

nwmo

NUCLEAR WASTE
MANAGEMENT
ORGANIZATION

SOCIÉTÉ DE GESTION
DES DÉCHETS
NUCLÉAIRES

ENGAGING YOUTH A REPORT ON NWMO YOUTH ENGAGEMENT ACTIVITIES

DECEMBER 2021



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ENGAGING YOUTH : AN OVERVIEW

The Nuclear Waste Management Organization (NWMO) is implementing Canada's plan for the safe, long-term management of used nuclear fuel. Developed through dialogue with Canadians and Indigenous peoples, the project – known as Adaptive Phased Management (APM) – has the end goal of safely containing and isolating Canada's used nuclear fuel in a deep geological repository.

A preferred site is expected to be selected in 2023. The site will be in an area with informed and willing hosts, where the municipality, First Nation and Métis communities, and others in the area are working together to implement it. The Wabigoon Lake Ojibway Nation-Ignace area in northwestern Ontario and the Saugeen Ojibway Nation-South Bruce area in southern Ontario are currently considered potential host areas for the project. As part of the site selection process, the NWMO engages with the potential host communities, which includes youth outreach. The NWMO's youth engagement efforts focus on three goals:



Building youth awareness of the NWMO and APM project in the siting area communities



Building youth understanding and confidence in the project in the siting area communities



Building youth capacity for future decision-making regarding Canada's plan in the siting area communities and more broadly

Year-over-year, youth initiatives are undertaken through several NWMO programs. These programs and activities are detailed in this report. They include:

- **APM student employment** and co-op work terms that provide direct involvement in the project, both in Toronto and in potential siting communities;
- Youth participation on the **Council of Elders and Youth** and community liaison committees that brings new perspective and contributions to the project's policies and processes;
- **Sponsorships and donations** that distribute support for local and regional community youth well-being initiatives and support for science-based educational programs;
- **Early Investments in Education and Skills (EIES)** program that supports training, education and other capacity-building activities for youth and adult community members; and
- **Post-secondary institutional collaboration** with professors, researchers and graduate students to foster career advancement and relevant research.

COMMUNITY WELL-BEING DURING THE COVID-19 PANDEMIC

As the world learned to deal with the ramifications of the COVID-19 pandemic, the NWMO worked to promote community well-being. We actively contributed to various local and regional initiatives, including food security and mental health supports for municipal and Indigenous communities, in the siting areas and beyond.

LEARNING AND BUILDING RELATIONSHIPS

The NWMO provides funding and support for communities in the site selection process to learn about the project and explore their potential to host it. Engaging youth in these communities supports awareness and understanding of the project and seeks opportunities for diverse voices to participate in learning about Canada's plan.

LEARNING ACTIVITIES

Learning at the NWMO's Learn More Centres

In 2021, the NWMO's two community-based offices, located in Ignace and South Bruce, adapted to the pandemic by conducting meetings and some outreach activities online. These offices opened to the public in late July, in compliance with COVID-19 safety protocols.

To promote awareness and understanding about the project, groups of high school and Lakehead University students visited the Ignace Learn More Centre for an overview of the project. The visit included presentations on the multiple-barrier system, site selection, transportation and other project components. The Environmental Assessment team discussed water and environmental baseline monitoring, along with our recently launched eDNA program.

Following the presentations, students visited a NWMO borehole site to learn about our geoscience program to drill and test rock. This program enhances our knowledge about whether the site can meet robust regulatory requirements. Students also visited our meteorological and seismic monitoring stations.



The Ignace Learn More Centre was refreshed and reopened with new youth-friendly displays, including a 3D model of a deep geological repository.



NWMO staff visited Formosa, a community in South Bruce, with the Mobile Learn More Centre.

Mobile Learn More Centre

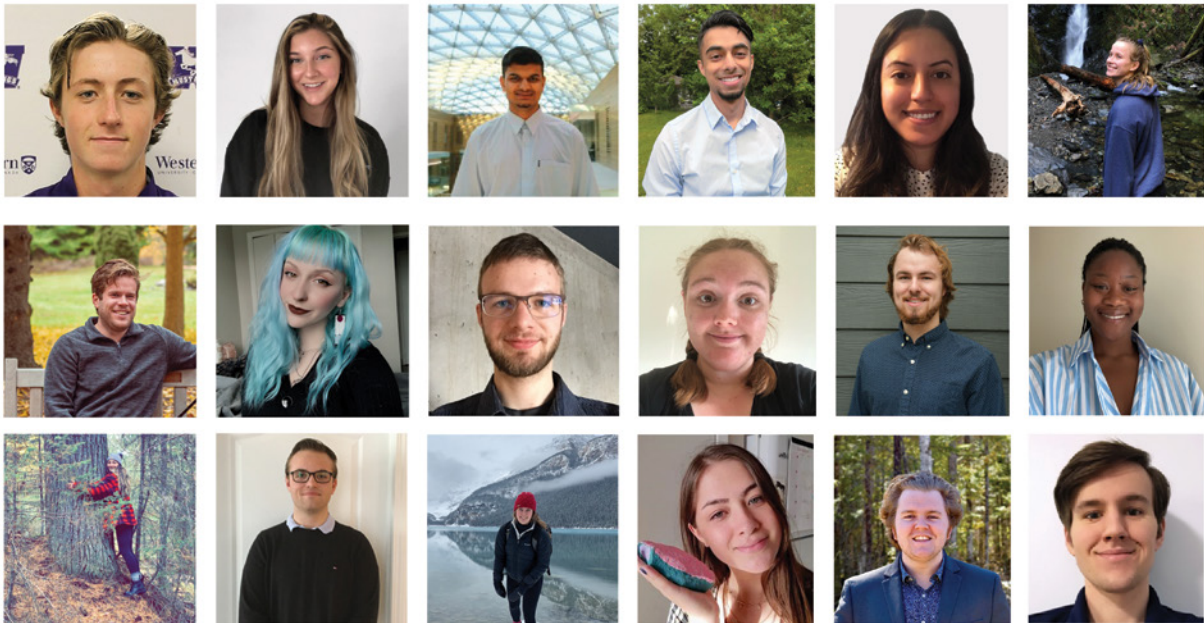
The Mobile Learn More Centre is a travelling exhibit designed to provide communities, within and beyond siting areas, information about the NWMO's work. Multimedia, interactive displays and a variety of models explain Canada's plan for a deep geological repository.

In 2021, the Mobile Learn More Centre made more than 50 stops in communities, while ensuring COVID-19 safety precautions were observed. During these visits, staff worked to support awareness and understanding of the project, for families and community members who stopped by to learn more.

YOUTH PARTICIPATION IN CANADA'S PLAN

Young people contribute to Canada's plan in many ways. In 2021, several students joined the NWMO as summer students and interns and undertook assignments related to their field of study. The student program has four-month internships and 18-month placement positions for university students. While working remotely during the summer in Ignace, South Bruce or Toronto, our students became valuable members of the NWMO team as they shared fresh ideas and made meaningful contributions. In addition to university student employees, 2021 marks the first year that a student participating in the Government of Ontario's Cooperative Education Program, for high-school students, took a placement with the NWMO.

Throughout 2021, **21** student team members contributed to the NWMO's work across 12 departments.



What did developmental student employees work on?

“... Internal events, event planning, media relations, content development and website updates.”

– Developmental Communications Student

“... Monitoring surface water, hydrology, air, soil, plant and animal tissues, and shallow groundwater.”

– Summer Environmental Technician

“... Engagement within communities that currently store radioactive waste, along with Indigenous peoples, elected officials, industry leaders and community service organizations.”

– Integrated Strategy for Radioactive Waste Student

What is being said?

“My experience as an intern with the NWMO has been eye-opening as to the tremendous amount of technical expertise, collaboration and due diligence required to successfully complete a project.”

– Geomechanics Developmental Student

“I really appreciate the level of responsibility that has been given to me in my term projects – it has really made me feel like I am a valued part of the team!”

– Summer Environmental Technician

INDIGENOUS YOUTH ENGAGEMENT

COUNCIL OF ELDERS AND YOUTH

The NWMO Council of Elders and Youth (Council) is an independent advisory body that provides counsel on the application of Indigenous Knowledge in the implementation of APM and on the NWMO's approach to Reconciliation. Indigenous youth continue to be directly involved in a dialogue about these subjects through their participation in the Council. The Council plays a crucial role in helping to build and strengthen relationships with First Nation and Métis communities in the siting areas.

Youth members

In 2021, the Council continued to meet virtually to provide advice and guidance to the NWMO on our work. Youth members have provided guidance on the NWMO's work, including a project to redesign our website, the transportation framework and the Indigenous Relations training program.

Youth members contributed to the Council in other ways as well. At each virtual meeting, a youth member was selected to read the *Declaration of the Keepers of the Land*, a document created by the Council in 2016 that outlines its role as independent advisors to the NWMO.

In 2021, we also welcomed a new youth member from the Wabigoon Lake Ojibway Nation. Currently, we have five youth members and are seeking to fill three more positions in 2022.

SPONSORED INDIGENOUS YOUTH PROGRAMS

Gord Downie & Chanie Wenjack Fund Legacy Schools Program

Across Canada, including in siting area communities, teachers are provided with tool kits to help students learn about the history and impact of the residential institution system on Indigenous peoples. As part of the program, schools are encouraged to take meaningful actions to move Reconciliation forward.

3,320 tool kits were distributed in the 2021-22 school year.



High-school student art from a Legacy School reflected on the residential institution experience.

Right To Play's Promoting Life-skills in Aboriginal Youth program

Across Canada, Right To Play's Promoting Life-skills in Aboriginal Youth (PLAY) program works in partnership with First Nation, Métis and Inuit communities, as well as urban Indigenous organizations. Across Ontario, the NWMO contributed to play-based learning that fosters leadership development and positive change related to community well-being priorities such as health, education, healthy relationships and employability.

There are **1,666** participants in Right To Play's Ontario programs.

The Program Officer is leading a group of Community Mentors during a team-building training, playing a game called Helium Stick, which builds communication, discusses the importance of planning and encourages teamwork.



EARLY INVESTMENTS IN EDUCATION AND SKILLS PROGRAM

The NWMO's EIES program provides communities in siting areas with funding for enriching educational activities. This program is an investment in the youth of today and their community, helping them become the leaders and innovators of tomorrow.



Programmed for success: Students learned by doing as they built their own robotics kits during an after-school program (photo taken pre-pandemic).

19 of the 33 youth-funded activities supported science, technology, engineering and mathematics (STEM) initiatives such as robotics kits.

COMMUNITY SPOTLIGHT

Motivational speaking

In September 2021, Ignace held its first annual Ignace and Area Youth Gathering (IAYG), which brought youth together for a conference-style event that incorporated sessions on employment, health, APM and connecting with community resources. EIES funding supported the keynote address with a motivational speaker, Spencer Beach, who focused on the power of anger, ending self-defeating attitudes and improving self-esteem. NWMO staff also delivered a presentation on National Truth and Reconciliation Day in support of Canadians learning from and addressing historic wrongs, and to work together to co-create a better future.



Youth participants in the IAYG Cultural Awareness session created their own shirt designs to wear in honour of National Truth and Reconciliation Day.

Bruce County Public Library Bookmobile

In 2022, the Bruce County Public Library Bookmobile project will bring books to people of all ages. In addition to serving youth and reaching underserved groups, the bookmobile can visit youth to support literacy. We can expect to see the bookmobile travelling to daycares, arenas, community events and more.



SPONSORSHIPS AND DONATIONS PROGRAMS — LOCAL AND REGIONAL INITIATIVES

The NWMO sponsorships and donations program supports youth development and community well-being, as well as broader regional science education programs. In addition to funding ongoing youth science organizations and community initiatives, we offer post-secondary scholarships and financial awards for graduating high-school students.

33 of the 61 funded activities supported youth in 2021.

COMMUNITY SPOTLIGHT

Two examples of locally led initiatives the NWMO contributed to, in 2021, include the Wellness and Emotional Support for Youth Online program and the Aamjiwnaang Athletic Club Youth Empowerment Program. Each support youth well-being in their respective communities.



The NWMO supports Wellness and Emotional Support for Youth Online, which provides free virtual counselling and mental wellness resources to Ontario youth.



The Aamjiwnaang Athletic Club Youth Empowerment Program uses a culturally rooted approach, combined with physical activity, to support the well-being of youth in the community.

YOUTH SCIENCE PROGRAMS

Supporting youth science programs contributes to positive youth development and helps build capacity for future careers within the NWMO and science-driven industries. Contributions to the Science North, Scientists in School and Shad youth science programs featured here are part of our continuing effort to fund science education in siting areas and beyond.

Science North

Science North provides hands-on and virtual STEM learning for students in junior kindergarten up to Grade 8. This ensures that students in northern Ontario have access to fun and engaging STEM learning, including schools in Dryden, Ignace, Lac Seul First Nation and Upsala.

“The Science North staff was an amazing presenter. They were very enthusiastic and knowledgeable. During the ‘Ask-a-Scientist’ session, they were able to keep the kids engaged and answered all their questions on a level that they could understand.”

– Keewatin Public School, Ont.

The NWMO’s support contributed to **80** e-workshops and **70** Ask-a-Scientist sessions.

Scientists in School

Scientists in School is a social enterprise committed to facilitating access to enriching STEM learning for students from all socio-economic backgrounds. Scientists in School delivers workshops across Canada, and despite the challenges posed by the pandemic, it has developed a virtual learning model and visited new communities in 2021.

“My Grade 8 class was so excited to participate in a virtual presentation from Scientists in School! We were in-class during the pandemic, so could not have a presenter in our classroom in person, so the Scientists in School organization pivoted to make this learning available virtually! We were part of the ‘Go With the Flow’ workshop. It involved a variety of materials, including syringes, containers, tubing and other related items. These were all shipped to our school and handed out to students so that they could participate with our presenter in real-time. It was amazing. My class was engaged and kept busy for the entire workshop period. They were able to consolidate their thinking and asked questions throughout. Thank you so much!”

– Grade 8 teacher, Bluewater District School Board, Ont., after a virtual “Go With the Flow” workshop

The NWMO’s support contributed to **70** virtual classroom workshops.

Shad

Shad offers month-long summer programs for high-school students across Canada, where the main focus is on science, technology, engineering, the arts and mathematics (STEAM). These programs also focus on entrepreneurship. Participants are challenged with group projects and experience unique learning opportunities, including in-class projects and presentations led by the NWMO.



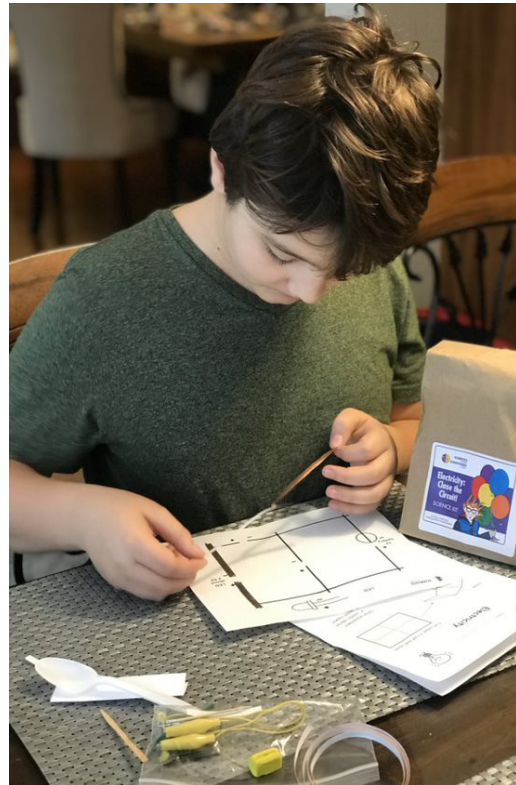
In 2021, the NWMO presented to Shad students at several Canadian universities, including Wilfrid Laurier University, Carleton University, Western University, Memorial University of Newfoundland, Dalhousie University and York University.



A Science North presenter delivered a coding workshop demonstrating the codes involved in our DNA.



The NWMO discussed with Shad students about used nuclear fuel during a breakout group session (photo taken pre-pandemic).



Scientific curiosity ignited with hands-on, virtual STEM workshops.

ENGAGING YOUNG SCIENTISTS IN COLLABORATION WITH POST-SECONDARY INSTITUTIONS

Canada's plan to contain and isolate used nuclear fuel involves engaging leading universities and scientists. To support the NWMO's goal to protect people and the environment, we develop an understanding of materials and processes for application in the project. As part of our research program, the NWMO's experts collaborate with professors, graduate students and international experts in disciplines such as chemistry, geosciences, biology, physics and engineering.

This program supports the NWMO's efforts in understanding site suitability, while also offering graduate students and professors the chance to expand their own networks and expertise in the nuclear waste industry through relevant research. In 2021, the NWMO supported 29 research groups at 15 Canadian universities. The NWMO's research on the Environmental Impact of Engineered Materials Degradation in Porous Consolidated Media is one of many projects funded by the Ontario Research Fund (ORF) and is one example of our work involving students.

JOINT PROJECT WITH ONTARIO RESEARCH FUND

One project co-funded with the ORF is a five-year project bringing together nine academic researchers with diverse expertise. As the industrial partner, the NWMO collaborates with five Ontario universities, including Western University, the University of Toronto, York University, Queen's University and the University of Waterloo. This group of experts works to fully understand and improve the long-term integrity of the NWMO's engineered-barrier system and the deep geological repository.

This ORF project offers funding and a unique learning environment for graduate students, as well as the opportunity to connect with experts in diverse disciplines. Students are also encouraged to present their work at various domestic and international academic conferences.

"I was able to interact with industry, specifically, the nuclear industry, through the research project that was funded by the NWMO. I gained a lot of practical skills and perspectives through community engagement activities that were hosted by the NWMO such as touring the NWMO's proof test facility."

– Queen's University graduate student

ENGAGING STUDENTS

In December 2021, a Corrosion/Microbiology Scientist from the NWMO participated in a panel discussion at the North American Young Generation in Nuclear (NAYGN) Canadian Regional Conference, which focused on nuclear waste. Panelists spoke on a range of issues, including innovation in the industry and professional opportunities.



The NWMO talks to graduate students and young professionals in the nuclear industry about professional development and opportunities.

The NWMO's scientists regularly present to university students and professors in order to share knowledge and increase awareness of Canada's plan. Though the pandemic limited in-person presentations, three presentations were conducted at Ontario universities in 2021.

The NWMO's scholarships at Ontario Tech University

In 2020, the NWMO signed a five-year agreement with Ontario Tech University to support access to education. In 2021, the NWMO's Women for STEM Scholarship was awarded to two recipients, and five students received contributions towards tuition costs through the Indigenous Student Success Award.

SOCIAL MEDIA

Throughout 2021, the NWMO steadily increased our presence on social media and in online communities. The NWMO's Facebook, LinkedIn, Twitter, Instagram and YouTube accounts provided platforms to engage with community members and respond to inquiries.

We continued to feature youth-related social media content in 2021. Youth community involvement was proudly featured on our platforms.



The NWMO's actions supporting academic access were highlighted through the promotion of our sponsorship of the Ontario Tech University's Women for STEM summit. We continued to showcase young academic talent by sharing the awarding of four scholarships at Ontario Tech University, including the NWMO Indigenous Student Success Award. The social media team also highlighted the NWMO's donation to the Wellness and Emotional Support for Youth Online program, which supports youth mental health across Ontario.



Youth involved with the food bank program accepted donations from the NWMO Trick or Treat event.

For more information, please contact:

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