



NUCLEAR WASTE
MANAGEMENT
ORGANIZATION

SOCIÉTÉ DE GESTION
DES DÉCHETS
NUCLÉAIRES

Planning Transportation for Adaptive Phased Management

Dialogue to date

August 2020

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1. Background

The Nuclear Waste Management Organization (NWMO) is leading a dialogue with interested individuals, communities and organizations to develop a framework for planning the used fuel transportation program, which is an important part of Adaptive Phased Management (APM), Canada's plan for the safe, long-term management of Canada's used nuclear fuel.

APM moves towards a goal that Canadians themselves identified: safe, secure, long-term containment and isolation of used nuclear fuel produced in Canada, with flexibility for future generations to make their own decisions, and adapt to experience and societal changes. Canada's plan involves placing our country's used nuclear fuel in a deep geological repository in a suitable rock formation using a multiple-barrier system. A fundamental tenet of Canada's plan is incorporating learning and knowledge at each step to guide a process of phased decision-making. APM is designed to be flexible, and respond to new learning, societal priorities, and evolving public policy. Importantly, the facility is to be sited in an area with an informed, willing host.

Used nuclear fuel is currently safely stored in facilities licensed by the Canadian Nuclear Safety Commission (CNSC) at or near sites where it is produced. Placing all of Canada's used nuclear fuel in a single central location will require transportation from these interim storage facilities to the deep geological repository. Transportation will involve placing these solid used fuel bundles in a transportation package that is specially designed to protect people and the environment during transportation, including in accident conditions. These transportation packages will be transported by road or rail, depending on the location chosen in the future for the deep geological repository.

Transportation of radioactive material is a well-established practice. There is a strong international track record in safely transporting used nuclear fuel. Transportation of used fuel is subject to stringent regulation and oversight. The NWMO will need to demonstrate to regulatory authorities and citizens the safety and security of any transportation program before transportation can begin.

Canada's plan for the long-term management of used nuclear fuel requires us all to work together to implement each component. Planning for transportation of the used nuclear fuel, an important component of APM, requires the involvement of a broad range of citizens and technical specialists. Together, we can ensure APM transportation plans incorporate the best knowledge and expertise, and are guided by the values and priorities of Canadians to protect future generations and the environment.

The APM transportation program is expected to begin in the 2040s. We have time to develop this transportation plan together and consider it carefully. To prepare for this important phase of work, the NWMO initiated a broad dialogue to develop a framework for transportation planning, involving clear objectives, the issues that will need to be addressed, the factors to consider in making decisions, and the means we will use to ensure the plan includes best knowledge and experience, as well as the values and priorities of citizens.

2. Dialogue approach

From very early in the implementation of APM, communities involved in the site selection process have been keen to explore the safety and security of transportation as an integral part of exploring the APM project. Over the course of these conversations, communities have expressed a strong sense of responsibility to all Canadians and future generations to ask and have answered the key questions important to advancing the project. To answer some of those preliminary questions, the NWMO published the Safe and Secure Transportation of Canada's Used Nuclear Fuel brochure and corresponding Questions & Answers brochure in 2015.

Further to these more technical documents and in response to the interest of communities involved in the siting process, in late 2016 the NWMO published a Transportation Discussion Document. The document was designed to explore areas of interest being raised by communities using five key questions. The questions were designed to stimulate dialogue and invite people to add to them through the conversation.

The Discussion Document was published on the NWMO website, and has been shared with municipalities, Métis and First Nation communities and organizations, and first responders during events such as conferences, trade shows, open houses, Community Liaison Committees (CLCs), community briefings and presentations, and tours of the NWMO's Proof Test facility in Oakville or tours of Interim Storage Facilities. Public attitude research has also been conducted as a means to involve a broad cross-section of citizens with different experience and interests. The NWMO has been engaged in thousands of conversations over the course of these activities, as part of:

- » Outreach and engagement to advance learning about the project and the site selection process, where transportation is a common subject of interest (e.g. open houses, information panels at community siting offices, the NWMO's Oakville facility, dry storage tours and presence at Key Métis, First Nation and Municipal conferences);
- » Presentations/discussions about transportation with both siting communities and, more broadly, with communities and groups that have expressed an interest about transportation;
- » Mobile learning exhibit - Used Fuel Transportation Package (2017) and transportation safety module (2019); and
- » Focus groups and dialogue sessions with a cross section of the public.

These discussions have been supported by information material including the information brochure and Questions & Answers brochure developed in 2015, as well as material developed over the course of the dialogue.

In 2018, a short pamphlet was developed to further stimulate conversation about transportation planning through summarizing key themes emerging from conversations to date. This pamphlet, titled 'Working together to develop a transportation planning framework', became part of the package of material that is shared in engagement activities in order to encourage further discussion.

The suite of information materials that have supported this dialogue include:

- » Safe and Secure Transportation of Canada's Used Nuclear Fuel;
- » Questions & Answers: Safe and Secure Transportation of Canada's Used Nuclear Fuel;
- » Transportation Planning for Adaptive Phased Management: Discussion Document (and accompanying questionnaire); and
- » Working together to develop a transportation planning framework: What we are hearing

Over the course of the dialogue, presentations were prepared and delivered. Depending on the audience and their interests, these presentations described the NWMO's transportation program and reported back to communities on what we have been hearing through our engagement and dialogue. They also stimulated further conversation. (See the NWMO's website to view documents and material used.)

As a complement to ongoing engagement, public attitude research and Métis and First Nation dialogue sessions were conducted between 2017 and 2019 to further understand principles, values and objectives to ground future transportation planning. These sessions were facilitated by a third party. The focus of this work was to complement ongoing dialogue activities and to ensure we were beginning to involve and hear from a broad cross-section of citizens. (See the NWMO's website to view summaries of what we heard in these various dialogues.)

3. Discussion document

To help advance broader conversation, the NWMO developed a discussion document focused on five key questions being raised by communities already involved in conversation through the site selection process. The discussion questions and a link to the discussion document are outlined below.

Discussion Questions

1. What basic requirements or factors should form the starting foundation for the APM transportation plan?
2. Which objectives, principles and key questions should guide development of an APM transportation plan?
3. How can we ensure the design and implementation of the APM transportation plan is sufficiently inclusive to ensure good decisions are made?
4. What information will we need from technical specialists to develop the plan and support decision-making?
5. What factors should be considered in future decisions about modes and routes?

The Transportation Discussion Document is available at:
<https://nwmco.co/transportation2016>

4. Draft framework for review

From these discussions, a framework for transportation planning appears to be emerging. It reflects a common ground of principles, objectives and process considerations people tend to share. This emerging framework is outlined in *Moving forward together: An invitation to review a draft planning framework for the transportation of used nuclear fuel (August 2020)*. In this document, the NWMO outlines what we heard about the key elements of a framework to guide transportation planning, and what this means in terms of a process for moving forward. This framework is published as a draft for discussion to ensure we listened well and that the framework includes what is needed. The framework is available for review and public input on the NWMO website.

5. Next steps

We invite interested individuals, communities and organizations to join the conversations, help refine the framework, and shape the plan going forward. We will refine the framework to reflect the ongoing dialogue and comments received, and share the refined framework within the coming year.

6. Listing of activities and reports to date

Dialogue to date has included a range of engagement activities, some led by the NWMO and some facilitated by third parties. A number of reports have been published that outline what was heard and learning from these activities; some of these reports have been prepared by the NWMO and some by third party consultants who lead various aspects of the work. The list below outlines these various reports and provides links to each document.

i. Activities

As the site selection process has advanced, we have continued to broaden our engagement on transportation as described above. Specific activities that contributed to this dialogue between the release of the Discussion Document and the draft Transportation Planning Framework include:

Conferences, trade shows, and meetings

Association of Ontario Road Supervisors Trade Show

- » June 5-6, 2019, Chatham
- » June 6-7, 2018, Belleville
- » June 7-8, 2017, Milverton, with Transportation Exhibit

Canadian Nuclear Society

- » October 27-30, 2019, Ottawa, 3rd International Meeting on Fire Safety and Emergency Preparedness, Ottawa
- » September 8-11, 2019, Ottawa, 4th Nuclear Waste Management, Decommissioning and Environmental Restoration (NWMDER) Conference

Federation of Canadian Municipalities (FCM) Annual Conference

- » May 30-June 3, 2019, Quebec City
- » May 31-June 3, 2018, Halifax
- » June 1-June 4, 2017, Ottawa

Federation of Northern Ontario Municipalities (FONOM) Annual Conference

- » May 8-10, 2019, Sudbury
- » May 9-11, 2018, Parry Sound
- » May 10-12, 2017, North Bay, with Transportation Exhibit

Emergency Response Organizations and Tradeshow

- » April 2-4, 2019, Northwest Response Forum, Dryden
- » April 10, 2019 - Dose Consequences Presentation, Manitouwadge Fire Department
- » September 5-7, 2019, FireCon, Thunder Bay
- » October 10, 2019 – Manitouwadge Fire Department open house
- » September 6-8, 2018, FireCon, Thunder Bay
- » April 11-13, 2017, Northwest Response Forum, Dryden

Northwestern Ontario Municipal Association (NOMA) Annual Conference

- » April 24-26, 2019, Thunder Bay
- » April 26-28, 2017, Thunder Bay

Ontario Good Roads Association Conference

- » February 24-27, 2019, Toronto
- » February 25-28, 2018, Toronto
- » February 12-15, 2017, Toronto

Indigenous Conferences and Annual General Assemblies

- » August 22-24, 2019, Métis Nation of Ontario Annual General Assembly, Sault Ste. Marie
- » September 27-28, 2019, Congress of Aboriginal Peoples Annual General Assembly, Ottawa
- » September 29-30, 2019, Ontario Coalition of Indigenous Peoples Annual General Assembly, Ottawa
- » August 17-18, 2018, Métis Nation of Ontario Annual General Assembly, Peterborough

Transportation Presentations and Discussions

- » April 8, 2019, Transportation Planning (included information on the transportation safety case and What we heard themes) Red Sky Métis, Thunder Bay
- » April 9, 2019, Dose Consequences from UNF Transportation Incident, Hornepayne CLC
- » April 11, 2019, Dose Consequences from UNF Transportation Incident, Manitouwadge CLC
- » April 16, 2019, Transportation Planning, Interjurisdictional Transportation Planning Group, Toronto
- » May 7, 2019, Transportation Planning, Huron-Kinloss CLC
- » May 9, 2019, Transportation Planning, South Bruce CLC
- » May 14, 2019, Transportation Planning, Hornepayne CLC
- » May 16, 2019, Transportation Planning, Manitouwadge High School & Manitouwadge CLC
- » May 30, 2019, Transportation Planning, Conference Board of Canada – Council on Corporate Aboriginal Relations, Toronto
- » June 1, 2019, Transportation Planning, Ontario Coalition of Indigenous Peoples, Sudbury
- » June 18, 2019, Transportation Planning, Ignace CLC
- » July 8, 2019, Transportation Planning, Wabigoon Lake Ojibway Nation
- » July 16-17, 2019, Transportation Planning, Wabigoon Lake Ojibway Nation Learning and Sharing Gathering

- » August 15, 2019, Transportation Planning, Lac Seul First Nation youth
- » August 22, 2019, Transportation Planning at Métis Nation of Ontario Annual General Assembly, Sault Ste. Marie
- » August 23, 2019, Transportation Planning at Huron-Kinloss Nuclear Waste Management Symposium, Ripley
- » September 11, 2019 Transportation Planning, 4th Conference on Nuclear Waste Management, Decommissioning and Environmental Restoration (NWMDER), Ottawa
- » September 12, 2019, Transportation Planning Union of New Brunswick Indians (UNBI), Fredericton
- » September 30, 2019, Transportation Planning, Ontario Coalition of Indigenous Peoples Annual General Assembly, Ottawa
- » October 17, 2019, Transportation Planning, Council of Elders and Youth, King City, Ontario
- » January 17, 2018, Technical overview to Grand Council Treaty #3, Oakville/Toronto
- » February 22, 2018, Technical overview to the NWMO's academic associates, Oakville
- » March 22, 2018, Technical overview to southern Ontario regional media, Tiverton
- » March 27, 2018, Technical overview to Huron-Kinloss and South Bruce youth representatives, Tiverton
- » April 17, 2018, Technical overview to the NWMO Council of Elders and Youth, Oakville
- » April 17, 2018, Technical overview to southwestern Ontario community representatives, Oakville
- » April 18-19, 2018, Technical overview to Découverte (French language TV series on science and technology), Oakville
- » April 19, 2018, Technical overview to South Bruce community representatives, WWMF facility
- » April 25, 2018, Technical overview to Quebec student group, Oakville
- » April 25, 2018, Technical overview to Power Workers Union representatives, Oakville
- » May 2, 2018, Technical overview to Huron-Kinloss community representatives, WWMF facility
- » May 14, 2018, Technical overview to Natural Resources Canada representatives, Oakville
- » May 28, 2018, Technical overview to Manitouwadge community representatives, Oakville
- » June 5, 2018, Technical overview to Ignace community representatives, Oakville
- » June 5, 2018, Technical overview to Ignace Grade 7, 8 students, Oakville
- » June 13, 2018, Technical overview to Canadian Nuclear Safety Commission representatives, Oakville
- » June 19, 2018, Technical overview to Lac des Mille Lacs First Nation representatives, Oakville
- » June 20, 2018, Technical overview to Manitouwadge community representatives, Oakville
- » July 11, 2018, Technical overview to Romanian nuclear and radioactive waste agency (ANDR), Oakville
- » August 8, 2018, Risk assessment and exposure/dose presentation, Wabigoon Lake Ojibway Nation
- » August 8, 2018, Technical overview to Aboriginal People of Wabigoon
- » August 9, 2018, Technical overview to Eagle Lake First Nation
- » August 10, 2018, Technical overview at Huron-Kinloss Nuclear Waste Management Symposium
- » August 23, 2018, Technical overview to Eagle Lake First Nation representatives, Oakville
- » August 23, 2018, Technical overview to Wabigoon Lake Ojibway Nation representatives, Oakville
- » August 25, 2018, Technical overview to East Coast First Peoples Alliance, New Brunswick
- » September 12, 2018, Technical overview to New Brunswick Power (Indigenous groups), Oakville
- » September 12, 2018, Technical overview to South Bruce Community and Business Association representatives, Oakville
- » September 26, 2018, Radiation primer and technical overview to Métis Nation of Ontario, Dryden Council community meeting
- » October 18, 2018, Technical overview to Huron-Kinloss community representatives, Oakville
- » October 22, 2018, Technical overview to Hornepayne community representatives, Oakville
- » November 10, 2018, Technical overview, Huron-Kinloss CLC, Ripley

- » June 23, 2017, Transportation workshop to members of the Huron-Kinloss NWCAC and South Bruce CLC, Huron-Kinloss Learn More Centre
- » September 26, 2017, Transportation and radiation overview, Hornepayne CLC
- » September 28, 2017, Transportation and radiation overview, Manitouwadge CLC
- » November 2, 2017, Overview of public attitude research and what we are hearing about transportation with Municipal Forum, Toronto
- » July 21, 2016, Planning for Transportation presentation and discussion with Municipal Forum, Toronto

Transportation Exhibit Visits (2017 only)

- » May 8, 2017, Learn More Day, Municipality of Huron Shore
- » July 7-8, 2017, Community Days, Blind River
- » July 11, 2017, Community BBQ, Ignace
- » July 12, 2017, Learning and Sharing Gathering, Wabigoon Lake Ojibway Nation
- » July 14-15, 2017, ATV Jamboree, Manitouwadge
- » August 18-21, 2017, Métis Nation of Ontario Annual General Assembly, Kenora
- » August 23-26, 2017, Fall Fair, Dryden
- » August 28-29, 2017, Lac Seul First Nation
- » August 30, 2017, Seine River First Nation
- » September 9, 2017, Mildmay-Carrick Fall Fair, Mildmay
- » September 16, 2017, Fall Fair, Lucknow
- » September 26-27, 2017, Legion, Hornepayne
- » October 18, 2017, Interjurisdictional Transportation Planning Group, Toronto

Mobile Learn More Centre Exhibit (2019 only)

- » July 21, 2019, ATV Jamboree, Manitouwadge
- » July 22, 2019, meeting with Nord-Aski Regional Economic Development Corporation, Hearst
- » July 23, 2019, open house, Constance Lake First Nation
- » July 24, 2019, community BBQ, Hornepayne
- » July 26-27, 2019, Annual Men's Golf Tournament, Ignace
- » July 29, 2019, Eagle Lake
- » July 29, 2019, Dymont
- » July 30, 2019, Dryden
- » August 1, 2019, open office, Ignace
- » August 8, 2019, South Bruce CLC meeting, Mildmay
- » August 23, 2019, Huron-Kinloss Nuclear Waste Management Symposium, Ripley
- » August 23, 2019, Fall Fair, Teeswater
- » September 2, 2019, community BBQ, Wabigoon Lake Ojibway Nation
- » September 7, 2019, Mildmay-Carrick Fall Fair, Mildmay
- » September 8-11, 2019, Nuclear Waste Management, Decommissioning and Environmental Restoration (NWMDER) Conference, Ottawa
- » September 21, 2019, Fall Fair, Lucknow
- » September 22-23, 2019, Women in Nuclear Canada conference, Port Elgin
- » September 26, 2019, South Bruce Science Night, Mildmay
- » September 27-28, 2019, Fall Fair, Ripley
- » October 16-18, 2019, Council of Elders and Youth meeting, King City

Focus groups, dialogue sessions and workshops

Year	Activities
2019	14 focus groups conducted in Ontario 10 dialogue sessions in Ontario 1 workshop with First Responders
2018	14 focus groups conducted in Ontario 1 public dialogue session
2017	20 focus groups conducted in Ontario, Quebec and New Brunswick 1 public dialogue session 2 workshops with individuals involved in the site selection process

ii. Reports

Annual What We Heard Report, published by the NWMO each year as a rolling summary since 2014

- » Transportation Themes 2014 – 2017: What We Heard About Transportation Planning from Working with Communities (December 2017), available on the NWMO website under Reports (www.nwmo.ca/Reports)
- » Transportation Themes 2014 – 2018: What We Heard About Transportation Planning (December 2018), available on the NWMO website under Reports (www.nwmo.ca/Reports)
- » Transportation Themes 2014 – 2019: What We Heard About Transportation Planning (December 2019), available on the NWMO website (www.nwmo.ca/en/A-Safe-Approach/Transportation)





Reports on focus groups and dialogue sessions, developed by third parties

- » NWMO Public Attitude Research and Dialogue – Integrated Report (October 2017), available on the NWMO website under Reports (www.nwmo.ca/Reports)
- » NWMO Public Attitude Research and Dialogue: Workshop Technical Report (October 2017), available on the NWMO website under Reports (www.nwmo.ca/Reports)
- » NWMO Public Attitude Research and Dialogue: Public Dialogue Technical Report (October 2017), available on the NWMO website under Reports (www.nwmo.ca/Reports)
- » NWMO Public Attitude Research and Dialogue: Focus Groups Technical Report (October 2017), available on the NWMO website under Reports: (www.nwmo.ca/Reports)
- » Transportation Planning: Public Attitude Research Report (December 2018), available on the NWMO website under Reports (www.nwmo.ca/Reports)
- » Transportation Planning: Public Attitude Research Report (March 2020), available on the NWMO website under Reports (www.nwmo.ca/Reports)
- » Transportation Planning: Indigenous Dialogue Report (March 2020), available on the NWMO website under Reports (www.nwmo.ca/Reports)

**For more information,
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