Saugeen Ojibway Nation (SON) with the two SON communities — Chippewas of Nawash Unceded First Nation and Chippewas of Saugeen First Nation — and the Municipality of South Bruce.

We further acknowledge that in both the northwest and the south, we have the privilege of working with other First Nations and organizations, with Métis communities and the Métis Nation of Ontario, and with many municipal communities that have all expressed an interest in learning about our work.

As part of our commitment to Reconciliation, we recognize both the historic and current injustices far too many Indigenous communities endure and pledge to do our part to encourage well-being in communities with which we work.

At the end of each year, the NWMO reports on the content and nature of our ongoing dialogue with communities, interested individuals and organizations as we advance the implementation of Canada's plan. These *What we heard* reports are intended to share these conversations more broadly, and invite others who may be interested to add their voices and help shape the conversation.

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Introduction

As part of Canada's plan to identify a safe site for a deep geological repository for Canada's used nuclear fuel, in an area with informed and willing hosts, the Nuclear Waste Management Organization remains committed to collaboration and partnership. As our 2023 *What we heard* report highlights, this past year has provided many opportunities to hear from community members in the two remaining siting areas as they prepare to make decisions for their own communities and for the country.

We continued to engage with people in potential siting areas, scientific leaders and the nuclear community, and to learn from and align with Indigenous Knowledge. Our engagement this past year has included opening the door for community members to learn more from international best practices. This has taken the form of including representatives from Sweden, Finland and the United States to speak at community events, while also inviting members of the siting area municipalities, First Nations communities and Métis communities to visit Finland's deep geological repository for used nuclear fuel, which is under construction and expected to begin operations in the mid-2020s.

Protecting water is at the heart of all our scientific and social safety activities, and we heard that protecting water and the natural environment continues to be of key importance for siting area community members. To highlight how protecting water for generations to come remains at the core of what we do, we shared our new [Water Statement](#) this past fall.

As part of that commitment, we pursued numerous activities to monitor water now and in the future. For example, we continued our [partnership with the University of Guelph on environmental DNA research](#), which will inform the NWMO's biodiversity studies and water protection actions. We also led high school students in an exploratory science, technology, engineering and math program to experience how scientists go about monitoring water and aquatic environments.

Earlier in 2023, the NWMO's experts also spent time sharing knowledge and answering questions during the [South Bruce Nuclear Exploration Forum](#) and the [Northwest Nuclear Exploration Event](#). These gatherings play an essential part in ensuring siting area residents can make an informed decision in 2024 about whether they are open to hosting Canada's deep geological repository.

As NWMO staff took part in these and other community forums, we heard valuable feedback about what is important to area residents and to members of siting area communities, as they consider how a multigenerational infrastructure project could be harnessed to meet their community vision today and in the future. This was a year in which the NWMO, having concluded geotechnical studies and community socio-economic studies relating to each siting area, focused on providing site visits to nuclear facilities, hosting community learning opportunities and engaging with community members online, one-on-one and through group events. We appreciate the insights and questions we received from groups and individuals in the siting area communities throughout 2023, as they prepare for site selection in 2024 and develop their processes for defining and expressing willingness to participate in the project.

2023 in review

WILLINGNESS AND PARTNERSHIP

Before Canada's plan can move ahead, the two remaining potential siting areas must confirm whether they are willing to host the project. Not surprisingly, questions around the willingness process were heard throughout the year. As we engaged with people in potential siting area communities, they asked about the role of communities in assessing willingness. They also asked about the timing of the NWMO's upcoming site selection decision, which will happen shortly after the siting area communities make their willingness decisions.

To address this next step, in 2023, each siting area community developed their own approach to assess and determine community willingness, including developing a timetable for engaging residents in 2024. Since the project must be sited in an area with informed and willing hosts, the results of each community's willingness decision will help inform the NWMO's site selection decision in 2024.

In 2023, we also heard questions about how the project could impact specific aspects of daily life in the potential host communities. In addition, we heard questions about how the project would impact the natural environment and water. The NWMO remains committed to protecting water and the natural environment, and has made the protection of water a cornerstone of our geoscientific plans — which have confirmed the suitability of the sites — and of our environmental and other monitoring efforts to ensure ongoing safety.

These important questions will be addressed during a formal impact assessment process which will be completed by the [Impact Assessment Agency of Canada](#) once a site is selected. Input from siting area residents will help inform the impact assessment process. Impact assessments are used to predict the potential environmental effects of a proposed project before it is carried out. In Canada, such assessments are crucial components of assessing whether large infrastructure projects should go forward. The implementation of Canada's plan will also be subject to regulatory decision-making processes and frameworks, including licence applications to the [Canadian Nuclear Safety Commission](#).

ADAPTING TO EMERGING TECHNOLOGY

Many people have asked us about managing used fuel from new or emerging technologies such as small modular reactors (SMRs). SMRs are a technology advancing through [Canada's SMR Roadmap](#), with a number of SMR vendors and technologies at different stages of the licensing process. We are continuing to work with organizations that are developing new concepts, as part of our mandate to manage all Canada's used nuclear fuel over the very long term.

The safety of people and the environment remains our key goal, and as a result, any new fuel waste will need to meet certain criteria to ensure we can accept it and meet all safety requirements. For example, the waste will need to be a durable, solid material and transportable to the repository site.

Host communities for the planned deep geological repository will be part of decision-making for any plans to manage new forms of used nuclear fuel in the repository. For example, through discussions about partnership agreements, the NWMO will work with potential host communities to develop and agree on a process for managing future changes to the type or volume of waste to be managed in the repository.

INTEGRATED STRATEGY FOR RADIOACTIVE WASTE

At the request of the Government of Canada, the NWMO engaged Canadians over a period of two years on the subject of a comprehensive strategy to manage all radioactive waste in Canada, including medical isotope waste. We submitted our recommendations in July 2023, and in October 2023 the Government of Canada endorsed the [Integrated Strategy for Radioactive Waste](#).

As a result, the NWMO is now responsible for the safe, long-term management of intermediate-level and non-fuel high-level waste. As a next step, we will begin developing a plan for a consent-based siting process for a repository for intermediate-level and non-fuel high-level waste. This will remain separate from our ongoing efforts to implement a deep geological repository for the long-term management of used nuclear fuel.

As an organization which has been engaging the public and implementing Canada's plan for used nuclear fuel for more than 20 years, we look forward to applying our learnings to this new part of our mandate.

LEARNING TOURS TO FINLAND BY ONTARIO DELEGATIONS

Around the world, there is scientific consensus and momentum behind using deep geological repositories to manage nuclear waste, and we continue to collaborate with global partners to learn from their best practices and share our own. In response to an interest in learning more from other communities that have taken part in a deep geological repository siting process, the NWMO provided opportunities in 2023 for representatives from potential siting area communities — including Indigenous and Métis community members and municipal and township leaders and community members — to visit Onkalo, the near-complete deep geological repository project in Eurajoki, Finland.

The Finnish project is due to become operational in the mid-2020s, and the on-site visits the NWMO facilitated in 2023 provided an opportunity both to learn about the technical aspects of Onkalo and to ask questions of facility staff and community leaders about the community's experience as it prepared to host the project. A more detailed account of what we heard during the visit is included in the "Safety, water and the environment" section of this report.

Finland's deep geological repository visitors' centre receives 15,000 visitors annually.



CENTRE OF EXPERTISE

One of the first ways Canada's deep geological repository for used nuclear fuel will come to life in the siting area will be the Centre of Expertise. Whether the project is sited in the Wabigoon Lake Ojibway Nation-Ignace area or the Saugeen Ojibway Nation-South Bruce area, the Centre of Expertise will be an anchor for the project and an important landmark for residents and visitors.

As a place for world-class science and innovation, it will become a hub for knowledge sharing across Canada and internationally, and a focal point for those living in the area to learn about the project through public viewing galleries and interactive displays.

In 2022, the NWMO began working with local communities to develop a vision for the Centre that aligns with their requirements and aspirations. This visioning process and continued dialogue around community interests for the facility will continue in the selected siting area. The results of the visioning work were [published in August 2023](#), following several community engagement updates.

This artist rendering shows one possible design for a Centre of Expertise in the Wabigoon Lake Ojibway Nation-Ignace area.



This artist rendering shows one possible design for a Centre of Expertise in the Saugeen Ojibway Nation-South Bruce area.



Safety, water and the environment

Our environmental program includes extensive engagement activities to encourage community participation in the full cycle of study design and implementation, including, for example, the opportunity to volunteer for biodiversity studies to help establish bat and carnivore populations. In 2023, at community events, during organized forums and in individual conversations, residents living in and around the two remaining siting areas asked questions focused on water and environmental safety issues, as well as the biodiversity studies and other topics related to the safety of people and the environment in their communities.

We held a number of in-person events to facilitate greater awareness and understanding of environmental safety programs. As a result, when we hosted information booths during the South Bruce Nuclear Exploration Forum in April and the Northwest Nuclear Exploration Event in September, we heard a broad range of questions, including questions about soil sediment levels, biodiversity impact studies, water sampling results and aquatic habit mapping. People also asked us for plain-language explanations about how surface water can be protected from mingling with storage caverns 500 metres below ground, and about how various ecosystems interact. Students were invited to learn more about how scientists conduct water quality baseline studies, and we hosted numerous visitors at the NWMO's Discovery and Demonstration Centre in Oakville, Ont.

To facilitate in-person learning experiences about the world's first deep geological repository for used nuclear fuel, we hosted several groups of siting area representatives as they traveled to Finland in the summer and fall to visit Finland's host community and ask questions directly of local officials at the project location in Eurajoki.

ENVIRONMENTAL REPORTING IN 2023

Together with the siting area communities, the NWMO shares a commitment to water and environmental safety. As part of that commitment, we invest in and support a range of programs that contribute to the understanding of local biodiversity and habitats, conduct baseline studies of water and environmental conditions in the siting areas, and participate in projects such as water conservation and shoreline preservation efforts.

These programs help answer questions from communities. In 2023, we published several reports on our findings, including the following reports: *Wabigoon Lake Ojibway Nation-Ignace Area Environmental Media Baseline Program – Year 1 Baseline Report* and *Biodiversity Impact Studies – Northwestern Ontario Region: 2022 Change Assessment Memorandum*. Findings from these reports were shared with the public at the two-day Northwest Nuclear Exploration Event.

For the Saugeen Ojibway Nation-South Bruce siting area, we published the *Saugeen Ojibway Nation-South Bruce Area Environmental Media Baseline Program – Year 1 Baseline Report* and the *Saugeen Ojibway Nation-South Bruce Site Biophysical Conceptual Site Model Update and Screening Level Change Assessment* in November. The *Biodiversity Impact Studies – Southwestern Ontario Region: 2023 Baseline Report* and *Biodiversity Impact Studies – Southern Ontario Region: 2022 Change Assessment Memorandum* are scheduled for release in 2024.

We had already shared some findings from these reports with residents ahead of their publication, including first-year results from the baseline monitoring programs. In previous years, some community members had provided input on the design of this program. In 2023, we wanted to provide an opportunity for residents to meet with our community engagement team, to hear about program results and ask any questions directly. In Ignace, we presented preliminary results of the first year of environmental monitoring programs at the Northwest Nuclear Exploration Event in September. People in the Wabigoon Lake Ojibway Nation-Ignace siting area also asked questions through our virtual open house. In the south, we presented the results and answered questions at a Community Liaison Committee meeting.

LEARNING THROUGH EXPERIENCE: FINLAND

To help answer community members' questions about hosting a deep geological repository, residents of siting area communities took part in tours of Onkalo, a deep geological repository in Finland, hosted by Posiva Oy, the company responsible for the project. Tour participants also met with the Mayor of Eurajoki or his staff for a presentation and Q&A on what it's like to be a host community for a deep geological repository.

Five delegations visited the Finnish deep geological repository between April and November of 2023. Delegates included representatives of the Wabigoon Lake Ojibway Nation, the Saugeen Ojibway Nation and the Métis Nation of Ontario, as well as residents and officials of the Ignace and South Bruce municipalities and surrounding regions. Participants included those who have previously worked in the mining or nuclear industry, as well as delegates with no prior experience in these sectors.

Common questions for Posiva and the Mayor of Eurajoki included those about economic benefits of hosting the project as well as the community's approach to willingness. Delegate groups heard about how the local municipality has grown, and is expected to continue to grow, now that the project is underway. Civic leaders also provided background on how the project came about and how the town has evolved.

The visiting groups also asked questions about water safety, opposition to the project at the time of site selection, and whether the community was currently supportive. They learned that local studies showed strong acceptance throughout the community for the project, and that community members welcomed the project and cited new jobs and increased economic activity from the project as community benefits.

We heard from participants that the visit was worthwhile and answered many of their questions.

After the fact-finding tours, some delegates met with their municipal Community Liaison Committees or community groups and answered questions during meetings. Delegates also shared their experiences and insights widely with community members upon their return.

BIODIVERSITY MONITORING ACTIVITIES BY COMMUNITY MEMBERS

Community biodiversity monitoring activities were co-designed with local communities, and the resulting data is being made publicly available.



We heard that residents are interested in participating in biodiversity monitoring, and in hearing results. A number of people in the Wabigoon Lake Ojibway Nation-Ignace siting area participated in our bat monitoring in the field in 2023. Others provided suggestions about where we might find bat populations to be incorporated into our field planning for 2024. The health of local fauna such as bats is a key focus of community biodiversity monitoring.

To strengthen our knowledge of current environmental conditions in the Saugeen Ojibway Nation-South Bruce area, we also invited participation in a new [community questionnaire](#) on American badgers and cougars in the area. Larger carnivores are essential for regulating and maintaining ecosystems by keeping down herbivore populations.

The results of the survey, which was mailed to area residents in 2023, will support the NWMO's ongoing biodiversity studies by helping us learn about existing environmental conditions and how best to protect biodiversity in the area. The community's involvement in the survey is a key component in the success of this study.

In addition to these biodiversity monitoring activities, our environmental baseline monitoring program was co-designed with local communities, conservation authorities and experts through a series of workshops to ensure that the NWMO is monitoring what local residents consider important. All the data collected will be made publicly available for use by any interested individuals or organizations.

YOUTH LEARN ABOUT ENVIRONMENTAL BASELINE WORK

In both potential siting areas, residents sought answers from NWMO scientists and engineers, as well as outside experts, about environmental and water safety. In response, NWMO engagement staff organized borehole sampling site tours, community fact-finding events and fieldwork experiences for students interested in a scientific career.

For example, a collaboration between the NWMO and the GENESIS program at Sacred Heart High School in southwestern Ontario involved introducing students to the type of work that goes into environmental sampling, where they worked with scientists to understand the concepts of baseline water quality monitoring and learned more about the waterways of their home communities.

In addition to receiving an introduction to science, technology, math and engineering careers, grade 11 and 12 students taking part in the GENESIS program had a chance to learn more about Canada's deep geological repository for used nuclear fuel. Students were invited to tour the McMaster Nuclear Reactor and received a presentation from the NWMO and Bruce Power. They also visited the NWMO's Discovery and Demonstration Centre in Oakville, Ont. to learn about natural and engineered barriers and other aspects of the repository design.

At the end of May, these students took part in a demonstration of water sampling, which included a classroom presentation on surface water sampling and a two-day field event. Students participated in surface water sampling as designed in our Environmental Media Baseline Program, assisted by an aquatic biologist consultant.

Limnology measurements



A student holds the tip of a limnology meter in the Teeswater River. The group notes the measurements for a variety of water quality indicators, including water temperature, conductivity and dissolved oxygen.

FREQUENTLY ASKED QUESTIONS: Safety, water and the environment

- » How long will this radioactive material be dangerous?
- » How can you know if it will be safe over millions of years?
- » What is a deep geological repository? How will it isolate used nuclear fuel from people and the environment?
- » How will it be determined that the project is safe?
- » How will people and the environment be protected?
- » What is the multiple-barrier system?
- » How much radiation would this facility emit in a year?
- » Will this affect groundwater and nearby waterways like rivers, lakes and the Great Lakes?
- » How will future generations be made aware of the danger of disturbing the repository?
- » What are the implications for used fuel storage if a site is not selected?
- » Do used fuel containers and packages become radioactive?
- » How will the environment, and specifically water, be protected during technical studies when you are drilling boreholes?
- » How will the environment be protected when the repository is under construction and during operations?
- » Is the rock pile acid-generating?
- » When transferring the used fuel from the transportation truck, is there a risk of contamination?
- » Can the underground water be exposed to radiation?
- » How far apart are the underground shafts from each other?
- » Will there be water and sewer treatment facilities on-site?
- » How will you handle accidental releases of radiation?
- » What are the levels of protection for the workers or the environment?
- » How will the NWMO handle damaged used fuel bundles?
- » Is the bentonite manufactured or mined?
- » Could the used fuel container leak?

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- » What are the safety measures at surface facilities? How will these facilities use water, treat waste and safely manage radioactive sources?
- » What does the rock look like in the region? Is it suitable for a deep geological repository?
- » Are you assessing the advantages and disadvantages of opening the packages, putting them in the transport containers and then repacking them into the barrier system?
- » How will you manage water runoff from the site?
- » What are the environmental impacts of the rock pile that will be created during the deep geological repository's construction?
- » How will an emplacement room in the deep geological repository be filled? Will robots be used?
- » What is the radiation limit for a nuclear worker in Canada?
- » Will there be a monitoring system placed underground?
- » In an ice age, could the repository withstand the weight of a glacier on top of it?
- » Is the NWMO considering disruptive events such as forest fires, flooding and extreme weather?
- » Does the NWMO take into consideration the possibility of earthquakes?
- » How would accidental releases into local waterways affect local agricultural products?
- » How many boreholes were drilled?
- » What if there are cracks in the rock?
- » Is there water in the rock?
- » How do you date the water you find in the rock?
- » Did you find any minerals?
- » What are you testing the rock for?
- » Are earthquakes a problem?
- » What is the difference between the rock in Ignace and that in South Bruce?
- » How old is the rock?
- » What measures will be taken to mitigate risks to water?

Safety from a social perspective

FOCUS ON SAFETY FROM A SOCIAL PERSPECTIVE

The deep geological repository is an important environmental infrastructure project for Canada, and core to our work is protecting people. Key to that commitment is our focus on implementing the project in a way that recognizes, acknowledges, and incorporates the questions, concerns and wisdom that people bring forward. Safety from a social perspective must necessarily be rooted in multiple ways of knowing, including Indigenous Knowledge, western science and other wisdom that is brought to bear through our dialogue with communities.

There are many elements of safety from a social perspective. Canada's plan itself was founded on the concept of safety from a social perspective. When the NWMO was founded in 2002, we began a three-year study designed to assess possible approaches and alternatives for the safe, long-term management of Canada's used nuclear fuel, working with the public to understand the options and make considered choices.

Face-to-face conversations were held with thousands of individuals and representatives of organizations at local, provincial, national and international levels. These included representatives of Indigenous organizations, nuclear power plant workers, youth, residents of nuclear power plant communities, environmental groups, industry experts, faith communities, government agencies and parliamentarians. Canada's plan emerged from this dialogue and was based on the values and priorities that Canadians and Indigenous peoples identified.

We also engaged the public in order to develop and design our site selection process. Voluntary participation, shared decision-making, openness and fairness formed the basis of that process which we detailed in [*Moving Forward Together: Process for Selecting a Site for Canada's Deep Geological Repository for Used Nuclear Fuel*](#) (2010) and continue to follow today.

Our site selection process has been voluntary from the outset, with 22 communities initially expressing interest in learning more and exploring their potential to host the project. As we have gradually narrowed the potential sites down to two remaining siting areas, safety from a social perspective has been built into the foundation of our engagement efforts and the site selection process.

The NWMO regularly solicits individual feedback on our work through our on-the-ground engagement efforts, social media and public surveys. We listen to communities, residents, community leadership and those expressing a diversity of views about our work. Through this process, we seek to understand and address the concerns people raise.

Since transparency is a core value of our organization, we also publish the results of these engagement efforts annually in *What we heard* reports, such as this one, that summarize the questions and themes we are hearing.

Our ongoing efforts to consider safety from a social perspective include:

- Using the feedback we receive to understand issues of importance to Canadians and Indigenous peoples, adjusting our work to address those concerns if needed, and highlighting those concerns in our public reporting;
- Actively and willingly participating in public panels featuring different perspectives on Canada's plan;
- Using common themes from the feedback we receive to guide the design of Canada's deep geological repository, and responding to that feedback in our reporting, as we have done on topics such as the importance of protecting water;
- Providing capacity to communities engaged in the site selection process so they can develop their own processes for determining if they are willing to host the project;
- Affirming our commitment to Indigenous communities that a site will not be selected without their consent;
- Following a collaborative approach to developing partnership and hosting agreements;
- Extending our engagement to regional and neighbouring communities, beyond the potential host communities;
- Involving communities in the development of community studies considering a range of socio-economic factors, and in the discussion of results, to explore the potential for partnership and ensure the project can be implemented in a way that fosters well-being in the area;
- Including communities in participatory environmental monitoring programs;
- Considering realistic lifestyles in our safety assessments — how and where people in the area live;
- Making safety assessment experts available to the public on a drop-in basis in the siting areas; and
- Creating opportunities for our staff to directly engage community members in the siting areas to discuss the safety of the program and learn about concerns they may have.

The NWMO is committed to continuing to understand and address safety from a social perspective through the eyes of the communities we work with. This includes a commitment to considering all aspects of safety, including physical, mental, spiritual and emotional. In this way, we aim to support and strengthen communities' role within the project as we move into the pivotal regulatory decision-making phase.

FREQUENTLY ASKED QUESTIONS: Safety from a social perspective

- » Will this affect the safety of agricultural products produced in the area?
- » Can land on top of the repository be farmed?
- » What is the NWMO doing to prevent social harm in the community?
- » Will the community depend on the NWMO?
- » How is the NWMO preparing for all the changes that will come to the siting area and region?
- » How can we prepare people in the community and area to participate in the project, and to develop skills and capacity?
- » What resources are available to communities now to help build understanding of the project locally and with our neighbours?
- » How are youth being engaged? How can we retain youth in our communities?
- » What learning resources are available to students and youth?
- » When will we begin to see economic activity and jobs in the area?
- » What kind of training is available in the near future to build the kind of human resource capacity needed to accommodate the project?

Moving towards partnership

In 2023, we heard questions from people in the two potential siting areas about how their community could potentially benefit from hosting Canada's deep geological repository for used nuclear fuel and entering into a partnership with the NWMO.

ON-SITE COMMUNITY ENGAGEMENT

From 2021 to 2023, the NWMO funded a series of socio-economic studies to help answer community members' questions and concerns about how the project could impact their community. These third-party studies looked at areas of community social and economic well-being identified by each community. In 2023, we presented the results of the studies for discussion and engagement with people in both siting area municipal communities, to help address people's concerns about how the project could potentially support or impact community priorities.

When we hosted a three-day South Bruce Nuclear Exploration Forum in April and a two-day Northwest Nuclear Exploration Event in Ignace in September, we heard many questions stemming from study results, as well as new questions related to the next steps in the site selection process. For example, as the selection process nears completion, people have taken the opportunity at in-person events to discuss how employment opportunities could be enhanced by the project, and to suggest the NWMO work to remove any barriers to employment, such as ensuring there are training programs for women interested in trade jobs.

People have also asked about how housing would be affected if their community hosted the project. Another recurring area of interest is the importance of preserving local culture, character and way of life.

In addition to the multi-day events, we also facilitated community discussions and addressed residents' questions through local meetings and one-on-one conversations. We heard that people had many questions about the benefits and challenges of integrating such a large infrastructure project into their community.

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In the two Indigenous communities of Wabigoon Lake Ojibway Nation and Saugeen Ojibway Nation, we met with community members in both small and larger groups as well as individually. At various events, we initiated discussions and answered community questions about how the project could impact their communities.

As each community formulates its draft hosting agreement with the NWMO, they will communicate those agreements to community members. Next, the community members will consider the benefits defined in the draft hosting agreements and appraise other factors in order to make a decision about their willingness to host the project.

Road map to partnership (2017-24): Starting from the bottom and moving upwards, the road map guides our discussions about partnership with communities.

ALIGNED PARTNERSHIPS

Through a schedule developed and agreed upon with partners

INVESTMENTS

Identify and deliver investments that drive capability and economic prosperity for partners

IDENTIFY REQUIRED PARTNERSHIPS

Identify required partnerships with whom, at what level, in what combination, and when

DEVELOP VISION FOR THE PROJECT

Develop the project vision that will meet the NWMO's and community's interests, and potential partners as well

VALUES AND PRINCIPLES TO GUIDE PARTNERSHIP DISCUSSIONS

Agree on common values and principles to guide partnership discussions

FREQUENTLY ASKED QUESTIONS: Exploring partnership and community studies

Partnership

- » Who will be involved in partnership discussions? Local municipalities? Indigenous communities?
- » What is the definition of willingness?
- » How will willingness and support be gauged? Will there be a referendum? Will [the municipal] Council decide?
- » What is our community's role in the site selection process? What do you need from us?
- » What is the Community Liaison Committee and when does it meet? Can I attend its meetings?
- » What are the local and/or regional benefits of hosting? Will there be local jobs or infrastructure?
- » How do I get involved in my community's decision-making process? Is there a local committee?
- » Have you talked to [my neighbour] about the project yet? I think they would be interested to know.
- » What happens if local circumstances change? Can we opt out of the process?
- » How much land is required to build the repository and facilities? Is there enough in my community?
- » Will the project involve changes to zoning/land use around the site?
- » Will you be looking at Crown land for the repository?
- » How will the NWMO ensure that the community and people in the area benefit?
- » How can we begin to plan for jobs and longer-term economic development?
- » What are the opportunities for businesses and employment associated with site selection?
- » Are there economic opportunities related to the rock that is extracted from the repository?
- » Who needs to be supportive of the project in our area for it to proceed?
- » How can I help build this partnership?
- » With whom is the NWMO looking to partner?
- » What resources are available to learn more about partnership and what partnership would mean for our community?
- » Can a few people in an area who are opposed to the project prevent it from proceeding in the area?
- » How can we help to get more people involved?
- » Will hosting agreements include support for new infrastructure and recreational projects?

- » When will the NWMO share the hosting agreements to support community decision making?
- » Will the project increase the difficulty many seniors have accessing health care?
- » What's the role of the municipality in the site selection process?
- » What happens if the community says no to the project?
- » Will there be a referendum?
- » How did the siting areas get involved in the process?

Community studies

- » Who is participating in the studies?
- » How will the studies be used in decision-making?
- » Are regional communities going to have a chance to review the studies? Do regional residents have a say in the site selection process?
- » Who wrote the reports?
- » What specific benefits would the community receive? What benefits will regional communities receive?
- » How will the NWMO engage existing industry for community development?
- » How did you determine who will be impacted by the project?
- » What will the municipalities do to get ready?
- » What about housing for workers for the project?
- » Will the project help youth stay in the community?
- » What are the jobs exactly?
- » How will the project affect health care in the community?
- » Will it affect people who cannot afford rent?
- » How will you plan for immigration or newcomers?
- » How will my town look different?
- » What opportunities are there for small businesses?
- » What capacity needs to be built?

Reconciliation and Indigenous Knowledge

RECONCILIATION

In 2023, the NWMO continued meaningful engagement with Indigenous communities and our independent advisory body, the Council of Elders and Youth (hereafter referred to as the Council) to discuss issues such as the draft *Sustainability Statement*, the draft *Water Statement* and the *Three-year Reconciliation strategy (2024-26)*.

As part of the NWMO's commitment to living our values, we continue to build a Reconciliation culture through activities, training and sponsorships. This past year, we continued Reconciliation training and cultural awareness sessions virtually and in person for employees and contractors. We also continued to work towards our goal of aligning with Indigenous Knowledge in all aspects of our work.

In 2023, the NWMO was able to continue building momentum with virtual and in-person engagement with both Indigenous communities and the Council of Elders and Youth.

The Council continued its momentum in advancing key elements of the NWMO's work. In-person meetings were held to discuss issues that could impact the implementation of Canada's plan for used nuclear fuel, including but not limited to:

- The NWMO's *Sustainability Statement (2023)*, including Indigenous Knowledge and perspectives;
- Learnings about the Canadian Nuclear Safety Commission's impact assessment requirements, and an exploration of an Indigenous-led impact assessment framework;
- Continued commitments and action related to Reconciliation through the *Three-year Reconciliation strategy (2024-26)*;
- The *Water Statement (2023)* as an example of a guiding document that was co-created by Indigenous and western science voices; and
- The Integrated Strategy for Radioactive Waste, and how lessons learned can help to inform future site selection processes.

Additionally, Council of Elders and Youth members participated in a number of learning and development opportunities, including attending industry conferences, visiting the deep geological repository in Finland and touring the McArthur River Uranium Mine. Following the uranium mine tour, Council members met with English River First Nation members to learn more about their experience working with the industry.

The NWMO's *Reconciliation Policy (2019)* outlines the purpose of our work, creating a strong foundation of recognition and respect that anchors our public commitment to Reconciliation. Reconciliation, as defined by the Truth and Reconciliation Commission, is an ongoing process of establishing and maintaining respectful relationships. In this policy, the NWMO identifies how we will build on our current commitments to work in partnership with First Nation, Métis and municipal communities to develop and implement, collaboratively with communities, a management approach for the long-term care of Canada's used nuclear fuel.

In 2019, we created a Reconciliation assessment tool to assess the NWMO's policies and procedures and ensure they are working within the organization's commitment to Reconciliation. The Reconciliation assessment tool also underwent an internal audit in 2021 that helped provide further context and direction to staff on the tool and its application and allowed for easier tracking of recommendations and common themes within the participatory dialogue.

In 2023, the NWMO was active in continuing the Reconciliation assessment of our policies and procedures, including the following:

- Safety Assessment Procedure;
- Procurement Procedure;
- Transportation Emergency Management Scope of Work;
- Geoscience Procedure for Fieldwork;
- Risk Management Procedure;
- Real Estate Management Framework;
- Environmental Guidelines for Contractors;
- Training and Development Procedure;
- Social Media Policy;
- Employee Business Expense Standard;
- Protest Response Procedure;
- Conduct of Engineering Program;
- Corporate Sponsorship Program;
- Sponsorships and Donations Program; and
- Regulatory Interface Standard.

In terms of results, each assessment had different findings, but some common themes were:

- It is important to include language that is accessible to Indigenous peoples (even when the document is internal, as our language guides our actions and implementation).
- We need to include visuals and storytelling where possible to help guide the work.
- We need to incorporate language from our *Indigenous Knowledge Policy* (2020) and/or our *Reconciliation Policy* (2019), as well as references to both documents.
- We should include references to the *NWMO's Ethical and Social Framework* (2019), and incorporate language from the framework into our policies and procedures.
- NWMO governance, including policies and procedures, should reflect the importance of the role of relationships and relationality within the Indigenous worldview.
- We need to highlight and continue our commitment to work with the Indigenous Engagement and Indigenous Relations teams to create and foster understanding of sensitivities around working with Indigenous peoples.

WHAT WE HEARD: Implementing Canada's plan in 2023

- We need to keep our various audiences front of mind, including those communities we are working with and future generations, as we do this work, even though much of the work has an internal component.
- We should emphasize the importance of action over words (success in implementation is key).
- We must continue and complete Cultural Awareness Training for contractors working with the NWMO.

As part of this foundational work, the NWMO provides Indigenous cultural awareness training to all our staff and contractors. This training provides a deeper understanding of the complex history of First Nation and Métis peoples in Canada and how it relates to Canada's plan. It explores the themes of Indigenous worldview, treaties, the history of the *Indian Act*, Indigenous residential schools, and Truth and Reconciliation.

In 2023, we developed and launched an internal, self-paced, comprehensive virtual Reconciliation Toolkit designed to encourage staff to apply a Reconciliation lens to all their work and consider how their work programs can contribute to the NWMO's Reconciliation journey.

The Indigenous Relations team worked closely with colleagues to develop both our *Sustainability Statement (2023)* and a paper on safety from a social perspective. This collaboration aimed to ensure Reconciliation and Indigenous Knowledge were reflected in both documents.

In 2023, we continued to offer regular sessions of our Reconciliation training program to Indigenous communities and municipalities in our siting regions, as well as to industry and academic partners, completing a total of three sessions with industry and more than 25 sessions with NWMO employees. The training was facilitated both in person and virtually, and participants felt that the training provided them with the confidence to engage more respectfully with Indigenous peoples and communities. We continue to receive requests from municipalities and others in the industry to provide advice on how they can move their respective Reconciliation journeys forward with their colleagues and neighbours.

In December 2023, the NWMO developed a three-year Reconciliation strategy to span 2024 to 2026, in support of the implementation of the *Reconciliation Policy*. Education and creating a strong foundation of recognition and respect have been the keys to the NWMO's journey in Reconciliation. The actions that follow over the next few years will be vital for the NWMO to demonstrate the truth behind our commitment to Reconciliation.

As the NWMO's journey in Reconciliation evolves, it is important that we plan strategically and thoughtfully how we will continue to meet and exceed our commitments to co-creating a better future for all beings of Creation. Four key areas of focus that will help us continue this momentum are learning, action, relationship and healing.

Currently, the strategy is not a public document but will help guide work internally to ensure Reconciliation is a consideration in all the NWMO's work. It is a response to the Truth and Reconciliation Commission's call to action 92, which calls upon the corporate sector in Canada to adopt the United Nations Declaration on the Rights of Indigenous Peoples as a Reconciliation framework, and to apply its principles, norms and standards to corporate policy and core operational activities involving Indigenous peoples and their lands and resources.

INDIGENOUS KNOWLEDGE

Both western science and Indigenous Knowledge systems contribute to decision-making processes at the NWMO. We remain committed to aligning with Indigenous Knowledge in all aspects of our work.

Throughout 2023, and in years prior, we heard from Indigenous community members and the Council of Elders and Youth the importance of NWMO staff respecting the sophistication of Indigenous science and knowledge and holding up both knowledge systems as equal in validity.

We hosted two Indigenous Knowledge and Western Science workshops in 2023 (May and September) where we brought together academics, Knowledge Holders and NWMO staff to create momentum to move from dialogue to action. This was our sixth year hosting these workshops, which was evident in the growth of the group of participants, as well as the quality of the dialogue.

The goal of each of the workshops was similar to previous years in that they created space to explore new opportunities for Indigenous Knowledge Holders and scientists to work together and inform research about the long-term performance of the multiple-barrier system in a deep geological repository.

The May workshop was the first hosted by an academic partner, Western University, and aimed to focus on meaningful discussion about how we can intentionally and respectfully align knowledge systems and begin moving from dialogue into action. We called on Indigenous Knowledge Holders and western scientists to have conversations based on "participatory leadership" and discuss areas important to the NWMO's work, including the relationship between water and copper, water and rock, and water and clay, as well as water protection.

Peter Keech and Jessica Perritt partnered with Western University to host an Indigenous Knowledge and Western Science workshop at the University's Wampum Learning Lodge in May 2023.



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The workshop in September brought together 30 participants, a blend of Indigenous Knowledge Holders and members of the NWMO's technical team, at a sacred space in Six Nations of the Grand River Territory. Themes of this workshop included: finding intersections between Indigenous Knowledge and western science, particularly through the use of hearts, minds and hands; honouring the importance of ceremony; always asking permission from Mother Earth as provider; and respecting the sentience of all life forms, including rock, trees, plants, water, copper and clay.

NWMO employees and Council of Elders and Youth members at the fall Indigenous Knowledge and Western Science workshop at Soul of the Mother Lodge in Six Nations of the Grand River Territory. From L to R: Brittany Jones (NWMO), Billie Schibler (Council of Elders and Youth), Jeff Binns (NWMO), Melissa Mayhew (NWMO).



In 2023, the NWMO also entered into a partnership with Turtle Island Institute to collaborate on a project that will provide NWMO employees with an opportunity to explore and apply Indigenous science. Members of the Council of Elders and Youth and community members felt strongly that work related to Indigenous Knowledge should be led by an Indigenous organization or institute. Turtle Island Institute's work amplifies Indigenous knowledge systems, ancient wisdom traditions and Indigenous science to restore this relational balance.

Metuaptmumk ("All Around Seeing") is a collective 13-moon wisdom-seeking journey into the multidimensional relationships of Indigenous knowledge systems and science. Together, we are exploring the interdependence and interconnectedness of all living systems of the natural world by "living into" relationships with Mother Earth as a whole system development. Working in alignment with the seasons, and in cadence with grandmother moon, the NWMO is journeying across ancestral lineages and knowledge systems of place to expand the boundaries of Indigenous practice. Metuaptmumk introduces a way of thinking that is contextually grounded in ancient rematriative language, centered in Sacred Fire pedagogy, guided by Mahigan (wolf) teachings, and tethered to Spirit.

WATER STATEMENT

Water protection remains at the core of the NWMO's work on safety and the alignment of western science with Indigenous Knowledge.

In October 2023, the NWMO released a *Water Statement* that outlines just how vital water protection is to Canada's plan for the safe, long-term management of used nuclear fuel.

Since our establishment in 2002, collaboration with communities has been at the core of the NWMO's planning. Through discussions with Canadians and Indigenous peoples, the NWMO identified a common theme of questions about how the project will protect water. As one way to reinforce the importance of this work, we decided to publish a *Water Statement*, which outlines how the entire purpose of the plan for used nuclear fuel is to protect people and the environment, including water.

The NWMO *Water Statement* begins with an acknowledgement of truths, before outlining how the NWMO is committed to water protection in all our work by considering how the agency of water (from surface to underground) may be in relationship with Canada's planned deep geological repository and its surrounding area.

The principles of the *Water Statement* are as follows:

- To include Indigenous Knowledge Holders, western scientists and community voice in project planning and implementation;
- To ensure that our water protection work is done in an open, humble and inclusive manner;
- To support the co-creation of programs and activities related to water with communities;
- To continue to develop and identify resources to prioritize and amplify continuous learning about water and its connectedness to all life within the NWMO's work plans and decision-making milestones; and
- To be guided in alignment with truth and humility in our work.

INDIGENOUS ENGAGEMENT

As Canada's plan moves forward, Indigenous engagement remains essential. The project is an inclusive one. Indigenous perspectives are not only integral to our work, they also make our work stronger.

Indigenous communities continue to highlight the importance of protecting and safeguarding water, air and land in reflection of their history, rights, culture and way of life.

The NWMO's Indigenous Engagement team continued to create opportunities for important questions to be asked as part of dialogue on key areas of our work. Some common themes included:

- Understanding more about transportation and a proposed transportation route;
- Identifying shared priorities around safety;
- Understanding the nuances of community willingness;
- Co-creating environmental processes that reflect the values, rights and interests of potentially affected Indigenous communities;
- Continuing to learn about how the NWMO is prioritizing water protection in all our work; and
- Beginning dialogue around the impact assessment process.

Finally, the NWMO sponsored a range of activities identified as important by First Nation and Metis communities we work with, including:

- Support for Meat Bingo events and responses to food insecurity;
- Support for a large cultural event on Truth and Reconciliation Day;
- Support for a skirt-making project;
- Engagement events including on- and off-reserve community members; and
- Support for youth programming.

FREQUENTLY ASKED QUESTIONS: Indigenous relations and Reconciliation

- » How will the NWMO address the United Nations Declaration on the Rights of Indigenous Peoples in the management of hazardous materials in the traditional territories of Indigenous peoples?
- » How can we keep our water safe by gaining a better understanding of the water cycle/the journey of water?
- » What considerations are we giving to cultural sites in the selection of potential areas for drilling?
- » How can we learn more about Indigenous cultures?
- » What are some examples of how the NWMO is aligning the project with Indigenous Knowledge?
- » How are Indigenous communities involved in borehole drilling activities?
- » How will First Nation/Métis communities indicate they are “willing hosts”? What does that mean?
- » How do land use claims enter into the discussion? Do all the First Nation/Métis communities that have land claims in the area have to agree to be “willing hosts,” even though these land claims have not yet been settled?
- » What determines who is involved and who is not?
- » Where or how do the provincial/federal First Nation/Métis governing groups enter into the picture? Do they or can they override the decisions of the local First Nation/Métis communities? Do they also have to be “willing hosts”?
- » Can my group/community participate in Indigenous cultural awareness workshops?
- » What is the NWMO doing with respect to Reconciliation with Indigenous peoples?
- » How can non-Indigenous communities be involved in Reconciliation?
- » Will [the project] affect safety, access to natural resources such as water, ability to enjoy nature, or the ability to harvest or practice ceremony on traditional lands?
- » What will engagement look like in 2024 and 2025?
- » What other information is available to help Indigenous communities make a decision?
- » How do Indigenous communities define “safety”?
- » Would the environment be contaminated if an accident involving a nuclear shipment happened? Would we be unable to use the land?
- » Accidents close the road for days. Will it mean weeks of closure if there is a nuclear accident?
- » How will communities benefit from the project? How can community members apply for job opportunities?
- » What are the timelines for the willingness phase of the project, and when will decisions be made?

Transportation

TRANSPORTATION PLANNING FRAMEWORK AND PRELIMINARY PLAN

As in 2022, the [transportation planning framework](#) and [Preliminary transportation plan](#) (published in December 2021) formed the backbone of transportation engagement in 2023. The framework reflects a common ground of principles, objectives and process considerations, while the preliminary plan begins to answer commonly asked questions about transportation safety and logistics. The wealth of knowledge contained within these documents continues to provide an entry point for discussions on the transportation of used nuclear fuel, even as conversations mature and become more specific.

Both the framework and the plan are living documents which the NWMO has committed to updating on a regular basis as development of the transportation program evolves. Updates of these documents will allow social priorities to be incorporated as transportation planning unfolds over the next two decades.

In 2023, the NWMO's transportation team participated in over 50 events, meetings and conferences, engaging with over 2,000 people. Building on the foundations of the framework and preliminary plan, these activities facilitated deeper discussions with members of the public, including Indigenous communities, about numerous transportation-related topics, including but not limited to:

- The scope of the transportation program (e.g., the number of fuel bundles to be transported from each interim storage location and the duration of the transportation program);
- The two transportation systems that the NWMO is considering (all road or road/rail) and how those would differ between the two siting areas;
- The multiple layers of safety that will be applied to the transportation program (e.g., transportation package requirements, operational controls, emergency response and security measures, and management system and compliance assurance);
- Planned technical work over the upcoming years to support more detailed transportation planning; and
- How the NWMO plans to move transportation planning forward in an inclusive way, taking into account feedback from Canadians and Indigenous communities and aligning with Indigenous Knowledge and worldviews.

Frequently heard questions and comments during these conversations can be categorized into a few themes:

- Planning for the future (e.g., how will new transportation and security technology be taken into account?);
- Safety and security (e.g., what specific measures will the NWMO take to keep people safe?);
- Infrastructure (e.g., will the NWMO work with the government to twin parts of the highway that have high accident rates?); and
- Environment (e.g., what are the greenhouse gas emissions associated with the transportation program?).

For most participants, more detailed conversations discussing transportation package requirements, logistics, safety measures and inclusive planning were reassuring. As expected, concerns and skepticism continued to be voiced by some participants. Critical voices form an important part of *What we heard* reporting as they highlight the issues and concerns that may require more attention.

Concerns about package testing and the adequacy of the regulatory tests to simulate severe accident conditions continued to be voiced. Concerns about potential radiation exposure for the public in proximity to used fuel shipments were raised. The safety of highway infrastructure was also a topic of interest, as was ensuring that first responders along the transportation routes were aware of the used fuel transportation program and how to respond to incidents, should they arise.

In 2023, we continued to engage with first responders about their questions and concerns related to our future transportation program. First responders are very interested in our program and, in particular, how transportation incidents involving used fuel might impact their responsibilities at the scene. They are also very interested in learning more about industry-wide radioactive materials transport as a whole.

Transportation planning at the NWMO is revisited and revised on a regular basis to ensure that the voices of all Canadians and Indigenous peoples are heard and incorporated.

SOCIAL SAFETY OR PARTICIPATORY SAFETY

Safety continues to be a key tenet of the NWMO transportation program. However, safety encompasses more than the technical aspects of the program. Social safety involves ensuring that people feel safe about the transportation program. During the past decade of engagement, the NWMO has been asked and has answered a broad spectrum of questions. These questions led to the development of the transportation planning framework and the *Preliminary transportation plan*. In turn, transportation work programs were developed to address the questions and concerns voiced by the participants. With this approach, our planning is developed in a way that is responsive to what we hear from Canadians and Indigenous peoples, helping them feel safe about the transportation program.

Complementing the preliminary routing analysis and a security framework completed in 2022, two participant-inspired work programs were completed in 2023. The first of these was an accident risk and mitigation assessment which examined the various types of accidents and analysed their outcomes. A second work program looked at building confidence in the strength of the transportation packages used and their ability to survive severe accidents. A third work program examining emergency response, to assist in responding to questions about emergency response planning, is underway.

We continue to be driven by the public's questions and how we can best respond to those questions, and both the transportation planning framework and the *Preliminary transportation plan* are available for review and comment on the [NWMO website](#).

FREQUENTLY ASKED QUESTIONS: *Transportation*

- » What transportation route will you be using to get the used nuclear fuel from the interim storage facilities to the repository site?
- » Is this material safe to transport? What if an accident happens on the way?
- » How do the tests on the transportation package that are required by the CNSC [Canadian Nuclear Safety Commission] prove that the package can withstand a severe accident?
- » What would emergency response planning and training protocols look like? Will my community require an evacuation plan?
- » How will emergency response workers stay safe in the unlikely event of an accident?
- » What modes can you use to transport used nuclear fuel? Road or rail? Is water being considered? Which is safest?
- » What is the frequency of shipments and will that change depending on the season?
- » Will new or upgraded transportation infrastructure be required to transport used nuclear fuel? Who will pay for it?
- » Will your drivers be transporting the used nuclear fuel even in the harsh northern winter conditions?
- » Will you be tracking the transportation packages?
- » Will the used nuclear fuel transportation packages emit radiation while being transported to the repository site?
- » What will you do to ensure the safety of the Mennonite community on the roads around the South Bruce site?
- » Would the driver of a transport vehicle with a used nuclear fuel package be safe? What would their dose level be?
- » Will the NWMO respect Indigenous jurisdiction with respect to transportation?

WHAT WE HEARD: Implementing Canada's plan in 2023

- » How does transportation of highly enriched uranium by another organization differ from that of the CANDU fuel by the NWMO?
- » In selecting a particular site that could eventually host the repository, does the NWMO consider proximity to rail and road?
- » When will you begin considering local transportation routes? Will dedicated highways or rail spurs be constructed?
- » Can the dry storage containers be transported? Will used nuclear fuel be transported in the same containers as are used in the repository?
- » What happens if an unauthorized individual really intends on opening the Used Fuel Transportation Package (UFTP)? Can the package be opened?
- » What happens if a UFTP falls into a body of water? For example, how would you retrieve it from a lake?
- » What is the assumed speed of the truck transporting the UFTP?
- » Will advancements in transport technology and security be incorporated into the system as they develop?
- » What happens when an accident occurs? How will the truck and package be removed?
- » How frequently would used fuel shipments take place? Would they travel in convoys?
- » Accidents close the road for days. Will it mean weeks of closure if there is a nuclear accident?

Social media and online conversations

The NWMO continued to generate steady social media conversation in 2023. While Facebook and LinkedIn were our most active communities, we also communicated on Instagram and X. Community members from the Wabigoon Lake Ojibway Nation-Ignace area and the Saugeen Ojibway Nation-South Bruce area generated the most conversation on Facebook, with most comments coming from the north. Locally focused initiatives, events and activities drove online interest and conversation, with residents of both potential siting areas sharing local news or their opinions on Canada's plan with their followers. On LinkedIn, members of the nuclear industry (including NWMO employees) made up most of the conversation, sharing their perspectives on the project.

Topics that drove the majority of online conversations included:

- The transportation of used nuclear fuel in the north;
- Water protection initiatives in both siting areas;
- The willingness process in the north; and
- Potential economic benefits of the project in both siting areas.

Of all the social media conversations we saw across social media platforms, 57 per cent of comments were either positive or neutral in sentiment. As we approach site selection, there has been an increase in the volume of comments from critical voices in the north.

Some illustrative social media comments include:

- "A reflection of a great community pulling together. With the increase in the number of people using local food banks the donations [from the annual NWMO South Bruce Holiday Food Drive] will be greatly appreciated."
- "Nuclear Waste Management Organization the people here will not allow [used nuclear fuel] to be dumped here. If this goes through, then be prepared for a huge battle with active protesters."
- "I would like to commend the NWMO on their approach to finding an appropriate location for the long-term management of Canada's used nuclear fuel."
- "When will there be an information session on the dangers of this experiment? There can't be WILLINGNESS without the knowledge of the dangers brought forward..."

As in prior years, we also observed online discussion groups outside NWMO-owned channels, typically based around specific potential siting areas. Some groups are critical of the NWMO's work or presence in their community, while others are supportive.

We continue to monitor public discussions for emerging topics and themes, and to hear about issues and questions that are being discussed by people in the potential siting areas. So far, the concerns we see expressed in these local forums are reflective of the broad themes discussed throughout this report and resemble the learning process seen in our face-to-face conversations with people in the potential siting areas.

Implementing Adaptive Phased Management 2023-27

WHAT WE HEARD

In March 2023, the NWMO published *Implementing Adaptive Phased Management 2023-27*, updating the previous five-year version of this annually updated plan. By also distributing a survey about the implementation plan digitally, we have sought to make it easy for the public to review and comment on Canada's plan for used nuclear fuel, supporting our commitment to transparency. We heard from hundreds of Canadians and Indigenous peoples, largely from northwestern and southern Ontario, including within the two remaining siting areas.

The survey offers a snapshot of respondents' thinking and provides insight into confidence in our ability to implement Canada's plan, as well as identifying areas of opportunity for the NWMO. The survey was designed to solicit broad feedback from interested individuals, and it was disseminated at informational events and through social media and other digital channels. As the survey was open to all interested parties rather than focusing on a representative sample, the results should not be viewed as statistically reliable. Instead, these results should be interpreted as qualitative and indicative of broader trends.

Overall participation numbers in 2023 were slightly lower than in 2022. However, the total number of completed surveys (rather than partial survey completions) increased. We received 632 total responses with a 37 per cent completion rate (compared to 19 per cent in 2022). Most (73 per cent) of the respondents were based in Ontario, with 15 per cent from the northwestern siting area and 18 per cent from the southern siting area.

The survey about our implementation plan is only one way we gather input that informs our work. The NWMO also solicits feedback through activities such as on-the-ground and digital engagement efforts, community liaison committees, educational events, advisory groups, publishing in peer-reviewed journals, attending conferences, and meeting with a range of subject-matter experts and all levels of government representatives.

This type of public input informs and guides our work, and comments received have helped us update this plan year after year. Below is a summary of what we heard in the implementation plan survey.

CONFIDENCE IN THE NWMO

Respondents to the survey expressed noticeably higher confidence in the NWMO than in previous years. Overall, more than three in five respondents (62 per cent) reported feeling confident in the NWMO after reading the implementation plan, an increase compared to 2022.

Confidence is higher in southern Ontario than in northwestern Ontario, although perceptions in the northwest are greatly improving.

To build on this confidence, we will continue to expand our ongoing communications efforts, including targeted outreach within the two remaining potential siting regions. This expansion will build on work completed in 2023. In South Bruce, we designed and executed the South Bruce Doorstep Discussion Initiative — our first-ever door-to-door campaign to enhance our outreach efforts within the municipality. Over the course of the summer, we visited close to 1,000 residents, successfully increasing the NWMO's visibility, building on existing relationships and beginning many new ones.

In the northwest, our team held 11 "Get to know the NWMO" sessions at several community venues, purposefully expanding our engagement efforts outside our own Learn More Centre. Many of these events featured third-party speakers, offering opportunities for community members to hear from experts outside the NWMO about the project and its potential benefits.

Communication within the implementation plan has been well-received, with close to three-quarters describing it as "excellent" or "good." Respondents commonly describe the implementation plan as understandable, clear and transparent.

INDIGENOUS KNOWLEDGE AND RECONCILIATION

As in years past, the majority of respondents told us they share the value of making Indigenous Knowledge and Reconciliation a priority, and they want us to communicate more about the steps in our Reconciliation journey. Among respondents, 58 per cent reported feeling confident in the NWMO's ability to align with Indigenous Knowledge and our commitment to Reconciliation. At the same time, we continue to hear concerns about these topics.

In response, the NWMO will continue to share information about the role of Indigenous Knowledge in our work, engage with Indigenous communities and work towards building trust and meaningful partnerships. We remain committed to our ongoing Reconciliation journey, working with Indigenous peoples, learning from Indigenous Knowledge and applying these learnings to our work to successfully implement the safe, long-term management of used nuclear fuel. We also conduct mandatory staff Reconciliation training and provide continuous learning opportunities, informal training opportunities, staff support systems and community-driven work plans.

SAFETY

Safety remains a top priority for the NWMO — and it was ranked as the most important priority for survey respondents.

Understanding of safety increased since last year. In total, 83 per cent of respondents reported understanding the safety approach.

Most comments from respondents were linked to general opposition and safety concerns — such as expressing the view that the project is inherently unsafe — and that “the NWMO is unable to guarantee safety.” Respondents also shared environmental and transportation concerns.

The NWMO engages directly with residents to address questions and concerns, and uses communications campaigns to share information on safety-related topics.

The NWMO is committed to ensuring Canada's plan is safe from a conventional, social, cultural and environmental perspective.

In 2024, we plan to revise our *Confidence in Safety* reports to reflect additional technical analyses completed after they were first released in 2022. The reports provide a summary of evidence that a deep geological repository can be constructed at either potential site. They reflect years of research and fieldwork, and provide detailed results that show why the NWMO is confident that both siting areas are suitable for the safe, long-term management of used nuclear fuel.

After a site with informed and willing hosts is selected, further technical studies will be undertaken at the selected site. These will provide even greater clarity for the repository design and formal safety case that will be submitted to regulators.

TRANSPORTATION

Transportation remains an important priority for the NWMO, and survey responses indicate public understanding of this priority has increased slightly since last year. In northwestern Ontario, 71 per cent of respondents reported understanding the transportation approach, while in southern Ontario, 86 per cent of respondents reported understanding it. Positive sentiment about transportation also increased compared to 2022.

However, there is still a persistent concern that transportation of used nuclear fuel could be dangerous. Respondents expressed concern about the safety of transportation, particularly due to traffic accidents and road conditions, especially on highways. Transportation continues to be a concern expressed especially by respondents in the north.

The NWMO is continuing to engage with the public on transportation, hear concerns and answer questions related to safety. In 2023, we conducted a number of studies to build on our *Preliminary transportation plan* and *transportation planning framework*, released in 2021. These include confidence in Used Fuel Transportation Package performance and transportation mitigation.

Looking forward, the NWMO's transportation approach will continue to undergo review and public reporting. Every three years, the transportation planning framework will be reviewed and revised as necessary, taking into consideration factors such as evolving best practices, new technologies, ongoing adaptation and continuous improvement.

ENGINEERING

This year's survey showed most respondents understand and feel positive about the NWMO's engineering program, ranking it as one of the best understood priorities. Specifically, 83 per cent of respondents said they understand this priority, and 76 per cent expressed a positive or neutral sentiment about it.





Respondents noted the robustness of the plan as a positive, while also expressing interest for greater research, to address safety concerns.

The NWMO has continued to collaborate closely with academics, government and international organizations as we advance the repository design. In 2023, for example, we concluded pressure testing of the used fuel container, a key engineered barrier in the repository design, building on the success of a full-scale demonstration completed in 2022.

Canada's use of a deep geological repository is consistent with international best practices. This approach is the culmination of decades of research, development and demonstration of technologies and techniques. There is also consensus among major nuclear regulatory and monitoring organizations that deep geological repositories are the responsible way forward.

**For more information,
please contact:**

Nuclear Waste Management Organization
22 St. Clair Avenue East, Fourth Floor
Toronto, ON M4T 2S3, Canada
Tel.: 416.934.9814 Toll free: 1.866.249.6966
Email: contactus@nwmocanada.ca
Website: nwmocanada.ca

   @nwmocanada
 /company/nwmocanada

nwmo

NUCLEAR WASTE MANAGEMENT ORGANIZATION SOCIÉTÉ DE GESTION DES DÉCHETS NUCLÉAIRES

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