



Engaging youth:

A report on NWMO youth engagement activities 2023

DECEMBER 2024

nwmo

NUCLEAR WASTE
MANAGEMENT
ORGANIZATION

SOCIÉTÉ DE GESTION
DES DÉCHETS
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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 more than 20 years.

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

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

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

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

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Engaging youth: An overview

The Nuclear Waste Management Organization is a not-for-profit organization tasked with the safe, long-term management of Canada's intermediate- and high-level radioactive waste. As part of our mandate, we are implementing Canada's plan for the management of used nuclear fuel. Developed through dialogue with Canadians and Indigenous peoples, this project — known as Adaptive Phased Management — has the end goal of safely containing and isolating Canada's used nuclear fuel in a deep geological repository. In a separate and distinct project, the NWMO is also responsible for disposing of intermediate-level and non-fuel high-level waste. That project is still in the very early stages of planning.

The NWMO expects to select a site for Canada's deep geological repository for used nuclear fuel in 2024. The site will be located 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 the two remaining potential host areas for the project. As part of the site selection process, the NWMO engages with the potential host communities, including through youth outreach. Given the multigenerational timeline, involving youth is an important part of Canada's plan.

The NWMO's youth engagement efforts focus on three goals:

- **Building youth awareness** of the NWMO and sharing information with youth about Canada's plan for a deep geological repository, which may be sited in their community or region;
- **Building youth understanding** about the scientific, social, environmental and economic aspects of the project; and
- **Building youth capacity** for future decision-making regarding Canada's plan in the siting area communities where they live, and more broadly as citizens.

ENGAGING YOUTH: A report on NWMO youth engagement activities 2023

Over the years, the NWMO has engaged young people through a variety of activities, including education, cultural activities, well-being initiatives, sports and others. Youth initiatives are realized through several NWMO programs:

- In support of **learning and building relationships**, the NWMO provides youth in potential siting area communities and surrounding areas with opportunities to learn about and contribute to Canada's plan.
- **Indigenous youth engagement** provides Indigenous youth with opportunities to learn more about the project, participate in hands-on learning, and participate in groups such as the Council of Elders and Youth, where they can influence strategies for engaging with Indigenous peoples.
- **Sponsorships and donations** contribute to local and regional youth-oriented well-being initiatives and support youth participation in sports, as well as environmental, safety and STEM education activities.
- The **Early Investments in Education and Skills program** supports training, education and other capacity-building activities for youth to support broad skill-building related to Canada's plan.
- **Post-secondary institutional collaboration** with professors, research laboratories and students fosters youth career advancement, provides research opportunities with the NWMO and encourages youth and the academic community to consider becoming involved in research to support Canada's plan for the safe, long-term management of nuclear fuel.

This report provides an overview of youth outreach activities undertaken by the NWMO in the two potential siting areas, as well as regionally and nationally. The names of participants involved in youth engagement activities have been omitted for privacy reasons.

In support of learning and building relationships

The NWMO organizes various activities, tours and events for communities involved in the site selection process for Canada’s deep geological repository for used nuclear fuel, so they can learn about the project in the context of their community’s potential to host it. Young people are encouraged to be involved and participate in these activities as future leaders of the siting communities. In addition, as many young people are interested in learning more about career and educational opportunities, the NWMO includes activities that can help youth explore potential educational and career paths.

KEY LEARNING AND RELATIONSHIP-BUILDING ACTIVITIES

Wabigoon Lake Ojibway Nation Winter Gathering

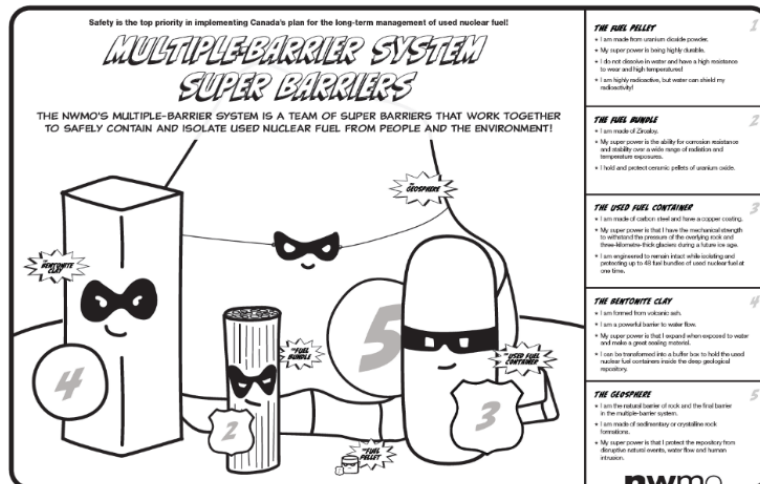
The February Winter Gathering organized by Wabigoon Lake Ojibway Nation brought the community together to learn about projects affecting their community, including Canada’s plan for used nuclear fuel. Experts from the NWMO hosted information booths and provided short seminars on used nuclear fuel and its transportation.

The NWMO provided youth with an immersive virtual experience using our new virtual reality technology, which features tours of Finland’s deep geological repository and career modules. Other headsets played short videos demonstrating Indigenous cultural activities.

Métis Nation of Ontario Nuclear Safety Open House

In May, the NWMO, Ontario Power Generation, Bruce Power, Cameco, Global First Power, the Canadian Nuclear Safety Commission and the Impact Assessment Agency of Canada came together to participate in a Métis Nation of Ontario Nuclear Safety Open House in Collingwood, Ontario. Métis community members and youth learned about the nuclear industry and its commitment to safety. The NWMO booth offered opportunities for Métis youth to try out virtual reality technology, while the youngest visitors were invited to colour an infographic about the multiple-barrier system that will contain and isolate used nuclear fuel in the deep geological repository.

The five Super Barriers unite to safely contain and isolate used nuclear fuel! This colouring sheet for children was used at engagement events such as the Nuclear Safety Open House.



South Bruce Youth Program

In the spring, the NWMO launched the South Bruce Youth Program to encourage youth between 18 and 25 years of age to learn about Canada’s plan by meeting them in their communities. Curlers of all levels went for the “shot rock” at the program’s first information session at the Teeswater Curling Club. Other events included a yoga night at the Teeswater-Culross Community Centre, as well as a charity fundraising golf day at the Wingham Golf & Curling Club, which raised funds for Big Brothers Big Sisters of South Bruce North Huron. Throughout the program, NWMO Engagement staff informally discussed the deep geological repository project and provided resources for youth to learn more.

Left: A student who worked at the NWMO for a four-month winter term gets ready to throw a curling stone.

Middle: Youth warm up at the NWMO’s Yoga Night in Teeswater.

Right: Youth join NWMO staff at a golfing fundraiser for Big Brothers Big Sisters.



South Bruce Nuclear Exploration Forum

The Municipality of South Bruce and the NWMO hosted a two-day Nuclear Exploration Forum in April, which brought together local and regional communities and three high school groups. Attendees learned about educational pathways and careers, as well as details of Canada’s plan — including potential socio-economic impacts. The presentations, panel discussions and exhibition focused on safety, the environment, international experiences and workforce development.

The “Youth Retention and Opportunities in South Bruce” panel included four experts who engaged youth in discussions about career opportunities and paths in the nuclear sector. The panel included representatives from the Nuclear Innovation Institute, the Bruce County Planning and Development department, Launch Pad (a community hub that offers skill-building programs to youth in the Grey Bruce region) and the University of Western Ontario. The panelist from Western University was a graduate student whose research on “The Effect of Solution Parameters on the Interfacial Chemical Dynamics of Early-Stage Corrosion” is affiliated with the NWMO.



South Bruce engagement staff chat with visitors about Canada’s plan, education pathways and careers.

Movie night with Saugeen Ojibway Nation

In collaboration with the Saugeen Ojibway Nation Environment Office, the NWMO rented a movie theatre in Owen Sound and screened *Guardians of the Galaxy Vol. 3* for youth and community members. A short presentation from the NWMO with project updates was shared prior to the screening.

Saugeen Ojibway Nation youth day camp

In July, in collaboration with the NWMO and other organizations, the Saugeen Ojibway Nation Environment Office offered a two-week summer day camp to Saugeen First Nation and Nawash First Nation youth aged six to 12. Campers participated in hands-on science, technology, engineering, arts and mathematics (STEAM) activities organized and led by experts from partnering organizations. A NWMO developmental student (a post-secondary student working at the NWMO) supported the daily running of the camp, and other Engagement staff joined the camp on Fridays to answer questions from youth and parents about Canada's plan.

The Saugeen Ojibway Nation Environment Office's archaeology team taught youth how to separate small pieces of material from loose soil.



"The camp was a perfect opportunity for young people to learn in a fun and interactive way. This camp taught valuable lessons and life skills, but also sparked interest in career paths that may have been overlooked, ultimately opening more pathways for Saugeen Ojibway Nation youth."

— NWMO developmental student, Indigenous Engagement

Ignace open office event and community BBQ

The NWMO opened the Ignace Learn More Centre to the community on July 5 for families and young people to talk to NWMO experts about Canada's plan. Visitors explored booths providing information about the Ignace and area community studies, Canada's regulatory requirements to approve a repository site, environment programs, the NWMO's work with interested First Nation and Métis communities, and the design and use of the planned Centre of Expertise.

The day's activities included laser tag in the plaza and a visit from the local fire department, who brought their new fire truck to attract and engage youth. NWMO developmental students ran a booth dedicated to younger community members, where attendees painted birdhouses, completed activity books, and experienced virtual reality tours of Indigenous traditions and skills-based careers.

Left: Youth painted 50 birdhouses at the Open House and Community BBQ.

Right: The NWMO had a full slate of indoor and outdoor activities planned for youth, including outdoor laser tag in the plaza.



White Otter Days

Throughout the first week of July, the NWMO partnered with the Township of Ignace and community organizations to organize various activities for the annual White Otter Days event. NWMO staff participated in the Kids Fest and used arts and crafts to demonstrate the robotic technology that may be used inside the deep geological repository. The NWMO also organized other community activities during the event, including a Youth Golf Day at the Ignace Golf & Country Club and a Youth BBQ at our local Learn More Centre.

THE NWMO ON THE ROAD AND GIVING TOURS

Mobile Learn More Centre

The Mobile Learn More Centre (MLMC) is a travelling exhibit that provides the potential siting areas and regional public with information on the technical and social aspects of Canada’s plan for used nuclear fuel. In advance of summer tours across the province, the MLMC received a refresh with updated content to reflect our progress in implementing the project over the last few years. For example, some changes were made to exhibits featuring rock core samples, and updates were provided on the implementation of our *Reconciliation Policy*, which was published in 2019. The exterior of the MLMC received a new “Welcome” panel, giving the exhibit an enhanced look and feel.

In 2023, the MLMC made multiple stops at community-based events that included families and youth. A few examples included the Moon River Métis Council community gathering in Mactier, a BBQ event at the Dryden Native Friendship Centre, the Canadian Lakehead Exhibition, and Nawash and Saugeen Weekly Drop-Ins. During these visits, NWMO Engagement staff were present to answer questions and guide community members through project information. In total, the MLMC made 38 community stops in 2023.

The MLMC visited Nawash Weekly Drop-Ins over the summer.



The NWMO's Discovery and Demonstration Centre

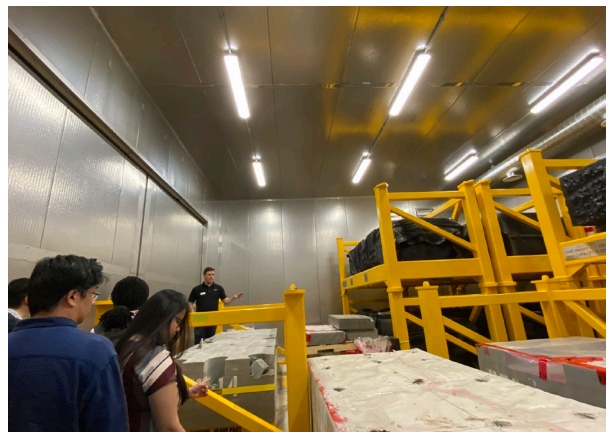
The NWMO's Discovery and Demonstration Centre offers an up-close look at the NWMO's technical work, including models and equipment, and provides an opportunity to ask questions to experts directly working on Canada's plan. Guided tours allow youth and community groups to learn more about the multiple-barrier system that will safely contain and isolate used nuclear fuel in the repository.

In 2023, the NWMO's Discovery and Demonstration Centre welcomed many members of siting area communities and youth from Saugeen Ojibway Nation, South Bruce, Wabigoon Lake Ojibway Nation and Ignace. Our tours also engaged regional communities from the potential siting areas, such as youth from Ojibway Nation of Saugeen. The NWMO also held tours for post-secondary students from Canadian universities to inform their research on components of the deep geological repository.

Left: A NWMO developmental student from Sacred Heart High School in Walkerton holds a sample of copper powder. Copper is used in the coating around the used fuel container to prevent corrosion.



Right: Post-secondary students from universities across Ontario visit the Temperature and Humidity Control Room. The room keeps bentonite clay in ideal conditions for usage.



Virtual reality technology

Virtual reality headsets were used at industry and community events, youth presentations and conferences, as well as in the NWMO's Learn More Centre offices. Many youth were eager to try out the headsets to see for themselves the engineering, environmental and cultural work related to Canada's plan and have a virtual "hands-on" experience.

The headsets played immersive content, including a 3D tour of Finland's deep geological repository, as well as an introduction to technical skills-based careers via 20 virtual scenarios, such as construction workers using heavy equipment and machinery. More than a dozen videos were included to help raise awareness and understanding of Indigenous cultures, traditions and knowledge. These videos provided demonstrations of Indigenous cultural activities, including canoe building and smudging.



Youth had the opportunity to try out the new virtual reality headsets at Yoga Night in April.

COMMUNITY-BASED PARTICIPATORY RESEARCH: ENVIRONMENTAL BASELINE MONITORING PROGRAM

Community-based participatory research is an approach to research in which community members, Indigenous peoples and researchers collaborate on aspects of a project. The community helps develop the study questions, design the methodology, collect data and interpret the findings.

The NWMO is completing environmental baseline monitoring in areas surrounding the two potential repository sites. Since the program's inception in 2020, Indigenous peoples and community members have been involved in the initial design of the program, training programs and field work. In 2023, youth from Ignace and South Bruce conducted field research based on the program's methodology. While the data collected was not used as part of the NWMO's formal baseline work, laboratories analyzed the samples, and the activities provided learning opportunities for youth.

"This is one of the main objectives of our program, to provide opportunities for community members to get involved. In the case of GENESIS, students gained insight into what is involved when executing field work, and they were exposed to potential environmental career paths that they may not have known were options for them." — NWMO Assistant Scientist, Environmental Assessment

Surface water community-based sampling program

In a program called GENESIS, grade 11 and 12 students performed surface water sampling at river sites in Teeswater in the Saugeen Ojibway Nation-South Bruce siting area. The two-day program was similar to the sampling the NWMO and Saugeen Valley Conservation Authority complete quarterly to provide a comprehensive description of water, sediment and aquatic biota quality within South Bruce.

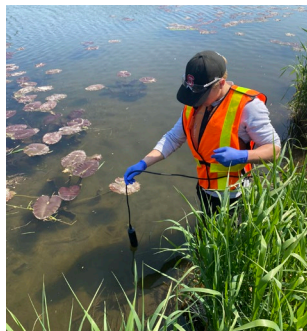
GENESIS is a one-of-a-kind pursuits-based (cycling, canoeing and hiking) environmental education program at Sacred Heart High School in Walkerton, Ontario. Students earn four credits in one semester as part of an Environmental High Skills Major designation.

Before the sampling program, the NWMO and the GENESIS program teacher developed lessons on nuclear energy to equip students with the foundational knowledge and skills needed to partake in the research. Students toured the Bruce Power Visitors' Centre, the McMaster Nuclear Reactor and the NWMO's Discovery and Demonstration Centre. They also viewed the NWMO's rock core samples drawn from the South Bruce area.

Left: A student holds the tip of the limnology meter into the Teeswater River.

Middle: A NWMO developmental student and a GENESIS student collect water samples from the Teeswater River in jars.

Right: Students practice the kick-net technique for collecting invertebrates in shallow water.



Environmental Enthusiasts day camp and Community Sampling Program

One day a week from July to August, the NWMO planned and delivered various activities for local Ignace youth ages seven to 12 at the Explore and Learn day camps. Each week the NWMO had a different theme, focusing on environmental, cultural and scientific topics. The Environmental Enthusiasts camp in July brought youth to Ignace’s Lilypad Lake to identify and learn about local species and to collect samples of Labrador tea to be chemically analyzed as part of the Community Sampling Program. Participants used their collected plant species to build wind chimes.



Top: Youth and NWMO staff say “kangaroo,” the camp’s safe word for the day!

Bottom left: Youth look for Labrador tea samples.

Bottom right: A participant in the day camp is proud of the wind chime they built using plant samples.

In the fall of 2023, youth, local community members and residents from the area brought tissue samples from plants and animals to the NWMO’s Ignace Learn More Centre. Thanks to local knowledge and skills, and tissue samples acquired through the Community Sampling Program, our understanding of current environmental conditions in the Wabigoon Lake Ojibway Nation-Ignace area was strengthened.

YOUTH EMPLOYMENT

The NWMO hires university and college students through our annual co-operative and summer work term programs in our Toronto office and the two potential siting areas. These opportunities enable youth to participate directly in Canada's plan and make meaningful contributions to our technical and engagement work, while gaining important and practical skills and experiences in areas related to their fields of study.

This year, 22 developmental students from more than 10 universities and colleges across Canada joined the NWMO. Students were placed in the Engineering, Communications and Engagement teams, as well as two new positions on the Geochemistry and Regulatory Approvals teams. Seven students were based in siting areas, with the rest working in Toronto. A high school student from Ignace participating in the Government of Ontario's co-operative education program accepted a placement at the Ignace Learn More Centre. Developmental student postings are shared on the [NWMO website](#).

Developmental students attend the annual NWMO staff BBQ.



Indigenous youth engagement

In addition to engagement with youth in the siting areas, the NWMO also engages Indigenous youth through our Council of Elders and Youth, and supports Reconciliation and positive impacts through sponsorship of third-party organizations.

COUNCIL OF ELDERS AND YOUTH

The Council of Elders and Youth provides counsel on the NWMO's application of Indigenous Knowledge and Reconciliation in implementing Canada's plan. There are 22 First Nation and Métis members on the council, and six members are youth. This year, a new youth member from Neyaashiinigmiing First Nation joined the council, and a new Youth Advisor was appointed in July.

One of the council's priorities in 2023 was to foster learning and development among youth members. The prioritization of youth engagement within the council reflects the importance of youth members in decision-making. "Youth facilitate conversations, bring fresh perspectives, and given the multigenerational aspect of the NWMO project, keeping knowledge within the council and transmitting knowledge is of the utmost importance," said a former youth member. This year, council members, including youth, visited the McArthur River uranium mine in Saskatchewan and Finland's repository. Youth also attended the Wabigoon Lake Ojibway Nation Winter Gathering, the NWMO's Indigenous Knowledge and Western Science Workshop, and the Covenant of Nations.

Youth members of the Council of Elders and Youth are contributing to creating a Cultural Protocol for 2024, a guide for respectful and culturally appropriate interactions between council members. During monthly meetings, youth guided group discussions, took notes and provided input on the topics discussed. A youth council member and NWMO developmental student held several visioning events in Treaty 3 territory to encourage Indigenous youth to reflect on the future of their communities and how the project might impact the region.

Council of Elders and Youth members and NWMO staff tour the McArthur River uranium mine in June.



SPONSORED INDIGENOUS YOUTH PROGRAMS

Gord Downie & Chanie Wenjack Fund

The NWMO is the first supporting and longest-serving sponsor of the Gord Downie & Chanie Wenjack Fund, a Canadian organization building awareness, education and connections between Indigenous and non-Indigenous peoples. As in previous years, this year the NWMO sponsored the Legacy Schools Program. Teachers throughout Canada, including schools in the potential siting areas, were provided with tool kits to help teach students about the history and impact of residential schools on Indigenous peoples.

Right To Play's Youth Leadership Program in Ontario

Right To Play partners with Indigenous communities to hire and train youth to deliver play-based programs to support health and wellness, teach positive life skills and connect youth with local languages and cultures. The NWMO has partnered with Right To Play to sponsor the Youth Leadership Program in Ontario since 2019.

Early Investment in Education and Skills program

Through our Early Investment in Education and Skills (EIES) program, the NWMO is working with communities to build capacity for participation in Canada's plan for used nuclear fuel, should the project be sited in their area. This includes investments in training and education to equip community members, including youth, to work at the Centre of Expertise, and in subsequent site preparation, construction and operation activities. These investments are intended to include transferable skills that could be applied to other projects or workplaces as well. The NWMO continues to work with individual communities to understand how to support capacity-building, education and skills development in a manner that best suits their needs. We also understand that these needs may evolve over time and as the siting process advances in an area.

Resources support capacity-building, education and skills development related to the project. Activities in these areas may include: Indigenous Knowledge-related education, work experience in a community-minded endeavor, local and regional job fairs to support students in understanding opportunities for post-secondary education and trades, workshops for general skills development on topics such as computer literacy, business planning, proposal writing, bookkeeping, first aid training, project planning and conflict resolution skills, communication training, and grants for skills training programs.

SKILL DEVELOPMENT WORKSHOPS

This year, through EIES funding, the Municipality of South Bruce offered seven free skill development workshops to young adults aged 16 to 25. The workshops taught participants foundational life skills that are essential to becoming more independent. Cooking, cleaning, sewing, financial management and what to look for when searching for rental housing were among the topics covered.

In Ignace, the NWMO offered in-kind support to Crossroads Employment Services to organize a resume writing workshop and a career fair for youth in March. The Township of Ignace Employment Office also facilitated a series of "Mini Essential Skills for Youth" workshops on topics such as customer service skills.

Meals Made Right May 23, 2023

Starting at 7:00 PM at the Mildmay-Carrick Community Centre



The Municipality of South Bruce is offering **free** life skills training seminars for residents of South Bruce



Cooking 101 with Nikk Wise

Nikk is the owner and operator of Harley's Pub and Perk in Mildmay. Class attendees will learn how to prepare and cook essential dishes that will provide a solid foundation for when they are ready to move away from home.



Healthy Shopping with Karri-Anne Cameron

Karri-Anne is a Registered Holistic Nutritionist and an expert in teaching healthy lifestyles. Her class will demonstrate how you can develop healthy cooking habits by learning to make the right decisions in the grocery store.

To register visit southbruce.ca/lifeskills

For more information reach out to sbclc@southbruce.ca or call (519) 392-6623 Ext. 245



Public advertisement for the Meals Made Right workshop in South Bruce.

SCIENCE, TECHNOLOGY, ENGINEERING AND MATH (STEM) EXPERIENCES

In South Bruce, the NWMO’s Early Investment in Education and Skills program funded several STEM experiences for students to support learning development and critical thinking. Elementary school students were able to partake in two programs run by the non-profit organization Let’s Talk Science. The Living Space project allowed students to collect and record data on environmental conditions in their classrooms and upload the data to a national dataset. In addition, the Bruce County Public Library was able to add Launchpads to the library rental collection. These learning tablets are pre-loaded with educational STEM content for children of all ages.

In Ignace, Science North ran a week-long camp in July for local youth ages seven to 12, filled with engaging activities to spark natural curiosity while inspiring a love for science. “Campers explored what they know about our Earth and how they can be better stewards for our planet. We learned about electricity and got to play with snap circuits,” said a Science North Bluecoat Scientist who delivered the activities.

In the broader northwestern Ontario siting region, EIES funding was used to purchase Cricut crafting machines and the equipment necessary to run the DNA electrophoresis laboratory technique to research DNA fragments.



“Watt” a fun week at camp! Participants in the Science North camp build a simple electricity circuit.

Sponsorships and Donations program

The NWMO's Sponsorships and Donations program supports youth development and community well-being in local siting communities, as well as broader regional initiatives such as science education programs. The program also sponsors Canadian organizations working to advance Reconciliation through event programming and exhibits.

LOCAL AND REGIONAL INITIATIVES

First Nation and Métis initiatives

The Sponsorships and Donations program has contributed to local initiatives organized by and for First Nation and Métis communities. This year, the program funded several youth camps and activities to encourage young people to socialize, stay active and learn. The Saugeen Ojibway Nation Environment Office hosted a science summer camp for a broad range of Indigenous youth in Grey, Bruce and Huron counties.

The NWMO supported various events organized by Chartered Community Councils for the Métis Nation of Ontario, aiming to promote and celebrate Métis culture through music, traditional foods, art and storytelling. The NWMO also supported the Nawash Family Well-Being Program's Heritage Celebration and youth participation in the annual Little Native Hockey League tournament in Mississauga.

The Ontario Regional Chief and NWMO staff attend the Little Native Hockey League tournament.



Making Connections for Children and Youth

Making Connections for Children and Youth (MCCY) is a non-profit organization that sponsors cultural, leisure and recreational activities for families facing financial barriers. MCCY is located in Dryden and supports youth in Ignace, Wabigoon and all unincorporated areas within the area. The NWMO's contribution supported over 100 young people to have access to equipment and participate in a variety of activities including hockey, skating, music lessons, karate and gymnastics.

Bike safety projects

The EarlyON Child and Family Centre in Ignace had three bike safety projects for the summer of 2023. The Bike Rodeo on May 25 taught youth in the community bike safety skills at Ignace Public School. The Bike Helmet Safety Project gave away bike helmets to area youth. The Ontario Provincial Police joined the Ignace Nursery School in offering youth a coupon for a free ice cream cone if they were observed wearing their helmets while biking, as part of the Scoop Helmet Safety Project.

Environment Club at Hillcrest Central School

The NWMO contributed to Teeswater's Hillcrest Central School's purchase of 150 tree seedlings for the Environment Club. The club provides students with seedlings to take home, and several trees were planted in the schoolyard. This initiative helped local young environmentalists involved in extracurricular activities make a positive change in their school and community. Similarly, the Bruce County Public Library received support for its seed libraries, which enabled residents and young people to connect and learn through gardening using seed packages provided by the library.



Youth participating in the Environment Club put together care packages with tree seedlings and flower seed mixes to give to their peers at Hillcrest Central School.

Grey Bruce Children's Water Festival

The Grey Bruce Children's Water Festival has been a staple stewardship program in Grey and Bruce Counties for 22 years. The annual festival ran over three days in May and had more than 40 interactive activities on water, reaching thousands of grade four students. In addition to sponsoring the festival, NWMO South Bruce Engagement staff volunteered to run the activities to support youth education in environmental sustainability and science.

YOUTH SCIENCE ORGANIZATIONS

Youth science programs promote and encourage youth education in STEM, show youth how science connects to the world, and build interest in career paths related to the NWMO and STEM-driven industries. The NWMO has connections to these programs through our contributions to Science North, Scientists in School and Shad Canada, which fund elementary and high school science education in the siting areas and beyond.

Science North



Science North delivers STEM classroom programming for elementary school students in northwestern Ontario. In the 2022-23 school year, Science North delivered 121 in-person programs and 75 e-workshops, reaching 3,705 students in 31 schools. The NWMO also supported Science North's Northwest Expansion project, which will establish science centres and expand outreach programs in the northwest.

A Science North Bluecoat Scientist delivers an e-workshop to students in northwestern Ontario.



Scientists in School



Scientists in School delivers STEM classroom and community workshops for thousands of elementary school students across Grey, Bruce, Huron and Perth Counties. Over the past nine years, the NWMO and Scientists in School have worked together to provide programming to schools in the Saugeen Ojibway Nation-South Bruce area. During the 2022-23 school year, Scientists in School delivered 90 classroom and 30 virtual community workshops, engaging approximately 2,600 youth. Additionally, the organization provided mini science bags to each workshop participant for a hands-on learning experience, and developed two new virtual community workshops entitled “Do It Like da Vinci” and “Science Snippets.”

Shad Canada



Shad is a month-long summer program for grade 10 and 11 students, where the educational focus is on STEAM and entrepreneurship. In July, a total of 1,300 students participated in ShadOnCampus (live-in) and ShadAnywhere (digital) programs. The NWMO presented to Shad students in two ShadAnywhere classes and at six Canadian universities, including Lakehead University, the University of New Brunswick, York University and Laurentian University. NWMO staff discussed nuclear power and the plan for safely managing Canada’s used nuclear fuel. For some groups, the hands-on activity was a mock town hall debate where students took on the roles of building developers and community members, exposing youth to the social implications of infrastructure projects. For others, the activity was to brainstorm how to talk about Canada’s plan with other youth. The NWMO’s ongoing partnership with Shad allows driven, aspirational youth to develop workplace and post-secondary education readiness and skills.

Engaging young students in collaboration with post-secondary institutions

Canada’s plan to safely contain and isolate used nuclear fuel involves engaging with leading universities and researchers to ensure a robust understanding of the materials and processes for implementing the deep geological repository. The NWMO helps fund student research on engineered barriers and geoscience, and engages with many post-secondary students during conferences, workshops and other events. Some examples of student research projects and academic conferences involving post-secondary students are featured in this section.

ONTARIO RESEARCH FUND-RESEARCH EXCELLENCE PROJECTS

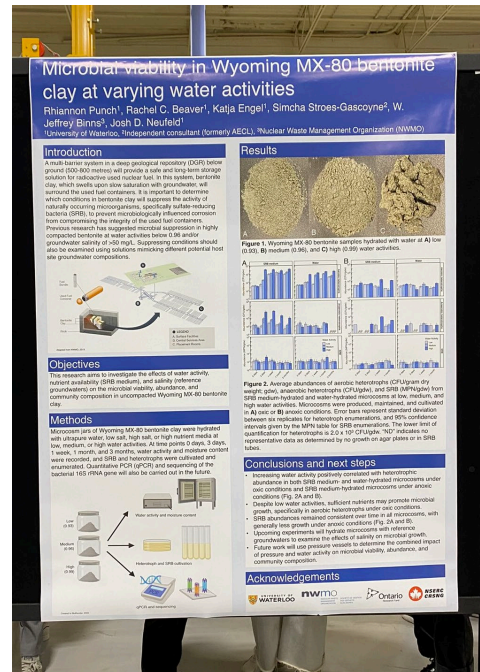
Funded through the Ontario Research Fund-Research Excellence (ORF-RE), the NWMO collaborates with an extensive academic network of faculty, staff and graduate students from eight Ontario universities and national laboratories in support of our technical research. Our university partners include the University of Waterloo, the University of Toronto, the University of Guelph, McMaster University and Queen’s University, among others. This group of experts works to understand and improve the long-term integrity of the NWMO’s engineered-barrier system within the deep geological repository. The program offers graduate students opportunities to expand their networks and expertise, as well as improve their oral communication skills.

YOUNG SCHOLARS SPOTLIGHT

Many graduate students work on research projects with us; two are highlighted below.

A Master of Science candidate at the University of Waterloo is studying the conditions in which bentonite clay will suppress the activity of microorganisms in a deep geological repository. Coming into the project a year ago, the student was unfamiliar with the NWMO. The project funded through the ORF-RE allowed them to undertake a scientific project with practical applications that also interested them. The student is writing a thesis on “Microbial viability in Wyoming MX-80 bentonite clay at varying water activities.” The thesis will be published by the end of this year, in addition to a journal article.

A poster on microbiology activity around bentonite clay, produced by a master’s student at the University of Waterloo for the NWMO’s Academic Tour.



A Master of Science candidate at the University of British Columbia's Centre for Environmental Assessment Research is focused on developing a practical biodiversity framework within the Canadian impact assessment process. Impact assessment is the process of identifying and assessing the environmental, social and economic impacts of a proposed project. The student's research is funded directly by the NWMO, and a NWMO Senior Environmental Scientist is a member of the student's master's committee. The student discussed their research and its practical applications:

"The deep geological repository project provides an excellent opportunity to facilitate my research, as the NWMO's comprehensive approach to impact assessment requirements encourages innovation in the way proponents and regulators consider project interactions with complex environmental topics such as biodiversity. The application of my research will support the NWMO's impact assessment submission, provide guidance to other proponents and regulators, and contribute to progressing Canada's biodiversity objectives and international commitments."

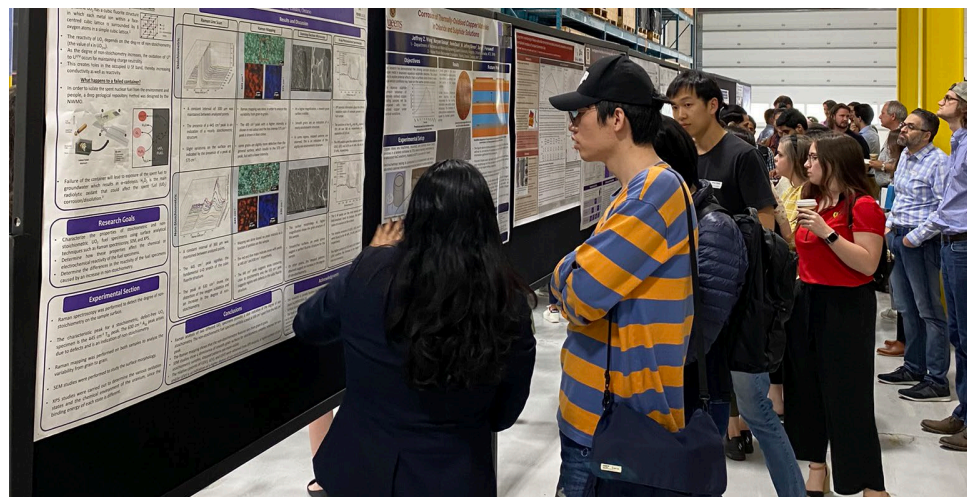
YOUTH CONTRIBUTIONS AT CONFERENCES

The research work carried out by students is presented at a wide variety of conferences and workshops. This is an important part of the research process, as well as the students' development. The NWMO also engages with post-secondary students in university settings. Some examples are listed below.

The NWMO's Academic Tour

The fourth annual Academic Tour at the NWMO's Discovery and Demonstration Centre on May 11 brought together our network of academic collaborators and graduate students to see how their research supports the planned engineered barriers, connect with the NWMO's technical staff, and learn from each other's work. Sixty graduate students in applied chemistry, microbiology, chemical engineering and mechanical and materials engineering presented their research through a poster session. The posters condensed one to two years of work into a summary of research objectives, methods, results and conclusions. The research presented pertained to building confidence in the effectiveness of engineered-barrier materials under various conditions.

Summary research posters were presented during the poster fair at the NWMO's Discovery and Demonstration Centre, allowing research students to learn and collaborate.



Indigenous Knowledge and Western Science Workshop

The sixth annual Indigenous Knowledge and Western Science Workshop, “Breaking New Ground,” focused on identifying where circles overlap and commonalities exist between the two knowledge systems. The workshop was held at a post-secondary institution for the first time, at Western University’s Wampum Learning Lodge, encouraging post-secondary youth participation and the incorporation of the academic world into the NWMO’s circles of support. Several Indigenous students from Western University were introduced to the NWMO through the workshop. A key component of the workshop was the group discussion on personal Reconciliation journeys, and on opportunities for and barriers to the meaningful alignment of knowledge systems. Youth added unique perspectives and experiences of being the future generation involved in the project. A youth member of the Council of Elders and Youth played a song on their hand drum to close the workshop.

Following the opening remarks by an Elder and the Associate Vice President, Indigenous Initiatives at Western University, NWMO staff shared reflections on their intentions for the workshop.



Pathway to Increase Standards and Competency of eDNA Surveys (PISCeS) International Conference

The NWMO created opportunities for Indigenous Knowledge, voices and perspectives to be heard within traditionally western scientific spaces at the PISCeS conference at the University of Guelph. The conference discussed research on environmental DNA (eDNA), a non-invasive technology used to detect what species are present in the environment. NWMO Indigenous Relations and Strategic Programs staff delivered a keynote address and interactive workshop. During the workshop, attendees explored how research can meaningfully incorporate Indigenous Knowledge and contribute to Reconciliation. Half the participants were youth. The NWMO also sponsored the PISCeS conference, making the conference financially accessible to several students, including an Indigenous student.

“At the PISCeS conference, I broadened my knowledge of eDNA best practices, limitations and practical applications, including its use by the NWMO for characterizing biodiversity at potential used nuclear fuel sites. I especially enjoyed the NWMO’s workshop, where I reflected much more on what Reconciliation means and how to act on Reconciliation in my own life.”

— PISCeS student attendee pursuing a Master of Science in Bioinformatics at the University of Guelph

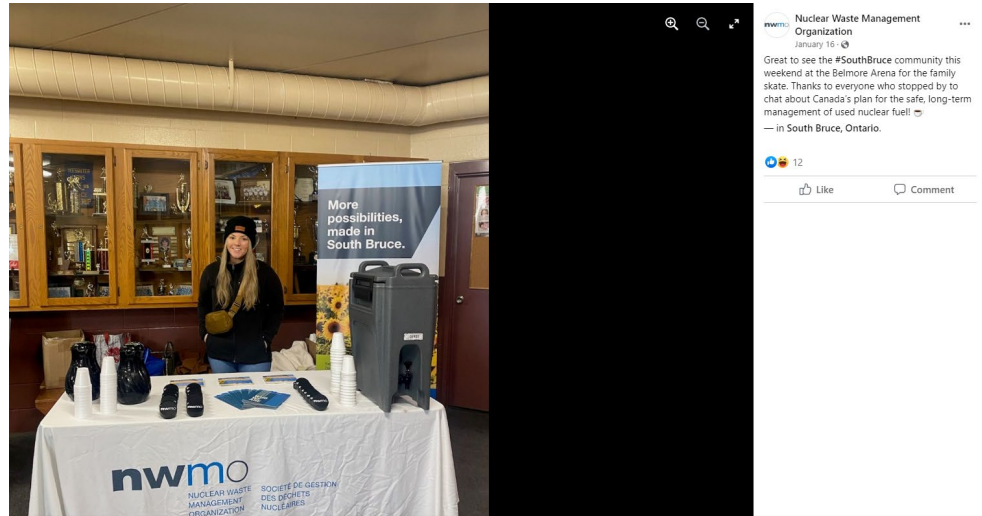
NWMO staff delivered a workshop on “Understanding Reconciliation and Indigenous Knowledge” at the PISCeS conference.



The NWMO on social media

Throughout 2023, the NWMO continued to connect with online communities. The NWMO's Facebook, LinkedIn, X and Instagram accounts provided platforms to engage with community members and respond to inquiries. Youth-related social media content continued to be a focus for the NWMO. We shared our commitment to supporting academic access at all ages through our partnership with Scientists in School and our support of the student-led Women in Mining event at the University of Toronto. We also shared our support for seed libraries and community skates.

The NWMO shares youth engagement-related content on social media, such as this Facebook post about a family skate event at Belmore Arena in South Bruce.



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