



What we heard:

Implementing Canada's plan in 2022

JULY 2023

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 community 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. We 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 voice and help shape the conversation.

Table of contents

INTRODUCTION.....	4
2022 IN REVIEW	7
SAFETY, WATER AND THE ENVIRONMENT	12
EXPLORING PARTNERSHIP AND COMMUNITY STUDIES.....	19
RECONCILIATION AND INDIGENOUS KNOWLEDGE	24
TRANSPORTATION.....	27
SOCIAL MEDIA AND ONLINE CONVERSATIONS	31
IMPLEMENTING ADAPTIVE PHASED MANAGEMENT 2022 TO 2026.....	32

Introduction

In 2022, the Nuclear Waste Management Organization (NWMO) heard from thousands of Canadians and Indigenous peoples as we implemented Adaptive Phased Management (APM), Canada's plan for the safe, long-term management of used nuclear fuel.

We engaged in person, virtually and by correspondence, at hundreds of planned events and impromptu encounters. Mostly we talked to people in and around the two remaining siting areas under consideration in advance of our decision to select a single, preferred site in 2024. This report is the latest in a series of annual reports meant to summarize these wide-ranging and increasingly complex conversations.

Public engagement is one of the NWMO's central areas of focus, and this document summarizes and records some of the key questions, concerns and topics we discussed with people over the course of 2022. At the end of each chapter, a list of frequently asked questions is also presented, which is updated every year to include new and emerging lines of inquiry.

In responding to the public, NWMO staff draw upon different wells of knowledge and expertise to address complex topics and concepts. We use 3D models, videos and diagrams to explain various aspects of Canada's plan, and our subject matter specialists can reference many technical, social, environmental and health reports and studies, and can refer detailed questions to the right colleagues.

Many of these resources are available on our [website](#), which also contains a [FAQ page](#) that addresses common questions and provides links to other documents, multimedia and materials.

This report on what we heard in 2022 discusses those key topics under the following themes:

SAFETY, WATER AND THE ENVIRONMENT

We have consistently heard over the past two decades that safety is a priority in everything we do. The past year witnessed two key milestones in building public understanding of risk and the technical methods the NWMO will use to keep radioactive material isolated from people and the environment.

After more than 10 years of studying the geology and five years of intensive field study that pulled approximately eight kilometres of core samples from bedrock in both potential siting areas, we are excited for the completion in 2022 of the deep borehole drilling required to select a site.

With the completion of this important phase of borehole drilling, the NWMO was also able to reach a related milestone in 2022 with the publication of two *Confidence in Safety* reports, one for each potential site. Each report summarizes the results to date, indicating that both sites would be suitable from a technical perspective for hosting a repository for used nuclear fuel.

WILLINGNESS, PARTNERSHIP AND COMMUNITY STUDIES

Throughout 2022, at community and NWMO-organized engagement activities, staff provided project updates to many groups and individuals and also engaged with many people about the project for the first time. These in-depth conversations explored partnership and the potential social and economic benefits of building a deep geological repository to store Canada's used nuclear fuel. Many of these conversations were held over coffee chats in local cafés and restaurants, tours at the NWMO Discovery and Demonstration Centre in Oakville, Ont., borehole tours, fall fairs, and when people dropped by the local South Bruce office and Ignace Learn More Centre.

Both the NWMO and the municipalities engaged in the site selection process continued learning about one another through the design and the completion of three dozen studies meant to address a variety of topics of importance to communities. Each study, conducted by qualified third-party consultants, describes current baseline conditions, identifies potential changes with the project and assesses options to mitigate impacts or leverage opportunities within the communities and region. Community study findings are being considered as input into draft hosting agreement discussions.

Results of the studies were published and shared with community liaison committees. Summaries and presentations to the public are available [online](#).

RECONCILIATION AND INDIGENOUS KNOWLEDGE

In 2022, the NWMO resumed in-person engagement with Indigenous communities and our independent advisory body, the Council of Knowledge Holders, to discuss issues such as the draft transportation framework and our commitment to protecting water. Water protection remains at the core of the NWMO's work on safety and the alignment of western science and Indigenous Knowledge.

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

As part of the NWMO's commitment to living our values, within our organization 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 Indigenous Knowledge with all aspects of our work.

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

TRANSPORTATION PLANNING

The NWMO's transportation planning framework, released in 2021, was the focus of transportation engagement in 2022. Over 2,000 people were engaged about transportation at over 50 meetings and conferences where we heard about the importance of planning for future technologies, working with governments to upgrade infrastructure, and the effects of transportation on greenhouse gas emissions.

WHAT WE HEARD: Implementing Canada's plan in 2022

Some people raised concerns about the adequacy of transportation package testing, the environmental and health consequences of transporting used nuclear fuel, and the preparedness of first responders along transportation routes.

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](#).

MEDIA AND ONLINE VOICES

We continued to generate a steady and active social media conversation in 2022. Residents from both siting areas generated most of this discussion, but we continued to engage with those from outside the study areas as well. Topics that drove the majority of online conversations included water protection, potential economic benefits, community approaches to willingness and how Canada's plan was selected after a three-year study process.

Conversations in siting areas were typically positive or neutral in sentiment (over 60 per cent), roughly on par with 2021. Groups and individuals critical of the NWMO or our mandate also generated many discussions through letters to the editor in local newspapers and online feedback with their followers. Concerns and issues being expressed in these local forums are broadly reflective of the themes discussed in face-to-face conversation and throughout this report.

2022 in review

APPROACHING MILESTONES

Since 2010 and the initiation of the siting process, the NWMO has worked with communities to identify a preferred site for the long-term safe storage of Canada's used nuclear fuel. Over the course of the past decade, the NWMO has narrowed down the potential siting areas to just two, both located in Ontario — the Wabigoon Lake Ojibway Nation-Ignace area in the northwest and the Saugeen Ojibway Nation-South Bruce area in the south. Site selection is a critical milestone marking the beginning of a new series of activities, including the regulatory decision-making process.

As with most organizations, several provincial lockdowns associated with the COVID-19 pandemic impacted our work in 2020 and 2021. In reviewing our rolling five-year implementation plan and considering the impacts of the pandemic, in 2022 we made the decision to delay the timing for site selection. We now anticipate we will identify a preferred site by fall 2024. This shift in timing is not expected to impact the overall schedule for Canada's plan. Construction of the repository is still expected to begin in approximately 2033, and operation of the repository is expected to begin in the early 2040s.

ENGAGING SAFELY AND VIRTUALLY

Throughout the pandemic, the NWMO has maintained a safety-conscious approach. Following advice from local public health authorities, we adapted our engagement approaches by providing virtual open houses and online videos to keep people safe from COVID-19.

Once public health restrictions eased, the NWMO heard from stakeholders who saw value in ongoing virtual engagement. This year, virtual engagement provided people with an opportunity to review material and provide input on environmental baseline monitoring programs through a dedicated virtual open house.

Similar virtual showcases were also launched to engage officials in the municipal sector at their annual gatherings, and to share results of the social, economic and health studies carried out by the NWMO and municipalities in each siting area. All the study information will be available on our [website](#) and updated over the course of 2023.

CONFIDENCE IN SAFETY REPORTS

Our commitment to protect people and the environment is driven by safety. Since 2010, our staff have engaged the public on the safety case and the multiple-barrier system, which includes the geosphere as a safety barrier and is integral to the design of the deep geological repository. As an important part of the project, this year and in previous years, we have received many questions about the geosphere and the suitability of the rock in the different siting areas.

In June 2022, we published the *Confidence in Safety* reports for each potential site. They indicate that the sites would be suitable from a technical perspective for hosting a repository. The publication of these reports addresses community interest in safety and reflects years of research and fieldwork. The detailed results provided in the reports show why we are confident that both siting areas where communities are considering hosting the project can meet the rigorous safety requirements.

These safety reports indicate that the sites are located in stable, seismically quiet settings with rock formations of the necessary depth, breadth and volume to isolate the repository. In combination with the strength of the multiple-barrier system, the NWMO's confidence in the safety of each site is built on an understanding of several broad factors, including the characteristics of the geology and long-term stability of the rock and surrounding area and the sites' capabilities to support the safe construction, operation and closure of the repository. The reports also make clear that neither site has known economically exploitable resources within the rock (e.g., minerals, salt, gas), reducing the risk of human intrusion into the repository in the future.

For more information about the publication of the *Confidence in Safety* reports and how they respond to ongoing public engagement on the topic of safety, see the following chapter.

EMPLACEMENT TRIALS

Through engagement, we continue to hear questions from communities about the project's safety and a desire to understand how the multiple-barrier system will keep used nuclear fuel isolated from people and the environment.

This year, the NWMO completed a full-scale demonstration of the engineered barriers that will safely contain and isolate Canada's used nuclear fuel in a deep geological repository. This important safety and technical achievement was the culmination of more than eight years of preparation.

The repository will be built more than 500 metres underground and surrounded by a natural shield of solid rock. Its design uses a series of five engineered and natural barriers to ensure the facility's safety for many thousands of years. As part of the demonstration, technical teams built a life-size model of one of the repository's underground storage rooms at the NWMO Discovery and Demonstration Centre in Oakville, Ont., with the exact planned dimensions and interior walls lined with simulated rock tiling. Over several days, highly customized heavy machinery moved containers designed for used nuclear fuel into the room and filled the remaining space with protective material that will ensure the containers retain their strength and durability for many thousands of years.

During the process, the durable used fuel containers, made of thick carbon steel and coated with corrosion-resistant copper, were encased in protective layers called buffer boxes. Made of compressed bentonite clay, the boxes provide additional protection against corrosion or degradation. Once assembled, each used fuel container in its buffer box weighs 8,000 kilograms. One by one, the containers were lifted and precisely placed into the storage room. Later, all the remaining space from floor to ceiling was filled with loose granular bentonite.

After the demonstration was completed, the room was methodically emptied to carefully evaluate the installation of the engineered-barrier system. In-depth analysis is now underway to assess the results and yield insights that will support the ongoing design and planning of the deep geological repository.

WHAT WE HEARD: Implementing Canada's plan in 2022

Seeing the process in action goes a long way towards addressing many of the inquiries we have received from the public about how the multiple-barrier system works and how used fuel will be emplaced underground. To watch a mini-documentary on the demonstration of the engineered barriers, please visit our [YouTube channel](#).

A modified forklift with a customized handling attachment is used to move containers designed for used nuclear fuel and their heavy bentonite clay housings. It can move autonomously or be manually operated remotely from outside the room as needed.



CENTRE OF EXPERTISE

Planning for an eventual Centre of Expertise in the selected siting area has been part of the project's community engagement program for several years. As the site selection process advances towards identifying a preferred site, there is increased public interest, especially in terms of the centre's design and how the community and the NWMO will use the facility.

The Centre of Expertise will be a place for world-class science and innovation as well as enriching social services identified by residents. To this end, since 2019 the NWMO has undertaken dialogue to seek public input on what it will look like and its function in the community. In 2022, the NWMO sought feedback from the municipalities on their vision for the design of the Centre of Expertise. Community members shared their feedback at open house events that the NWMO hosted in each siting area and through an online survey.

Ultimately, the Centre of Expertise will be a multimillion-dollar investment in the area, making it one of the most tangible benefits and most exciting commitments made by the NWMO to the communities that will host the deep geological repository. Public feedback will be reflected in updated concepts of the facility, which will be shared with the communities as part of the NWMO's ongoing journey of learning and dialogue with siting communities.

Artist renderings for a potential Centre of Expertise.



PROPERTY VALUE PROTECTION

In response to the municipality of South Bruce's guiding principles to support local decision making on the project, the NWMO developed the Property Value Protection (PVP) program in consultation with the community. This program addresses feedback from the community requesting such a program and offers landowners confidence in terms of property value.

The program indicates that properties within a five-kilometre radius of the potential site will be eligible if the South Bruce Site is selected as the preferred site for Canada's deep geological repository. Additional support is incorporated into the first two years of the PVP program for those properties immediately adjacent to NWMO-owned and optioned properties.

Nuclear facilities have a long history of operating safely near agricultural lands and communities. The NWMO is committed to working with the community and has developed the PVP program — before a site is even selected for the project — to give landowners peace of mind when it comes to property values. We will continue to engage with landowners in the vicinity of the potential site to be sure we are capturing their thoughts on this and other topics related to the project.

For updates and more information on the PVP program, please visit our [website](#).

INTEREST IN NEW AND EMERGING TECHNOLOGIES

In 2020, the Government of Canada launched Canada's Small Modular Reactor (SMR) Action Plan. Since then, developments in SMR technology have increased interest in non-carbon generating sources of electricity and prospective SMR projects are driving national discussion and questions.

While the NWMO is not a proponent nor operator of any proposed SMR, we do engage in many discussions on SMRs and related topics, including the kinds of technologies used in designing and building SMRs and how the commercial

operation of SMRs may impact Canada's plan for the long-term management of used nuclear fuel. Common questions include:

- What kinds of nuclear fuel are used in SMRs?
- What is the nature of the nuclear fuel waste from SMRs?
- Is there a greater risk of failures with SMRs?
- What is the criticality of SMR waste?
- Are there any security risks with SMRs?
- Are SMRs a feasible technology?
- Does the deep geological repository plan have room for SMR waste?

In response to these and other questions, the NWMO developed a backgrounder called *Small Modular Reactors: Managing Used Fuel*, which is available on our website. It outlines the NWMO's responsibility for the long-term management of all Canada's used nuclear fuel, including any created using new or emerging technologies. We will also stay informed about technological advancements to anticipate any changes in fuel cycles and the types of waste we might be required to manage in the future. This information on new technology is shared with the public through our annual *Watching brief on advanced fuel cycles and alternative waste management technology*.

Safety, water and the environment

In 2022, the NWMO celebrated 20 years as an organization committed to safety. The *Nuclear Fuel Waste Act* (2002) created the NWMO to study and recommend a long-term management approach that was comprehensive, integrated and economically sound. Ethical, social and economic considerations were explicitly to be taken into account, and over two decades of engagement, including with many Indigenous communities across Canada, we have always heard that safety is the first and foremost concern.

Safety can mean different things to different people, but through our conversations we have come to understand that the safety of Canada's plan means locating, building and operating a facility while maintaining the integrity of our shared natural environments, especially bodies of water and valued components of the ecosystem.

It is with this understanding in mind that our engagement looks to build the public's confidence in the safety of Adaptive Phased Management (APM), both as a technical method (a deep geological repository) and a management system (long-term storage and monitoring that adapts to changes in science and society). The past year witnessed two key milestones in building public understanding of risk and the technical methods the NWMO will use to keep radioactive material isolated from people and the environment.

GEOSCIENCE FIELDWORK ACTIVITIES

After more than 10 years of studying the geology and years of intensive field studies that pulled approximately eight kilometres of rock core from bedrock in both potential siting areas, we are excited about the completion of this phase of deep borehole drilling at both potential sites in 2022. The completion of the last borehole at the potential site in the Saugeen Ojibway Nation (SON)-South Bruce area follows on work in the Wabigoon Lake Ojibway Nation (WLON)-Ignace area, which wrapped up in 2021. The completion of this phase of fieldwork marks a key milestone in site investigations to assess the suitability of the sites to host a deep geological repository to safely contain and isolate Canada's used nuclear fuel. Monitors from Indigenous siting area communities were present during the work.

Borehole drilling and testing work has been a focus of NWMO engagement for years. The work itself also provided an opportunity for the public to participate in borehole tours and see some of the expertise and technology that are part of the project. Last year, scheduled tours in the SON-South Bruce area facilitated opportunities for community members to visit and ask questions of NWMO geoscientists and specialists. Seeing the work first-hand prompted questions on a range of issues. For example, people asked about the quality of the rock and how it compared to rock in the other siting area, whether one type was more safe than another, technical aspects of the work such as questions about drill bits, how water was managed to ensure environmental and project safety, as well as what the potential repository and surface facilities would look like.

CONFIDENCE IN SAFETY REPORTS

With the completion of borehole drilling, the NWMO was also able to reach a related milestone in 2022 with the publication of two [Confidence in Safety reports](#), one for each potential site. Each report summarizes the results to date, indicating that both sites would be suitable from a technical perspective for hosting a repository. The findings address safety concerns about the project that the NWMO has heard through collaborative dialogue on safety in siting areas.

Ongoing and future technical work will include further site studies, design development and safety analyses to confirm and extend the results to date. The goal of publishing these early reports was to support public discussion on site selection.

At the South Bruce Site in the SON-South Bruce area, the preferred host rock is at a depth of approximately 650 metres. This formation has the depth, breadth and volume to isolate the repository from surface disturbances and changes caused by human activities and natural events. In addition, there are no active geological features (e.g., faults), and no appreciable groundwater was measured below 325 metres in depth.

There is also low risk of inadvertent future human intrusion. Other than sand and gravel deposits, no known economically exploitable mineral resources, hydrocarbon resources or salt resources have been previously identified at the South Bruce Site, and preliminary data from the first two boreholes at the site have not indicated economically significant concentrations of any of these at the site. This reduces the risk of inadvertent future human intrusion into the repository.

The site is amenable to geological characterization and its mineral composition is favourable to the construction of the repository. There is high confidence that the regional infrastructure can support the construction, operation and closure of the repository and used fuel can be safely transported to the South Bruce Site.

Facility performance must meet regulatory criteria for safety and the protection of the environment. Based on the assessment results to date, the NWMO is confident that a deep geological repository could be constructed at the South Bruce Site in a manner that would provide safe long-term management for Canada's used nuclear fuel.

There is a similar conclusion published in the *Confidence in Safety* report for the Revell Site in the WLON-Ignace area, located on the Canadian Shield approximately 43 kilometres northwest of the Township of Ignace and 21 kilometres southeast of WLON.

This site is within the Revell batholith, a unit of rock formed approximately 2.7 billion years ago, and has the depth, breadth and volume to isolate a repository. It is located in a stable, seismically quiet setting in the Canadian Shield, far from tectonic plate boundaries. There are no expectations nor indications of mineral resource potential within the Revell batholith, which is a relatively homogenous rock mass with 95 per cent of the core recovered from borehole drilling classified as biotite granodiorite-tonalite.

WHAT WE HEARD: Implementing Canada's plan in 2022

Taking the above into account, the repository can be safely constructed at this site. The Revell Site is within 10 kilometres of a highway and rail line and used fuel can be safely transported there using licensed transportation packages already available for CANDU used fuel.

More site characterization is required and is planned for whichever site is selected.

Both *Confidence in Safety* reports are part of a larger site assessment process. Ongoing and future technical work will include further site studies, design development and safety analyses to further check and clarify the safety basis. When a site is selected for the repository, this work will ultimately be presented to Canadian federal regulators for an impact assessment and then for a series of licence applications. This is a process that will take years before approval to construct can be received. After construction and operations, there will be continued monitoring to ensure that the site is and remains suitable.

WATER AND THE ENVIRONMENT

Water safety is a very common concern when discussing safety with the public, especially in siting areas. In 2022, the NWMO completed the first phase of a water well sampling program that was co-designed with local community members in South Bruce. This unique participatory process provides local residents with assurance that their water will be carefully safeguarded and helps landowners and the NWMO better understand water resources and water quality in the area around the potential deep geological repository site.

In addition to the well sampling program, the NWMO has also been conducting surface water quality and hydrology studies since summer 2021. Data collected in those studies will be shared with the community and be peer reviewed by independent experts. These programs will then be reviewed and adapted based on scientific findings and community input.

This co-designed environmental work will inform decision-making for the potential siting and construction of a deep geological repository.

Water was collected from wells on 10 properties near the proposed deep geological repository site and analyzed by a third-party laboratory to establish baseline conditions in private wells.



The NWMO understands the importance of water and the need to protect it for generations to come. To learn more about how we are protecting water together and the NWMO's water stewards, visit our [website](#).

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 is the NWMO technically demonstrating the safety of the project?
- » 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, a thousand years from now and perhaps without today's technology, 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?
- » Would the driver of a transport vehicle with a used nuclear fuel package be safe? What would their dose level be?
- » 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 is each underground shaft from the other?
- » Will there be water and sewer treatment facilities onsite?
- » 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?
- » 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?

- » Used nuclear fuel is moved around at nuclear power plants and in interim storage sites already. Are there any activities that would be considered higher risk than the activity already being done at the nuclear power plants?
- » 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?
- » How much does it cost to drill a borehole?
- » What are you testing the rock for?
- » Are earthquakes a problem?
- » Is water runoff from the rock pile dangerous?
- » What is the difference between the rock in Ignace and South Bruce?
- » How old is the rock?

SAFETY FROM A SOCIAL PERSPECTIVE

While the deep geological repository represents an important environmental infrastructure project for Canada, just as core to our work is protecting people. Key to that commitment is our focus on implementing the project in a way that makes people feel safe. History tells us that demonstrating the project is safe from a technical perspective is necessary, but not sufficient; it must be considered safe from a social perspective as well (i.e., in the eyes of citizens).

Defining and addressing safety from both technical and social perspectives is a critical component of success for this project. As discussed in the previous chapter, the NWMO will continue to develop the site-specific safety assessments required to demonstrate that the project meets or exceeds all regulatory

requirements. Trust with communities and individuals can be increased not only through the provision of technical information, but also through the continual building of the NWMO's understanding of what safety means to people.

We do this by listening to the safety concerns of people. It is essential that the NWMO continue to work closely with all communities involved to identify and address issues that comprise safety from a social perspective. Issues may include such concerns as cultural protection and economic protection, confidence that all accident and malfunction scenarios of social concern have been addressed, and the protection of water and cherished landscapes, among many others. We note that defining safety from a social perspective may be distinctly different in Indigenous communities from non-Indigenous communities and also different from community to community.

To ensure we address safety from a social perspective, 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. Members of the NWMO's siting safety group are routinely available in our community offices to share assessment outcomes in person and informally. This engagement helps us hear first-hand specific community questions, concerns and sometimes misunderstandings.

Our ongoing efforts to ensure that the project considers safety from a social perspective include:

- Using the feedback we receive to understand the issues of importance to Canadians and Indigenous peoples, adjusting our work to address those concerns if needed, and highlighting them in our public reporting;
- Actively and willingly participating in public panels featuring different perspectives on the project;
- Using common themes from the feedback we receive to guide the design of the repository and responding to that feedback in our reporting, as we have done on topics such as the importance of protecting water;
- Providing resources 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 and discussion of community studies considering a range of socioeconomic factors, to explore the potential for partnership and ensure the project can be implemented in a way that fosters well-being in the area (see the following chapter);
- Including communities in participatory environmental monitoring programs;
- Considering realistic lifestyles in our safety assessments, i.e. how and where people in the area live; and
- Making safety assessment experts available to the public on a drop-in basis in the siting areas.

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?

Exploring partnership and community studies

As the siting process advances there is a greater interest in detailed conversation about what the project would look like if sited in an area and how it would align with the vision community members have for its development. Through ongoing dialogue and engagement with NWMO specialists, engineers and scientists, factual information is made available to residents in and around the siting areas to support greater understanding and awareness of the project. For more detail on the kinds of engagement activities we held over the 2020-22 period, please see our most recent [triennial report](#).

EXPLORING PARTNERSHIP

Two areas remain in the site selection process. In northwestern Ontario, the Wabigoon Lake Ojibway Nation and the Township of Ignace will each have to demonstrate compelling willingness for the project to move forward. Similarly, in southern Ontario, the Saugeen Ojibway Nation and the Municipality of South Bruce must each demonstrate compelling willingness if the project is to be sited in that area.

The NWMO's road map to partnership was developed to illustrate how the NWMO would advance the site selection process. Through it, both the NWMO and municipalities would be able to learn about one another by envisioning what the project would look like if it were to be sited in the community. This envisioning would be informed by the completion of 34 socio-economic studies meant to address a variety of topics of importance to communities.

From our earliest engagements in potential siting areas, we heard a strong interest in understanding and participating in the site selection process. As communities have built an understanding of the project and potential investments in the siting area, they've considered complex topics such as how the community would manage healthy growth, including access to housing, healthcare and amenities like childcare, especially with an influx of project-related workers and infrastructure investment. Community members sometimes differ in how they view the project and its potential effects, and we strive to maintain an atmosphere of respectful discussion and learning for everyone regardless of their orientation towards the project. Implementing a dynamic project like Adaptive Phased Management means there is always something new to learn and consider, so dialogue with residents may evolve and develop over many years.

Through these conversations, we seek to listen and learn about local priorities while providing access to NWMO specialists, engineers and scientists to provide information and address community questions. Regularly scheduled community liaison committees (CLCs) continue to be an important forum for information sharing at the municipal level. Open to the public, these meetings welcome community members to learn details about current and future work and ask questions about the project.

Throughout 2022 at community and NWMO-organized activities, staff provided project updates to many groups and individuals and also engaged many people about the project for the first time. These in-depth conversations explored partnership and the potential social and economic benefits of building a deep geological repository to store Canada's used nuclear fuel. Many of these conversations were held over coffee chats in local cafés and restaurants, as well as at tours at the NWMO Discovery and Demonstration Centre in Oakville,

borehole tours, fall fairs, and when people dropped by the local South Bruce office and Ignace Learn More Centre.

FOLLOWING A COLLABORATIVE ROAD MAP

In 2022, South Bruce signed a Memorandum of Understanding (MOU) with the NWMO, following the signing of a MOU between Ignace and the NWMO in 2021. These agreements represent a key moment in the site selection process. Building on community input for the development of values, principles and project visioning, the MOUs contribute to developing “aligned partnerships” in the road map to partnership (see diagram below). These MOUs will form the basis of the future draft hosting agreements which are under negotiation in each siting area.

In South Bruce, the municipality established 36 guiding principles that reflect the community’s priorities and expectations. The MOU is a non-binding agreement that identifies how the NWMO will address the 36 guiding principles. It does not speak to the willingness of the community. The MOU reflects a number of areas of community input, including safety as well as environmental and socioeconomic priorities. Highlights of the commitments made by the NWMO can be found on our [website](#).

Road map to partnership (2017-24):

Starting from the bottom and moving upwards, the road map guides our discussions about partnership with communities.



SOCIOECONOMIC STUDIES

The NWMO’s commitment to community well-being will be ensured in part through hosting agreements, but community understanding of those potential benefits is fostered through participation and knowledge-building. Working together with municipal partners, we conducted 36 sociocultural-economic studies that explored a range of community well-being topics and responded to concerns, questions and aspirations laid out in the Ignace-area project vision and the South Bruce 36 guiding principles.

The studies, referred to as “community studies,” were initiated by the Municipality of South Bruce and the Township of Ignace in 2021, and focused on the potential economic and social benefits and impacts of building a deep geological

repository to store Canada's used nuclear fuel. Each report was developed through a mix of sources including interviews with key stakeholders within and surrounding the siting area, publicly available data and published reports. The contributing Knowledge Holders worked in a range of areas, including economic development, emergency services, health and social services, land use planning and housing, municipal services and training.

In 2022, reports were completed in South Bruce and Ignace. Results from the studies were presented in both communities, and residents were able to pose questions to the experts and the NWMO. Throughout the year, the reports were presented at a series of webinars organized by the Township of Ignace and the NWMO, and at community liaison committee meetings in South Bruce. Meetings were livestreamed and open to anyone. Both municipalities' CLCs hosted community study information online, including final reports, presentations and additional information (see links below).

Each study, conducted by qualified third-party consultants, describes current baseline conditions, identifies potential changes to the project, and assesses options to mitigate impacts or leverage opportunities within the communities and region. The community studies' findings are being considered as input into draft hosting agreement discussions.

The community studies cover a number of topics, which are different in each siting area. Topics include:

- Employment and workforce growth estimates;
- Opportunities for businesses both locally and regionally;
- Effects of a growing population to support more robust community services; and
- A variety of infrastructure studies.

The completed reports are available on the NWMO website at the following links:

[Ignace community studies](#)

[South Bruce community studies](#)

In addition, the final reports, presentations, questions from public presentations and other information can also be found on the municipalities' websites:

Municipality of South Bruce website — [Reports and presentations](#) and [Q&As](#)

Township of Ignace community liaison committee website — [Reports, presentations and Q&As](#)

Hearing that residents wanted a variety of information in varying levels of detail and availability, the NWMO worked with municipalities to develop virtual open houses that included study summaries, public presentations and comment forms, all through a website available whenever residents were interested. The detailed final reports are also available in each virtual open house, which can be accessed [online](#).

These studies represent a collaborative effort with communities and Knowledge Holders, and we thank all for their contributions.

FREQUENTLY ASKED QUESTIONS: Exploring partnership and community studies (2017-24)

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'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?
- » What specific benefits would the community receive?
- » How will the NWMO engage existing industry for community development?

Partnership

- » What is the definition of willingness?
- » How will willingness and support be gauged? Will there be a referendum? Will 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?
- » Will there be changes to the timeline due to the pandemic?
- » 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?

WHAT WE HEARD: Implementing Canada's plan in 2022

- » 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?
- » Are there economic opportunities related to the rock that is extracted from the repository?
- » Who will be involved in partnership discussions? Local municipalities? Indigenous communities?
- » 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?

Reconciliation and Indigenous Knowledge

In 2022, the NWMO was able to move forward with our in-person engagement after nearly two years of meeting virtually with communities and the Council of Knowledge Holders (formerly known as the Council of Elders and Youth).

The Council of Knowledge Holders (hereafter referred to as the Council) continued its momentum in advancing key elements of the NWMO's work. In-person and virtual meetings were held to discuss issues that could impact the implementation of Canada's plan, including but not limited to:

- The draft transportation framework, to demonstrate how feedback provided in 2021 had been incorporated to align the project with Indigenous Knowledge;
- The Canadian Nuclear Safety Commission's impact assessment requirements and an exploration of an Indigenous-led impact assessment framework; and
- Our commitment to protecting water together, as an example of a value shared by Indigenous and western science voices.

Water and water protection are at the core of what we do and a shared commitment with First Nations, Métis and Canadians. The NWMO's water work continues to flow in new and exciting directions to create space for Indigenous Knowledge and western science to align on strategies for its protection. We have launched water stewardship videos that highlight connections to water featuring voices from the Council, Indigenous community members, partners and NWMO employees.

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.

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 the project. It explores the themes of Indigenous worldviews, treaties, the history of the *Indian Act*, Indigenous residential schools, and Truth and Reconciliation.

In 2022, we developed and piloted the Métis Awareness Training program with the goal of raising awareness and understanding of Métis history and culture. This training program was designed in collaboration with members of the Council and external partners. It was delivered both virtually and in person and created many opportunities for NWMO employees to interact with one another in small group discussions, as well as to interact with Métis members of the Council who provided opening comments and facilitation support.

We continued to create space in 2022 for NWMO employees, industry partners and Indigenous rightsholders to share their feedback on how we can continue to improve the reach and implementation of our *Reconciliation Policy*. In 2020, we worked collaboratively with Reciprocal Consulting to develop a Reconciliation baseline and create a framework for evaluating the success of our organizational journey.

In 2022, we published our first Reconciliation annual report that outlined areas of success and opportunities for improvement. Some examples included:

- Expanding knowledge on how to apply Reconciliation learnings to action within the NWMO workspace;
- Enabling collaboration across departments to improve consistency in Reconciliation processes throughout the NWMO;
- Considering ways in which strategic planning can incorporate Reconciliation work, such as creating space for Indigenous Knowledge and openness to systems change;
- Ensuring the *Reconciliation Policy* is central to all community engagement work; and
- Working towards an increase in momentum and participation in Reconciliation work across the NWMO.

In 2022, we expanded our Reconciliation training program to Indigenous communities and municipalities in our siting regions, as well as industry and academic partners, completing a total of six sessions externally and more than 25 sessions internally. 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.

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. With technical site investigation work resuming in 2022, communities learned more about technical aspects of Canada's plan related to safety.

The Indigenous engagement team continued to create opportunities for important questions to be asked as part of dialogue on key areas of the NWMO's work. Some examples included:

- 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;
- Understanding the ongoing process to develop a transportation framework; and
- Beginning dialogue around the impact assessment process.

Finally, responding by request, the NWMO provided more than \$34,000 in funding to several First Nation and Métis communities. This funding included support for the following:

- Several requests for Christmas hampers;
- A food drive request;
- Support for a Missing and Murdered Indigenous Women and Girls walk;

- Support for a Habitat for Humanity project;
- Support for a large cultural event on Truth and Reconciliation Day;
- Support for a skirt-making project;
- A toy drive project;
- Support for a large ice fishing derby; and
- Support for a fall feast, another cultural event.

FREQUENTLY ASKED QUESTIONS: Indigenous relations and Reconciliation

- » How will the NWMO address the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) 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 consideration 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? 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 this affect safety, access to natural resources such as water, the ability to enjoy nature, or the ability to harvest or practice ceremony on traditional lands?
- » What will engagement look like in 2023 and 2024?
- » What other information is available to help Indigenous communities make a decision?
- » How do Indigenous communities define “safety”?

Transportation

TRANSPORTATION PLANNING FRAMEWORK AND PRELIMINARY PLAN

In December 2021, the NWMO released our transportation planning framework and *Preliminary Transportation Plan*, which were the focus of transportation engagement in 2022. These documents were developed based on a wealth of shared knowledge from years of conversation and dialogue with Canadians and Indigenous peoples. The framework reflects a common ground of principles, objectives and process considerations, while the preliminary plan begins to answer questions commonly asked about transportation safety and logistics.

Key milestones on our path to the development of these documents include:

- 2010-2015: Understand people's questions and concerns about transportation through dialogue
- 2015: Publish *Safe and Secure Transportation of Canada's Used Nuclear Fuel* brochure
- 2020: Publish draft transportation planning framework for public comment
- 2021: Publish revised framework and *Preliminary Transportation Plan*

Both documents are living documents that will continue to evolve and incorporate social priorities as the NWMO continues to plan for transportation in the 2040s.



In 2022, we engaged over 2,000 people at over 50 meetings and conferences. The new framework and preliminary plan allowed the NWMO to get into deeper discussions with members of the public and Indigenous communities about several 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 length of the transportation program);
- The two transportation systems that the NWMO is considering (all road or road/rail) and how they 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 coming 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 reflected 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?)
- Environment (e.g., what are the greenhouse gas emissions associated with the transportation program?)

While the more in-depth conversations about safety measures, logistics and inclusive planning were reassuring to many participants, skepticism and concerns continued to be voiced. It is important to acknowledge these critical voices as part of our "What we heard" reporting because they raise important questions that we need to address and may represent unspoken questions or concerns from less engaged members of the public.

Concerns that continue to be raised include:

- Package testing adequacy and whether the tests simulate accident conditions in the Canadian context;
- Environmental and human health consequences of an accident;
- Release of radiation under normal (non-accident) transportation conditions; and
- Preparedness of first responders along the transportation routes.

The NWMO is committed to addressing all these concerns over the next 20 years as we include Canadians and Indigenous peoples in transportation planning.

SAFETY FROM A SOCIAL PERSPECTIVE

Over many years of engagement, the NWMO has listened to and addressed many questions about the transportation of used nuclear fuel. The *Preliminary Transportation Plan* is one example of how we are beginning to address some of the more technical questions raised by members of the public using actual questions we received.

Another initiative we have recently undertaken is to actively turn commonly asked questions into work programs. This action informs our planning in a way that is responsive to the questions and concerns we hear from Canadians and Indigenous peoples and is one way that our planning continues to be inclusive.

Specific work programs informed by public input include:

- A preliminary routing analysis that includes routing factors raised by the public, as outlined in the planning framework;
- A security framework to help inform the NWMO's thinking around security planning, and specifically the use of escorts, which is of significant interest to the public;
- Accident risk and mitigation assessments, which look at the risks of different types of accidents (e.g., road, rail, conventional, dangerous goods), the outcomes of those accidents and causal factors (underway);
- A confidence in transportation package overview using Canadian context and international examples to demonstrate the robustness of transportation packages in accident conditions (underway); and
- An emergency response framework to help inform the NWMO's thinking and answer people's questions about emergency response planning (underway).

The outcomes of this work will be included in future iterations of the preliminary plan, while new or changing priorities will be documented in the planning framework.

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 on the NWMO [website](#).

The NWMO is working with Canadians and Indigenous peoples to develop a socially acceptable framework for transporting used nuclear fuel.



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 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?
- » Will the NWMO respect Indigenous jurisdiction with respect to transportation?
- » 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 would happen if an unauthorized individual really intended on opening the Used Fuel Transportation Package (UFTP)? Could 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?

Social media and online conversations

The NWMO continued to generate a steady and active social media conversation in 2022. Community residents from both the Ignace and South Bruce areas generated most of the conversation. We continued to engage with interested social media users from outside our study areas, particularly around the site selection process for Canada's plan to manage used nuclear fuel, including the three-year study. Facebook and Twitter were the most used social media networks among this audience. Locally focused initiatives, events and activities drove online interest and conversation, with residents of both siting areas sharing local news or their opinions on the project with their followers.

Topics that drove the majority of online conversations included:

- Water protection initiatives in both siting areas;
- Potential economic benefits of the project;
- Community approaches to willingness in a municipal election year; and
- How Canada's plan was selected, including the three-year study and its process.

Of the local conversation, close to 60 per cent of comments were either positive or neutral in sentiment, roughly on par with 2021. Some illustrative comments include:

- "Who did you ask?"
- "It was great to be able to take the kids there! They asked one of the volunteers to teach them how to make pancakes. I'd say the boys enjoyed it."
- "Bring it on."
- "No nuclear waste anywhere!"

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

We continue to monitor all kinds of public discussions for emerging topics and themes, and to hear about issues and questions that are being discussed by people in the 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 siting areas.

Implementing Adaptive Phased Management 2022 to 2026

WHAT WE HEARD

In March 2022, the NWMO published *Implementing Adaptive Phased Management 2022 to 2026*, updating the previous five-year version of this annually updated plan. By also publishing our survey about the implementation plan digitally, we have made it easier for the public to review and comment on Canada's plan, supporting our commitment to transparency. We heard from hundreds of individuals from the two remaining siting areas, as well as Canadians and Indigenous peoples living outside those areas.

This document and the survey about it are only one way that we gather input that informs our work. The NWMO also solicits feedback through on-the-ground and digital engagement efforts, community liaison committees, educational events, advisory groups, publishing in peer-reviewed journals, attending conferences and meeting with all levels of government representatives.

The survey offers a snapshot of respondents' thinking and provides insight into their level of 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 was disseminated through social media and other digital channels. As the survey was open to all interested parties, 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 2022 were slightly greater than in 2021. We received 757 partial and completed surveys in 2022, versus 729 partial and completed surveys in 2021. However, we noted an imbalance in responses across regions, with more than twice as many responses coming from southern Ontario than northwestern Ontario (191 and 86 respectively). In response to this imbalance, we will increase efforts to promote the survey for the 2023-27 implementation plan in northwestern Ontario by increasing public engagement on its promotion and using targeted digital communications.

This type of public input informs and guides our work, and comments received have helped us update this plan year after year. Through the responses, several themes emerged and are summarized below. A full discussion of each theme is published as part of [Implementing Adaptive Phased Management 2022 to 2026](#).

CONFIDENCE IN THE NWMO

Overall, more than half of respondents said they were "confident" or "very confident" in the NWMO after reading the plan. A strong majority said they found the NWMO plan understandable, clear and transparent. On the other hand, less than a third of respondents found the plan unclear, too technical or not understandable.

Overall, perceptions of the NWMO were more positive in southern Ontario than in northwestern Ontario. On the question of whether they had confidence in Canada's plan, more than three-quarters of respondents in southern Ontario said they were confident, compared to just over half in northwestern Ontario. These figures for both regions are up slightly from last year, when 72 per cent of respondents in southern Ontario and 50 per cent in northwestern Ontario expressed confidence in the plan.

RECONCILIATION

As in years past, the majority of respondents told us they share Reconciliation as a priority and they want us to communicate more about the steps in our Reconciliation journey.

Our commitment has always been to publicly report our progress on Reconciliation. In 2022, we reached an important milestone in our ongoing Reconciliation journey. Our first Reconciliation report was published, providing an evaluation of the NWMO's *Reconciliation Policy's* impacts since its formalization in 2019. Activities tracked included mandatory staff Reconciliation training and continuous learning opportunities, informal training opportunities, staff support systems and community-driven work plans.

TRANSPORTATION

Several comments expressed concern about the safety of transporting used nuclear fuel or the outright belief that transportation is dangerous. Some respondents, particularly those in northwestern Ontario, said they were worried about the possibility of traffic collisions and inadequate transportation infrastructure in the community selected.

SAFETY

When respondents were asked, "What priorities are most important to you?", safety remained in the top spot. It was identified by 42 per cent of survey respondents as their most important priority, with a further 32 per cent ranking it as their second highest. Protecting people and the environment for generations to come guides everything we do and every decision we make as we work to implement Canada's plan.

TRUST IN ENGINEERING

This year's survey showed most respondents understand and feel positive about the NWMO's engineering, ranking it as the best understood priority. Specifically, 86 per cent of respondents said they understood this priority and 75 per cent expressed a positive or neutral sentiment about it. The NWMO's geotechnical expertise and robust engineering approach and Canada's engineering leadership were cited in respondents' comments as some of the reasons for their confidence and positive sentiments.

**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@nwmo.ca

Website: nwmo.ca

   @nwmocanada

 /company/nwmocanada

nwmo

NUCLEAR WASTE MANAGEMENT ORGANIZATION SOCIÉTÉ DE GESTION DES DÉCHETS NUCLÉAIRES

© 2023 Nuclear Waste Management Organization