



What we heard:

Implementing Canada's plan in 2017

DECEMBER 2017

nwmo

NUCLEAR WASTE
MANAGEMENT
ORGANIZATION

SOCIÉTÉ DE GESTION
DES DÉCHETS
NUCLÉAIRES

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» INTRODUCTION

In 2017, the Nuclear Waste Management Organization (NWMO) pursued a series of progressively more detailed technical studies in siting areas, and continued to engage with people in and around the communities that have expressed interest in learning about Canada's plan to safely manage used nuclear fuel and the potential to host the project in their area. As the siting process advances, dialogue and engagement activities are broadening with First Nation and Métis communities and surrounding communities in each area. The NWMO also engages national and provincial Indigenous organizations, as well as municipal associations on an ongoing basis. This is the latest in a series of annual reports that summarize what we are hearing from ongoing dialogue and engagement activities.

Over the course of the year, we held a broad range of one-on-one conversations, as well as larger open house and open office discussions, conducted presentations with groups, and participated in conferences and large public events in and around the communities where we work. The NWMO engaged with individuals and groups from siting areas through meetings and briefings, interim storage facility tours, tours of the NWMO's proof test facility, monthly meetings of community liaison committees (CLC), community open houses, a learning and sharing gathering, drop-ins to local community offices, and festivals and events organized by communities and groups. Questions and comments were also expressed to the NWMO through our website and social media channels, CLC websites, Indigenous and municipal conferences, and meetings of the NWMO's Municipal Forum.

In 2017, the NWMO reduced the number of communities involved in preliminary assessments from nine to seven in June, and from seven to five in December. Work continues towards a goal of identifying a single preferred site by 2023. While the broad topics of interest are largely similar year-to-year, there is a progressive line of inquiry evident

in the evolving nature of comments, questions and concerns communicated in the dialogue. This progression reflects the broadening and deepening of the communities' understanding of the project, as well as a desire to learn about the project's potential impacts on community well-being, now and in the future, as the project becomes more tangible with the onset of borehole drilling, and initial discussions on the partnership road map. This progressive inquiry is reflected in the description of each theme in this report.

The 2017 report presents a rolling list of frequently asked questions, inclusive of both historical topics collected over previous years and new topics emerging from current discussions. Much of what we heard this year is set in the context of seven key areas of interest and corresponding activities:

Health and safety: People continued to want to talk about health and safety as an initial point of discussion, and specifically be assured that people and the environment are going to be protected. Efforts continued to communicate information on health and safety topics associated with siting a deep geological repository. In siting communities and areas, we heard that people wanted to expand their learning about the safety case, including the safety features of planned surface facilities. This year, we expanded engagement on transportation planning, and deepened our understanding of what health, safety, and security information, issues, and concerns the public wants to see addressed in a future transportation plan.

Adaptive Phased Management and site selection process: Initial learning about the NWMO, Adaptive Phased Management and the process to site a repository evokes a common set of questions, and these remained prevalent with people new to engagement in communities and regions in 2017. On the

other hand, those involved in learning about the process over a period of time expanded the range of questions, deepened the inquiry, offered insights, and worked together with the NWMO to explore new program areas, as well as to share their learnings with people new to the process.

Community well-being: There were a number of opportunities provided through project engagement activities and funding programs to focus on tangible aspects of community well-being in 2017. In addition, we took time to explore with members of the Council of Elders and Youth and others varying perspectives on community well-being, and practical considerations for supporting community well-being initiatives in siting communities and the region.

Partnership: This year, communities advanced in the site selection process and began to explore the potential for partnership. The NWMO and community leaders agreed to work together on this critical consideration by first beginning to identify a shared set of values and principles as foundation for more detailed conversations about the project and partnership, and to guide future decision-making over the coming few years. With the objective of involving community members from the outset in this first step towards exploring partnership, a number of community workshops were held in southern Ontario, and discussions began in the Ignace area.

Interweaving local and Indigenous Knowledge: We continued work to build and sustain relationships with Indigenous communities in the siting areas. In working to interweave Indigenous Knowledge into the site

selection process, we rely on and appreciate the learning and sharing processes developed with First Nation and Métis peoples. In 2017, Indigenous Knowledge keepers and guides supported technical fieldwork, and we worked with Elders and Indigenous women to prepare a presentation known as *The Journey of Water*, to advance learning and discussion about water.

Choosing a site for borehole studies: We continued conversations on the topic of selecting a preferred site for borehole drilling. These engagement activities have as their goal the identification of a potentially technically suitable and socially acceptable site on which to focus borehole studies. These conversations evoked both excitement about the project and concerns among those who may be new to the project and in the immediate vicinity.

Transportation: This year, we broadened our understanding of people's concerns, themes and questions to be addressed in a transportation planning framework. In addition to regular and ongoing dialogue on transportation, we conducted a public attitude research and dialogue project involving citizens from three nuclear provinces. We published a summary of the year's work in the *Transportation Themes 2014-2017: 2017 What We Heard About Transportation Planning from Working with Communities*.

Although not inclusive of every one of the thousands of pieces of input we heard over the year of engagement activities, the *What we heard: Implementing Canada's plan in 2017* report reflects key points raised by the many individuals and groups that, in the spirit of learning and collaboration, engaged with us in 2017.

» AREAS OF INTEREST (2013-2017)

The following illustrates a rolling list of common questions and topics we have encountered between 2013 and 2017. While some questions remain typical and are repeated year over year, new lines of inquiry have emerged with the implementation of subsequent phases of the project. This year, new areas of interest include borehole drilling and discussions to explore partnership.

Health and safety

- For how long will this radioactive material be dangerous?
- How can you know it will be safe over millions of years?
- 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 the environment be protected?
- Would the driver of a transport vehicle with an NWMO package be safe? What would their dose level be?
- What is a deep geological repository, and how will it isolate used nuclear fuel from people and the environment?
- How will the environment be protected when the repository is under construction?
- How will the environment, and specifically water, be protected during technical studies when you are drilling boreholes?
- What are the safety measures at surface facilities?

Adaptive Phased Management and site selection process

- Who owns the NWMO? Who do you report to? How are you regulated?
- How much used nuclear fuel exists, and how is it being managed now?
- How was Adaptive Phased Management developed? Who approved it? Do Canadians support it?
- How much will this project cost, and who are the used fuel owners that are paying for it?
- How long will it take to find a site? How long will it take to construct, and how long will the repository operate?
- What is a deep geological repository, and how will it isolate used nuclear fuel from people and the environment?
- What is used nuclear fuel?
- How many people have attended this event? How many of my neighbours are coming out to meetings?
- Do you have a local office? I want to learn more about the project.
- What is the nature of the NWMO's work in the area?
- What kind of site and/or rock are we looking for?
- How are other countries managing their used nuclear fuel?
- What criteria is being used for narrowing down?
- Where will surface facilities be located – nearby or in the region?
- What can be done with the acreage that will not be taken up by Adaptive Phased Management surface facilities?
- How many communities are involved in the site selection process?
- Are you talking to neighbouring communities and local First Nations?
- What is the community 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?
- How will findings from the studies be shared with the communities?
- Will all communities that began Phase 2 studies complete them?

Community well-being

- What are the local 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 this 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 locally to build the repository and facilities? Is there enough in my community?
- Will you be looking at Crown land?
- How can we prepare people in the community and area to participate in the project, develop skills and more?
- How will the NWMO ensure that the community and people in the area will benefit?
- How can we begin to plan for jobs and longer-term economic development?
- What are the opportunities for businesses and employment associated with borehole drilling? How do we get involved?
- How are youth being engaged, and how can we retain youth in our communities?
- What learning resources are available to students and youth?
- When will we begin to see activities and jobs in the area?
- When will we begin to see more technical study activities 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 this project?
- What resources are available to communities now in order to help build understanding of the project locally and with our neighbours?
- Are there economic opportunities related to the rock that is extracted from the repository?

Partnership

- Who will be involved in partnership discussions?
Local municipalities? Indigenous communities?
- Who needs to be supportive of the project in our area in order for it to proceed?
- How can I help build this partnership?
- What resources are available to learn more about partnership and what it would mean for our community?
- How will willingness and support be gauged?
- Can a few people in an area who are opposed to the project prevent the project from proceeding in the area?
- How can we help to get more people involved?

Interweaving local and Indigenous Knowledge

- How will the NWMO address the United Nations Declaration on the Rights of Indigenous Peoples in the storage of hazardous materials in Indigenous territories?
- How can we learn about how to keep our water safe by better understanding 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 culture?
- What are some examples of how the NWMO is interweaving Indigenous Knowledge throughout the Adaptive Phased Management project?
- What is the NWMO doing with respect to reconciliation?

Choosing a site for borehole studies

- How will siting the project in this location affect my use of the land?
- How will siting the project in this location affect my property values?
- How will siting the project in this location affect surface water, animals and plants?
- How will siting the project in this location advance the well-being of the community and area?
- How does the rock look here in the region? Is it suitable to site a repository?

Transportation

- What transportation route will you be using to get the used nuclear fuel from reactor sites to the repository?
- Is this material safe to transport? What if an accident happens while on the way?
- What would emergency response planning and training protocols look like? Will my community have 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?
- Will new or upgraded transportation infrastructure be required to transport used nuclear fuel?
- Will your drivers be transporting the used nuclear fuel even in the harsh, northern winter conditions?
- Will you be tracking the transportation canisters?
- Will the trucks or trains be emitting radiation?
- 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?

1. Health and safety

Health and safety and the protection of people and the environment are pre-eminent considerations raised in engagement activities.

Protecting people and the environment

In 2017, health and safety was a top-of-mind consideration with the public, and aspects of health and safety were frequently discussed as part of other concerns, in particular planning for transportation safety. Generally, there is a desire to learn more about and understand radiation, including the health effects of exposure, and conversations on safety tended to gravitate to the nature of used nuclear fuel.

People, in particular those new to learning about Adaptive Phased Management, are interested to know that CANDU fuel bundles and used nuclear fuel is a solid, not a gas or liquid, and is neither flammable nor explosive. They also are interested to understand more about radioactivity, how it is a naturally occurring phenomenon, and safe exposure levels. This year, we heard more and more that people are thinking about security measures, in regards to the future transportation of used nuclear fuel. We also heard from people familiar with the project interest in knowing about plans for the deep geological repository surface facilities, and in particular about how those facilities will use water, treat waste and safely manage radioactive sources.

The protection of people and the environment remains a common topic of interest, especially as people learn about how the NWMO will use the underground rock to isolate used nuclear fuel. As technical studies advanced in siting areas, including preparation for the drilling of boreholes to explore subsurface geology, we heard about community preferences for where to focus borehole studies, considering potential to impact traditional Indigenous and local land use activities such as hunting, fishing and berry picking. Land users and community members also expressed a preference for locating boreholes away from lakes and surface water, and sought assurances on effective waste water management practices while drilling is occurring.

1. Health and safety

Learning through demonstration

To respond to specific learning needs identified through ongoing interaction with the public, the NWMO has developed props and exhibits to help facilitate learning and conversations about health and safety. In 2017, communities were presented with opportunities to see and handle unloaded CANDU fuel bundles, as well as three-dimensional scale models of the specially designed packages and containers that will be used to keep people safe while the used fuel is being transported and eventually stored underground. Refreshed open house and community office exhibits were produced to further integrate interactive learning elements like tablet computers and Geiger counters, and the information contained in related modules was updated. We made a number of presentations to show people how water and the environment would be kept safe during borehole drilling, among other topics.

Residents of siting communities and their municipal and Indigenous community neighbours were invited to participate in interactive tours of interim used nuclear fuel storage facilities at nuclear power plant sites, as well as tours of the NWMO's proof test facility in Oakville, Ont. Respectively, these tours provided visitors with the ability to see up-close how used nuclear fuel is currently being managed, and how technical specialists are designing technology for the repository to protect health and safety, now and in the future. Response to these tours was extremely positive, and demand was very high in 2017, with the NWMO organizing 16 tours of Ontario Power Generation facilities, and 12 tours at the NWMO's proof test facility.

In addition to facility tours, the NWMO expanded its use of a mobile Used Fuel Transportation Package (UFTP) exhibit to help people better understand how we will safely transport used fuel to a repository. The UFTP featured at more than 20 events in 2017. Visitors commented on the size and robustness of the package, and expressed confidence that the 30 centimetres of solid stainless steel and redwood impact limiter would keep used fuel bundles protected from contact with people and the environment. Visitors were interested in the weight of the package (35 tonnes when loaded) and whether it would be able to travel down local highways and roads.

2. Adaptive Phased Management and site selection process

Though many residents of siting areas have been exposed to NWMO information about Adaptive Phased Management and its site selection process over many years, others are newly engaged each year. Here, we summarize what we are hearing from this diverse range of residents when discussing the NWMO, Adaptive Phased Management and the site selection process.

Engaging those new to site selection

In 2017, we engaged new people, most notably from surrounding areas and neighbouring municipalities and Indigenous communities, to seek their input and answer questions about siting activities. Through this expanded outreach, we heard common questions about the NWMO and its work, in particular:

- Who owns the NWMO?
- How much does the project cost? Who is paying for it?
- Who governs the organization?
- What is the nature of the NWMO's work in the area?
- What kind of site and/or rock are we looking for?
- What is the community role in the site selection process? What do you need from us?

With the advancement of siting studies in 2017 and the accompanying reduction in the number of siting areas, there was interest in learning about narrowing down decision-making and next steps in the site selection process.

Regional residents and others new to the project expressed interest in details about economic development opportunities and how economic benefits might be distributed within the region. In some areas, structured workshops held in the context of exploring partnership provided people with a better understanding of how the community, neighbours and the area as a whole could benefit from the project. In the context of learning more about economic potential, people asked for information on the facilities that are to be associated with the repository such as the packaging plant and the Centre of Expertise, and if they might be located nearby or within the greater region.

2. Adaptive Phased Management and site selection process

Ongoing dialogue with those familiar with the project

Those familiar with the project continued to offer insight and pursue new lines of inquiry. For example, people wanted to learn more about how Adaptive Phased Management compares with the management of used nuclear fuel in other nuclear powered jurisdictions, and how lessons learned (both positive and negative) relate to our process. They wanted to know more about NWMO engagement efforts in other siting areas, and municipalities were interested in how engagement was unfolding with Indigenous and Métis communities in other areas. Some offered advice on who to engage further: youth, the broader community and regional neighbours. As discussions to explore partnership rolled out in communities, some encouraged a broader set of individuals to join discussions on partnership principles and values. As the community leaders prepared to receive the results of preliminary studies later in the year, there was specific interest in criteria for the eventual selection of a single site.

Other illustrative topics of inquiry included questions about: the ongoing technical and social studies in siting areas; the relationship between ongoing preliminary assessments and NWMO decisions on narrowing down sites; funding available to communities to build capacity and learn more; and the specific composition of local community liaison committees (CLCs) and their role in decision-making. CLCs have become well-established forums for community members to ask questions and express concerns, and siting area residents are increasingly interested in knowing when and where the CLCs meet, and how they can attend or become further involved.

2. Adaptive Phased Management and site selection process

Adapting our timelines

In previous years, we heard questions about the timelines and planning horizons: when will a final site be selected, and when will construction and used fuel transportation commence? In 2017, in response to this request for detail, we published an updated graphic illustrating project milestones and timelines, highlighting the goal of identifying a single preferred site by 2023.

| | | |
|---|--------------|--|
| Developing Canada's plan | 2002 | The NWMO is created. |
| | 2005 | The NWMO completes three-year study with interested individuals, including specialists, Aboriginal people and the Canadian public. |
| | 2007 | Government of Canada selects APM and mandates the NWMO to begin implementation. |
| Developing the siting process | 2008 to 2009 | Work takes place, with citizens, to design a process for selecting a preferred central site for the deep geological repository and Centre of Expertise. |
| Identifying a site using the siting process | 2010 | The siting process is initiated, with a program to provide information, answer questions and build awareness. |
| | 2012 | 22 communities initially express interest. In collaboration with interested communities, the NWMO conducts initial screening of each. |
| | 2012 to 2015 | Preliminary studies are conducted to further assess suitability. Areas with less potential to meet project requirements are eliminated from further consideration. |
| | 2015 to 2022 | The NWMO expands assessment to include field studies. Areas with less potential are eliminated from further consideration. |
| | 2018 to 2022 | Narrowing down process and subsurface studies continue. |
| | 2023 | A single preferred site is identified. |
| Towards construction | 2024 | Detailed site characterization begins. Construction of the Centre of Expertise begins. |
| | 2028 | Licensing applications submitted. |
| | 2032 | Construction licence granted (estimate). |
| Beginning operations | 2040 to 2045 | Operations of the deep geological repository begin. |

3. Community well-being

This year, there were a number of opportunities provided through project activities and funding programs to focus on tangible aspects of community well-being. For example, the NWMO began to explore opportunities for local procurement and employment associated with social and technical studies, and with the newly launched Early Investments in Education and Skills program, the NWMO and communities began to identify small-scale capacity-building initiatives. In addition, conversations on partnerships generated further dialogue on community well-being.

Benefiting from local studies

As technical studies advanced in siting areas, some local decision-makers and Indigenous and non-Indigenous suppliers asked questions about how to get involved in economic opportunities associated with the current phase of the site selection process. In 2017, in the north, geoscientific and environmental field studies hired Indigenous guides to lead technicians as they walked the land to observe geological and environmental features. We also heard questions about the contract tendering and procurement processes, and held discussions on skills upgrading. Local suppliers contracted to the first borehole drilling included, for example, site preparation, fuel supply, and waste management services. Some communities used NWMO funding to support broader local economic development and business planning.

We continued to engage people with results of our 2016 economic modelling work. In this context, we heard that some would like more detailed information on economic benefits associated with each stage of the project; others asked when the jobs projected in the model research would begin to arrive in a selected community. Beyond jobs, people are focused on leveraging benefits to local small- and medium-sized businesses during early stage activities. This includes contracts to purchase goods and services locally such as accommodation, office maintenance, and renovations to commercial properties used as Learn More Centres. In 2017, the NWMO took further steps to provide a greater local presence in communities advanced to borehole drilling, including hiring locally based specialists.

3. Community well-being

When speaking about benefits associated with future NWMO activities, people focus on ensuring that if their area is selected, there are measures in place to ensure fair sharing of those benefits.

All communities place importance on involving youth in the siting process and in preparing youth for the future. This year, we launched the new Early Investments in Education and Skills program and worked collaboratively with communities to identify youth training, and educational and other projects. Initiatives with schools and youth groups included, for example, the launch of robotics programs, science-based curricular and extracurricular activities, science-based summer camps, and science, technology, engineering, and mathematics (STEM) initiatives. We heard that community members were appreciative of the program and the NWMO's active participation in related initiatives.

Community well-being in Indigenous communities

The NWMO worked collaboratively with an increasing number of Indigenous communities to develop Learn More Agreements. These agreements are designed to enhance learning about the project and as a means to provide support for development priorities defined by communities. As relationships evolve with Indigenous communities, we hear a desire for more detailed information, including:

- What does the NWMO mean by community well-being?
- What is the process for discussing community well-being?
- How will the project impact communities in the long term?
- What learning resources are available to students and youth in the area?
- How can we ensure benefits are distributed geographically and over time?
- How do we ensure benefits are shared fairly?
- What does a healthy community look like?
- Can we learn more about potential impacts on property values and traditional land use?

3. Community well-being

Learning from Indigenous communities and the Council of Elders and Youth, we recently updated our existing community well-being framework graphic, which has spirit as the central component of the framework. Other aspects of the framework include community and culture, people, infrastructure, environment, and economics and finance.

MANY DIMENSIONS OF WELL-BEING



4. Partnership

This year, we launched early discussions to explore partnership through a sequence of steps outlined in the partnership road map in two siting areas that are advanced in the siting process. Early conversations focused on developing a list of guiding values and principles for these discussions, and questions and issues that must be addressed.

In early discussions, people are interested in understanding how partnership will work, how they can personally help their communities advance towards it, and how the potential for partnership will ultimately be assessed in making decisions on the single preferred site for the project.

As we advance in the siting process, important questions for people include: how should “community” be defined for the purpose of assessing willingness, which is a requirement of the project; how will willingness and support be gauged; who needs to be part of the partnership; how will benefits be fairly shared; how will any negative effects be mitigated; and what are the impacts of the project more broadly?

To date, communities have focused on learning about the repository and the multiple-barrier system. Communities are now beginning to focus on surface facilities associated with the project, including facilities such as the packaging plant, sealing material compaction plant, concrete batch plant, used fuel container factory, rock pile, and the Centre of Expertise. People are interested in learning about water requirements, waste water treatment, and radiation management in surface facilities. These facilities are expected to be the focus of conversation in subsequent stages of the partnership road map.

Ultimately, the project will only be implemented with the involvement of the interested community, First Nation and Métis communities in the area, and surrounding communities working in partnership. People are keen to explore further what this means and to work to develop the partnership needed by the project.

5. Interweaving local and Indigenous Knowledge

Learning through experience

In 2017, we continued to work with Indigenous communities to interweave Indigenous Knowledge with western science in the conduct of our work. This included the provision of resources for communities to conduct their own studies, and hold community discussions to determine if and how the community wishes to share its Indigenous Knowledge. In some areas where we conducted borehole drilling, Indigenous Knowledge of the traditional and current land uses was combined with the input of non-Indigenous people to help locate drill sites. We also worked with communities to develop a program in which local knowledge keepers guided technical specialists as they walked the land, and cultural monitors were present at drill sites.

Learning through open dialogue was central to the experience in the northwestern siting area. In discussion with Wabigoon Lake Ojibway Nation, we heard about the importance of holding ceremony in advance of technical work to study the underground rock. Based on this experience, ceremony has become an important part of our process, and a ceremony was performed in advance of drilling in November 2017.

In another example of how we are learning from our Indigenous communities, the NWMO developed and delivered a new technical presentation on how water is protected in all aspects of the project. This was in response to feedback that we needed more plain-spoken, illustrative presentations on specific topics to help build understanding among the diverse groups we were engaging. Often referred to as *The Journey of Water*, this new presentation is presented by way of telling a story, by both NWMO technical and Indigenous Knowledge specialists, which is an example of oral teaching and learning. It aligns traditional views of the water as having a story to tell, with the hydrogeological science that will help the NWMO learn about the rock we are currently studying. At one event, the NWMO was fortunate to have Indigenous peoples help deliver water teachings alongside this adaptable presentation, and it will be further developed as studies advance and the story evolves.

5. Interweaving local and Indigenous Knowledge

Reconciliation and well-being

In 2017, the NWMO heard from the Council of Elders and Youth that the NWMO start to think about what its role is with regards to reconciliation. It suggested that we make a formal commitment to contribute to reconciliation. As the NWMO develops its thinking on partnerships over the course of 2018, key factors will include integrating Indigenous Knowledge, ensuring benefits and participation in the project, and contributing to reconciliation. Interest has also been expressed by some Indigenous communities in developing consultation protocols for the project.

Communicating effectively

Engagement in 2017 continued to build on relationships with Indigenous communities, and we have started establishing Learn More Agreements that facilitate conversation on many of the social and technical aspects of the project. While information about the project was introduced, we heard that First Nation and Métis communities were interested in discussing the ways in which we can communicate with a culturally appropriate orientation. We have also heard that we need to ensure that we are communicating our work plans to Indigenous peoples early enough to give communities time to allow for traditional preparations such as ceremonies or seeking guidance from Elders.

Engagement activities that include presentations to Chief and Council, Métis communities and public events cover a broad range of topics. We have heard of the need to present topics that are inclusive of Indigenous Knowledge and world views, and begun incorporating it into our process. The development of *The Journey of Water* is a good example of integrating Indigenous Knowledge into discussing how the NWMO's work ensures environmental protection. The conversation about how to best communicate in culturally appropriate ways continues. As we have learned, *how* we communicate can be as important as *what* we communicate. In this way, we have also heard that engagement requires a flexible and responsive approach that allows community engagement to respond to particular areas of interest. We continue to hear that language is important, and the information being shared must take into consideration translation and reducing technical jargon.

6. Choosing a site for borehole studies

We are beginning to engage with people in siting areas about potential locations for borehole drilling. Borehole drilling sites have the potential to be considered for the repository, and as a result, conversations are becoming focused and personal. These conversations involve sharing a range of sites with potential to be technically suitable based on studies conducted to date in the area, and exploring with people in the area which of these sites should be the focus of borehole studies, understanding this could be a potential repository location. Engagement activities have as their goal the identification of a potentially technically suitable and socially acceptable site on which to focus borehole studies.

These conversations evoke both excitement about the project and concerns among those who may be new to the project and in the immediate vicinity. Excitement tends to focus on what the implementation of the project may mean to the area and how it might help achieve the area's long-term vision. Concerns expressed over the course of these conversations begin with questions about how the project will affect ongoing use of the land by individuals in that area and the value of their properties, the impact on cultural values, and the impact on the safety of people and the environment in that specific area. Free and frank discussion on these topics, in the context of siting borehole studies, is a crucial area of dialogue as we work with communities to advance Canada's plan in siting areas.

7. Transportation

The safe and secure transportation of used nuclear fuel is an important component of Canada's plan for the long-term management of used nuclear fuel. Although the transportation of used nuclear fuel to a repository site is not expected to begin before 2040, it is a key focus of interest and conversation in dialogue with communities in 2017. Since 2014, we have published an annual rolling summary of the ongoing conversations with communities about this important topic. The most recent report *Transportation Themes 2014-2017: 2017 What We Heard About Transportation Planning from Working with Communities* was published in October 2017, and is available on our website. The following is a high-level summary of the themes and discussions contained in that report.

In general, we heard that the communities involved in the site selection process are keen to explore the safety and security of the transportation of used fuel to any repository site as an integral part of exploring a project in which they may become involved. As communities, interested individuals and groups explore the basis for confidence in the safety of the transportation of used nuclear fuel, the NWMO is learning more about the questions that need to be addressed. It is also learning about the technical testing that needs to be performed, and the values, objectives, and processes that need to guide planning of the transportation of used nuclear fuel as part of the Adaptive Phased Management project.

As conversations on transportation advance, there is substantial agreement on the themes and questions that need to guide and be addressed in transportation planning. Across all these conversations, whether at open houses as part of the site selection process, or at conferences or gatherings to encourage learning about Canada's plan, or through focused public attitude research on the questions posed in our discussion document, several key themes or touch points are emerging:

- Primary consideration is safety and the protection of people and the environment. People want to understand and be assured that people's health, drinking water, watersheds, and the environment will be protected.

- People want to be confident in the procedures to secure shipments from threats such as terrorism or theft.
- People want assurance that emergency response plans are in place in case of emergencies along transportation routes. They want to know how the NWMO will equip and support first responders and other emergency response personnel.
- People want to know costs associated with the transportation of used nuclear fuel will be fully covered, and will not fall on taxpayers and future generations.
- Transportation plans need to be independent of politics and changes in government. People want to know that jurisdictional roles, responsibilities, and authorities are clearly articulated and understood.
- Education, communication and engagement are considered fundamental to overcoming people's natural tendency towards nimbysism, and fears and misconceptions about nuclear energy. These fears and concerns should not stand in the way of implementing the project and the greater public good.

As noted, in 2017, we completed a public attitude research project on transportation planning. This work was conducted over a series of months and engaged a wide cross-section of citizens through: 22-hour-long focus groups sessions in Ontario, Quebec and New Brunswick; two workshops involving representatives of Indigenous and municipal communities participating in the siting process; and a 45-person public dialogue session. Reports from that research are available on the NWMO website, and a summary of findings is included in the *Transportation Themes 2014-2017: 2017 What We Heard About Transportation Planning from Working with Communities* report.

We will continue to expand dialogue on used nuclear fuel transportation as part of our ongoing 2018 engagement.

»» SOCIAL MEDIA AND ONLINE CONVERSATIONS

The NWMO continued to hear from citizens via our website and email, and beginning in late 2017, through Facebook, LinkedIn and YouTube social media pages. Social media has become a primary communication tool for Canadians, with some surveys indicating that nearly two-thirds of us have at least one network profile, and more than half are using multiple platforms. Throughout 2017, the number of contacts received online has remained consistent in volume and frequency (i.e., on average, one or two contacts per day).

Online discussion groups local to specific siting areas continued. We continued to monitor these public discussions for emerging topics and

themes, and to hear about issues and questions that are circulating within siting areas, including the concerns that are being expressed by some people in the area. The concerns and issues we saw expressed are in-line with the themes discussed throughout this document.

In fall 2017, the NWMO launched its Facebook page (www.facebook.com/nwmocanada) as a way to further communicate Canada's plan. The NWMO also started to post content on LinkedIn (www.linkedin.com/company/nwmocanada).

We will continue to review, learn from and report on these public conversations as the siting process advances.

»» IMPLEMENTATION PLAN

2018-2022

In 2017, the NWMO also received comment and direction from interested individuals and groups on a draft of our annually updated strategic plan, *Implementing Adaptive Phased Management 2018 to 2022*, which describes our strategic objectives and five-year work plan. Based on feedback we received about our past plans and other communications materials, this year, we aimed to create a document that is easier to read and understand. This year's plan is about half as long as last year's, and the language is designed to be more open, friendly and accessible.

This draft of the 2018 to 2022 plan was released for public comment in September 2017. We received overall positive comments about the Adaptive Phased Management process and our strategic plans for the next five years. We received positive feedback on the new, more concise format of the plan, including that the plan was easy to review. The challenge of obtaining social acceptance, the importance of sustained engagement, and the need for careful transportation planning and engagement were also important areas of comment. The feedback received will be discussed more fully with the publication of the finalized version of the plan published in March 2018.

» CONTINUING DIALOGUE

In 2017, we heard from and engaged a broad range of interested communities, First Nation and Métis communities, individuals, and organizations as we worked collaboratively to advance the implementation of Canada's plan. This includes discussions during engagement activities such as open houses and trade show events, other in-person conversations, community group briefings, direct correspondence, learning events in the community and at conference venues, and the sharing of information and materials focused on areas of interest expressed through dialogue.

The NWMO has observed that as conversations continue, and more communities, individuals and groups become involved, there is substantial

agreement on the themes and questions that need to guide and be addressed in implementing Canada's plan. We also understand that as we advance to identify borehole sites and potential repository locations, conversations, questions and concerns will become more focused and personal. Special care and respect will be needed to collaboratively advance this work.

The NWMO continues to invite comments and suggestions about its work programs and plans, and thanks the communities, individuals and organizations that continue to lend their thinking to ensuring the safe, long-term containment and isolation of Canada's used nuclear fuel today and for generations to come.

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