



A Newsletter for Water and Wastewater Treatment Plant Operators!

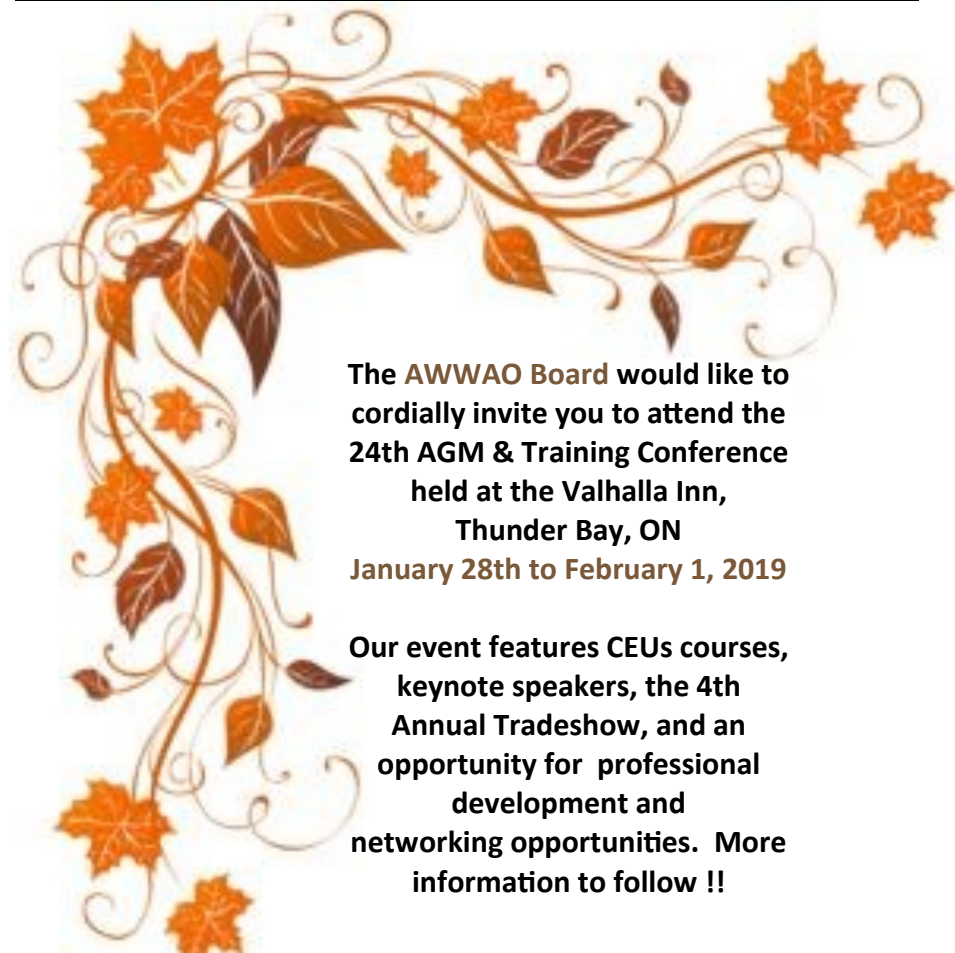
THE WATERDRUM

October 2018

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24th AGM & Training Conference & Tradeshow



The AWWAO Board would like to cordially invite you to attend the 24th AGM & Training Conference held at the Valhalla Inn, Thunder Bay, ON January 28th to February 1, 2019

Our event features CEUs courses, keynote speakers, the 4th Annual Tradeshow, and an opportunity for professional development and networking opportunities. More information to follow !!



happy fall

Sponsored by:



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et du Nord Canada





The meaning of the AWWAO logo as described by the artist:

Tree—represents Mother Earth

Sun—brings Life to our Environment

Eagle—watches over the Environment

Sky—ensures the Cycle of Water

ABOUT US

The Aboriginal Water & Wastewater Association of Ontario is an information source for water environment and Operator training and certification issues and technology. AWWAO's members include professionals from Ontario First Nations, Environmental Health Officers, Tribal Councils, Municipal Suppliers and some Government Agencies.

AWWAO is dedicated to the transfer of information and concepts regarding all areas of the water environment. As members of the American Water Works Association (AWWA), the Ontario Water Works Association (OWWA), the Water Environment Federation (WEF) and the Water Environment Association of Ontario (WEAO), we provide an invaluable network for those involved in water and wastewater industry. AWWAO, through a partnering agreement with Keewaytinook Okimakanak and ISC FNINB co-operates and liaises with the above noted associations, and all provincial and federal government agencies. AWWAO has a volunteer seat on many of the various association's committees.

AWWAO offers its members the opportunity to:

- ◆ Be updated and informed about issues that affect the water environment.
- ◆ Interact with persons in various fields of water expertise.
- ◆ Promote concerns of the membership through a collective voice.
- ◆ Exchange information and ideas to other members, the public and Chiefs and Council.

To date, the AWWAO consistently rank the training and certification of Plant Operators as its top priority. The attainment of Certification is widely recognized as essential to performing a good job, at a high level, in the water and wastewater treatment plant operations, and an indicator of a responsible and contributing community member.

MEMBERSHIP

\$200.00 Membership Fee for First Nations Water and Wastewater Treatment Plant Operators per operator. This Membership entitles the Operator(s) to the AWWAO Newsletter, monthly bulletin, Annual Report and the Annual General Assembly and Training Conference cost reimbursement, if applicable.

\$400.00 Membership Fee for Non-Operator, Public Works Management, Administration and Management of a First Nation or Non-First Nation. This Membership entitles the Member to the AWWAO Newsletter, monthly bulletins, Annual Report and invitation to the Annual General Assembly and Training Conference.

Please Print

Name: _____

Name: _____

Name: _____

Name: _____

First Nation/Business: _____

Address: _____

Phone: _____ Fax: _____

E-mail: _____

VISION

Our Vision is to be the Association that best understands and satisfies the training, education, certification and licensing needs of Operators of Ontario First Nations. Our dedication to supporting Operators touches not only health, but safety, spirit and empowerment ... most of all knowledge.

OBJECTIVES

- ◆ To act as a voice and forum for First Nation Plant Operators in Ontario, publish a newsletter, promote communications and networking among Plant Operators and other persons interested in AWWAO's objectives;
- ◆ Promote the importance of a safe and potable water supply and the highest standard of wastewater operations;
- ◆ Promote the development and delivery of continuing education and training programs for Plant Operators and others involved in water and wastewater treatment;
- ◆ Promote the importance of technical training in maintaining and upgrading the Operator's knowledge of proper water and wastewater operation and maintenance requirements;
- ◆ Promote the importance of involving qualified Operator's in the design, construction or upgrading of water and wastewater treatment plants;
- ◆ Promote the importance of proper training, certification and licensing of Operators;
- ◆ Promote the importance of enhanced lab testing of potable water and monitoring of wastewater effluents; and
- ◆ Promote the importance of establishing an effective Operations & Maintenance Management Plan to ensure proper care is performed for the assets.

MISSION STATEMENT

We are a member oriented, non-profit Association, providing province-wide and year-round high-quality services and an annual forum for the First Nations Water and Wastewater Treatment Plant Operators, allowing for networking opportunities at the same time. We are committed to providing high quality information on the water and wastewater industry through the quarterly newsletter. We are dedicated to promoting, preserving and protecting the water, natural resources and environment through the education, training and networking of the Ontario First Nations Water and Wastewater Treatment Plant Operators.

The Aboriginal Water and Wastewater Association of Ontario's newsletter is published quarterly by the AWWAO at 41C Duke Street, Box 340, Dryden, Ontario P8N 2Z1
Tel: (807) 735-1381 ext. 1660
E-mail: info@awwao.org

Advertising opportunities and/or submission or request of information, please contact the Association Coordinator.

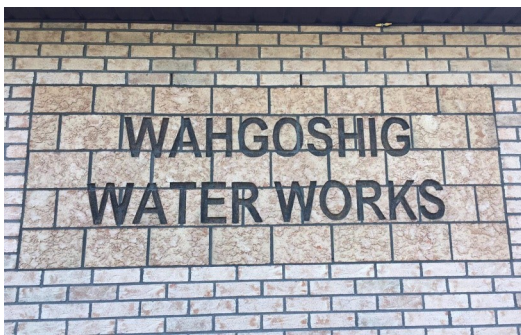
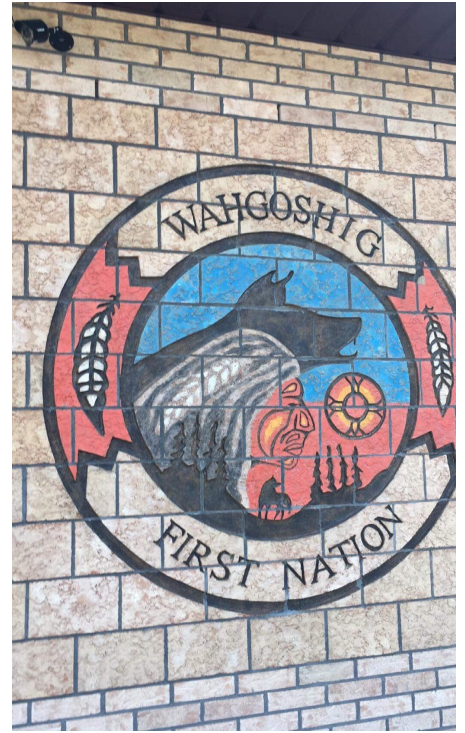


Wahgoshig First Nation 2018 AWWAO Water Taste Challenge Northern Cup Winner

For the second year in a row, the coveted Josephine Mandamin Northern Water Cup award was presented to Edward Black from Wahgoshig First Nation.

The Aboriginal Water and Wastewater Association Chairperson Ian Fortin, presented the cup on behalf of the association.

Congratulations!!



Safeguarding Ontario's drinking water



Since 2004, the Walkerton Clean Water Centre has provided high-quality training and support to the owners, operators, and operating authorities of Ontario's drinking water systems.

In May 2000, the small Southern Ontario town of Walkerton suffered a tragedy that would usher in a comprehensive drinking water regime. *E.coli* contamination sickened nearly half the town and resulted in the unfortunate death of seven people.

In response to an inquiry led by Justice O'Connor, the Ontario government introduced strict regulations governing drinking water system owners and operators. To ensure these owners and operators would be educated and supported, the Walkerton Clean Water Centre (WCWC) was established in 2004.

The WCWC provides training on behalf of Ontario's Ministry of the Environment, Conservation and Parks, and administers the mandatory operator training courses prescribed.

It also offers a variety of specialty courses that reinforce mandatory training. All 54 (currently offered) courses are continually updated and new courses are developed based on client feedback, consultation with experts and developments in the industry.

OPERATOR TRAINING AND SUPPORT

A lot has changed in the years since the Walkerton tragedy and the establishment of regulations that govern drinking water system owners and operators.

"There has been a significant increase in the competence of operators, post-Ontario regulations," says Brian Jobb, Manager of the WCWCs Training Institute. "We have among the best trained operators in the world, with the average operator absolutely head and shoulders above where they were 15-20 years ago."

The main reason for this improvement is due to the mandatory training that operators must complete to become, and remain, certified. And while the WCWC is not the only training provider in Ontario, it is one that sets a standard of excellence.

"Because we are an agency of the Ministry we provide the highest level of training," says Carl Kuhnke, who joined the WCWC as Chief Executive Officer last year.

According to Kuhnke, there are a number of contributing factors that set the WCWC apart.



Safeguarding Ontario's drinking water

"One of the ways that we ensure our curriculum is current and state-of-the-art, is that we both have a Training Advisory Committee and a Research Advisory Committee that are made up of subject matter experts from across the province," says Kuhnke.

The WCWC's expertise extends beyond its advisory committees. With 32 staff and a number of contracted trainers, the WCWC is able to meet the numerous challenges presented in the real-world and hands-on training.

"Our goal is not to teach students how to pass an exam, but to be good operators and do the right thing," says Jobb. "There is a lot more to being a competent operator than just passing an exam."

With over 54 courses and modules, the WCWC offers comprehensive training for operators and system owners. It even offers a Standard of Care course for municipal councillors, which some municipalities have made mandatory.

The WCWC also hosts special training events including our Maintenancefest hands on training event. Visit www.wcwc.ca/registration to view the upcoming schedule.

A new addition to the trainer team is Stephanie Meades, a certified public health inspector who joined the WCWC as a small system specialist in 2017. With her expertise on the other side of the table as an inspector, Stephanie is able to directly respond to operator and client questions during training and bridge the gap between two different regulations in the province that are administered by two different ministries.

In 2016, the WCWC introduced a helpline to respond to technical calls and provide information to address questions related to drinking water treatment processes, equipment, operational requirements and environmental factors. Email: helpline@wcwc.ca.



54

Courses/modules offered

16

Drinking water
treatment technologies



PROVINCE-WIDE MANDATE

Ontario is a massive province, well over 1 million square kilometres in size. Despite the challenge of geography, the WCWC is tasked with providing training to operators no matter how far or how remote.

"As an agency of the province, our training needs to be available and accessible to all operators, owners and authorities in Ontario," explains Corrine Louther, the WCWC's Manager of Training Operations. This means that the WCWC will provide training in northern and remote communities where it may not be feasible for other training providers due to logistics or cost.

Safeguarding Ontario's drinking water

This is essential for First Nations and remote communities that face many obstacles when it comes to operator training. For instance, they may not be able to afford the travel costs to send their operators to training, nor can they afford the loss of an operator for the time the training takes.

FIRST NATIONS TRAINING

There are so many similarities between communities with small drinking water systems and First Nations communities. Both can face the same challenges in staffing, budgetary constraints and logistics.

However, a key difference is that First Nations don't fall under provincial regulations (they are governed by Indigenous Services Canada), which means that drinking water operators do not have to be certified.

"Part of our job is to serve First Nations communities that choose to offer drinking water comparable to that under Ontario regulations, even though they are not required to," says Kukne. By becoming certified, operators will be better able to handle modern, advanced treatment plants and technologies.

To bring effective and achievable training to First Nation Communities', the WCWC has developed a Memorandum of Understanding with two First Nations organizations: the Ontario First Nations Technical Services Corporation (OFNTSC) and Keewaytinook Okimakanak (KO), which is a tribal council in Northwestern Ontario, part of the Northern Chiefs Council.

These two organizations meet monthly with the WCWC to plan relevant training for communities that are choosing to follow provincial certification.

FIRST NATION INITIATIVES

First Nations training has always been part of the WCWC's core training group. But, with \$1.85 million in provincial funding in 2016, the WCWC started a special community-based initiative in partnership with OFNTSC and KO.

The initiative identifies and prioritizes communities, focusing first and foremost on long-term drinking water advisories. It also works with communities not under drinking water advisories to ensure their operators receive training. Courses are delivered right in First Nation Communities.

"Under the initiative, we charge nothing for the training courses and we reimburse all travel expenses incurred, eliminated the financial hurdle," explains Kuhnke. "This also extends to people interested in becoming water operators, such as young persons interested in pursuing this career path."

Also under the initiative, content of the Entry-Level operator course remains the same, but adjustments have been made to suit the needs of First Nations students, including delivery by First Nation Trainers.

"What we have done for First Nations communities is change the delivery format and presentation style, as well as cultural angle," says Louther. "This reflects the input of our First Nations partners in building the curriculum."

The WCWC has seen measurable success in the initiative, as evidenced by a high completion rate and excellent feedback. Two new courses are under development for managers and leaders. For more information, visit: www.wcwc.ca/firstnations zone.



Safeguarding Ontario's drinking water

RESEARCH AND PILOT TESTING

Visitors to the WCWC will immediately be drawn to the wide array of water treatment technologies found in the WCWCs Technology Demonstration Facility. From conventional treatment to membrane filtration, ion exchange and adsorption, the WCWC contains a variety of treatment technologies as well as a full-sized laboratory.

The facility's variety of equipment and well-qualified technical staff make it a great training opportunity for operators and students, according to Dr. Souleymane Ndiongue, P.Eng., Manager of Research and Technology.

In fact, students of 16 Ontario colleges that have water and environmental science programs, are offered visits to the WCWC for hands-on experience and real-world training.

The facility's research skill and variety of equipment also make it a valuable pilot-testing resource. Communities are able to bring their raw water to the WCWC's on site 40,000-litre tank to test how the different water technologies are able to treat it.

The WCWC is also capable of bringing pilot equipment to communities that are too far away to truck water in. Indeed, it has delivered pilot equipment and staff too far away as a community in Northern Ontario, nearly 1,000 km from Walkerton.

The WCWC recently completed three pilot testing projects for the following communities: Shelbourne for arsenic removal from water; the Township of Hamilton for manganese; and Mississauga of Scugog Island First Nation for iron, manganese and disinfection by products. Currently there are six pilot projects underway across the province. These projects include the removal of iron, ammonia and natural organic matter to control disinfection by-products.

"On-site pilot testing is great for training since we are able to run several scenarios with operators for them to see what works and what doesn't," says Dr. Ndiongue. "This is not something operators can do with full-scale equipment, since they are limited to standard operating procedures."

Results are also shared with other operators and added to the ever growing Drinking Water Resource Library (DWRL), a recently launched tool to answer operator questions 24/7. The DWRL is a free online resource that answers operator drinking water questions with a simple keyword search. To try the DWRL, visit: www.wcwc.ca/en/resources.



E HANDS ON TRAINING

First Nations Entry-Level course students in action.

LOOKING FORWARD

With evolving legislation, technology and a changing climate, the WCWC must be able to respond to the training needs of operators. For example, the most recent version of the mandatory certificate renewal course for operators references climate change and prompts operators to think about resiliency and responses to extreme weather.

"Advancements in technology require today's operators to be well versed in new areas such as social media, GIS software and increasing digital interfaces with equipment," says Jobb.

Thanks to the Government of Ontario and the Ministry of the Environment, Conservation and Parks, the Walkerton Clean Water Centre is well equipped to proactively train drinking water operators.

"With our broad research and technical staff, and highly qualified and experienced trainers and managers, we know what is going on across the province," says Kuhnke. "This allows us to stay in touch with operator and system needs,

Pilot project trains Indigenous youth to help tackle water challenges in their communities

15-month paid internship offered through Canadian charity Water First



A group of young people on Manitoulin Island is finishing up a 15-month paid internship to become certified in drinking water treatment and water quality monitoring.

A pilot project on Manitoulin Island is giving a group of Indigenous youth the skills and training to ensure their communities have quality drinking water.

Ten young people from First Nations around the Island are finishing up a 15-month paid internship through Water First, a Canadian charity dedicated to helping First Nations solve their water challenges.

Kendra Driscoll, a water quality specialist with the organization, said the interns split their time between week-long workshops and regular hands-on training at their local water treatment plants, all while working towards certification to become water plant operators.

"What this program was focused on was the Water Quality Analyst, a provincially recognized certification," Driscoll explained.

"They have to take the examination through the Ministry of the Environment, Conservation and Parks, and then they're certified to do drinking water testing."



Ten Indigenous youth participated in the Water First Internship program, with several earning provincial certification to work in water treatment plants.

Eight interns have since earned that certification, and Driscoll said several have also attempted to gain further certification through the Operator-in-Training exam.

The program also explored a wide range of topics relating to water quality and protection, including mapping, traditional knowledge and environmental science.

Driscoll said there is an underrepresentation of First Nation and Indigenous youth in the water sciences, and the goal of the program was to engage young people who may be interested in a career in water treatment.

Thank you Keewaytinook Okimanak



Canadian teen tells UN 'warrior up' to protect water

Autumn Peltier, a 13-year-old from Manitoulin Island on Georgian Bay, delivered a strong message to the United Nations General Assembly that the world needs to stop polluting its water.

Melissa Kent · CBC News · Posted: Mar 22, 2018 2:39 PM ET | Last Updated: March 22



Canadian water activist Autumn Peltier, a 13-year-old from Manitoulin Island, addresses the UN General Assembly on world water day. Her plea to protect the world's water was part of the UN's launch of the International Decade for Action on Water for Sustainable Development.

It's time to "warrior up," stop polluting the planet and give water the same rights and protections as human beings. That's the message Autumn Peltier, a 13-year-old Canadian, delivered personally to the United Nations General Assembly on Thursday.

"Many people don't think water is alive or has a spirit," the Anishinaabe girl from Wikwemikong First Nation told the diplomats gathered in New York City in her speech on World Water Day. "My people believe this to be true.

"Our water deserves to be treated as human with human rights. We need to acknowledge our waters with personhood so we can protect our waters."

The five-foot tall teen from Manitoulin Island, Ont., stood on a stool behind the podium so she could reach the microphone.

She had been invited to speak as the "representative of civil society," joining UN Secretary General Antonio Guterres and other international dignitaries for the launch the UN's International Decade for Action on Water for Sustainable Development.

"By 2050, at least one in four people will live in a country where the lack of fresh water is chronic or recurrent," Guterres said during his address.

States need to better manage and preserve world water resources, he said. More than 2.1 billion people already lack safe drinking water at home, according to UN figures — and that includes people in Canada.

"No one should have to worry if the water is clean or if they will run out of water," Peltier said in her speech. "No child should grow up not knowing what clean water is or never know what running water is.

"We all have a right to this water as we need it — not just rich people, all people."



Peltier, 13, seen here on the shore of Georgian Bay near her Manitoulin Island home, is one of Canada's youngest water protectors.



Canadian teen tells UN 'warrior up' to protect water

Brenden Varma, spokesperson for the president of the General Assembly, said "it's definitely not very common to see a 13-year old girl addressing the 193 member states of the United Nations."

"We're used to having world leaders ... often speaking very bureaucratic language," he said.

Varma said hearing Peltier give such a heartfelt address was a treat for everyone in the room.

"We were all very moved," he said. "She was amazing."

Henk Ovink described Peltier's speech as inspiring and "in our faces as leaders of the world." The special envoy for international water affairs for the Netherlands said collaborating with those who will inherit the Earth is essential.

"It's the young that can help us leap forward, so we have to listen to the young and implement their ideas," Ovink said.

Peltier told CBC News after her address that she wasn't nervous speaking in front of the General Assembly.

"I felt like they all wanted to hear what I had to say, and I felt heard," she said. "It's just a great feeling to be speaking in front of world leaders."

She said it took her three days to write the speech, which she very nearly didn't get to deliver.

Autumns mother, Stephanie Peltier, said she was in the middle of an email purge when the UN invitation arrived. "I said this I probably a scam, and I almost deleted it."

Then their flight from Toronto to New York was cancelled three times. So she and her mother ended up driving all the way— a 15 hour trip.

"I am really proud," said Stephanie Peltier, who is a single parent. "I never imagined I'd be sitting here with her speaking at the United Nations."

Water advocate

This wasn't Peltier's first speech. The resident of the Wikwemikong Unceded Territory has become a well-known advocate for safe drinking water for Indigenous communities and clean waterways in Canada.

She attended the 2015 Children's Climate Conference in Sweden, is the only Canadian nominated for the 2017 Children's International Peace Prize, and had a tearful encounter with Prime Minister Justin Trudeau in 2016 where he promised to take steps to protect water in Canada.

"We are working to ensure that everyone has access to safe, clean, and reliable drinking water," Louise Blais, deputy ambassador at the Canadian Mission to the UN, told CBC News on Thursday. That includes working with First Nations communities to ensure their water is safe to drink.

Blais described Peltier's address as a further "call to action" for nations around the world to protect water for future generations.

Experience of a lifetime

Peltier herself is a very composed and thoughtful teenager. Her mother says people often aren't sure how to take her.

"My mom even used to call her little old woman girl," said Stephanie Peltier. "Sometimes, we joke around and tell



Canadian teen tells UN 'warrior up' to protect water

her to smile a little."

The 13-year old insists she has a social life outside of her activism, but that pollution and water scarcity scare her. "With what Mother Earth is going through right now, imagine that in 10 years," the Anishinaabe teen told the delegates at the UN on Thursday.

"Where I come from I am so fortunate — I can still drink the water from the lake."

She pointed out that many others around the world, and even across Canada, can't do that, including several communities near hers that have had boil-water advisories.

"I actually cried about it. And it makes me really mad when I think about it," she said in an interview at her home prior to the UN visit.

She has continued to speak out about the problems, even in the face of bullying from some of her peers at school.

Her mother has ensured her children follow their traditional path of water protection by instilling a strong sense of identity and culture. Autumn said she was also inspired by her great-aunt Josephine Mandamin, who trekked the shores of all five Great Lakes to bring attention to issues threatening Canada's largest natural resource.

"What I've been told through ceremonies is Mother Earth has been surviving for millions of years without us. And it's taken us less than a century to destroy her — and Mother Earth doesn't need us, but we need her," she said.

Peltier said she has already received a lot of positive feedback from people in the audience at the UN who heard her speech, which she hopes will translate into action.

"This was the experience of a lifetime."

Peltier left the gathered international dignitaries at the UN with this message: "One day I will be an ancestor, and I want my great-grand-children to know I tried hard to fight so they can have clean drinking water."

In Autumn's Words

CBC News asked Autumn Peltier what being a water advocate means to her, and what her advice would be for young people who want to follow her example as a "water keeper." Here's what she said:

My experience as a water keeper is more of an honour to the water and Mother Earth. Doing this work is very spiritual, and I feel connected to the water in spirit.

I also am proud to represent my people, and especially my community. I enjoy meeting new people and travelling to new places and learning about their issues and seeing if I can help in some way. I hope I am making a difference for our future and our great grandchildren.

If you want to become a water keeper:

- Learn as much as you can from your elders and your teachers.
- Learn your history. Learn your language. Listen and ask questions.
- Pay attention to the climate and the animals. Have respect for all living things.
- Talk with Mother Earth, sit with her and thank her. Make offerings of tobacco, pray and give thanks.
- Have fun and be a kid as much as you can. Get your school or class involved in a type of activity to help the land.
- Talk to your friends and share ideas. Inspire and encourage others.
- If you have a idea, act and make it happen. Don't be shy, there are no rights or wrongs — anyone can do this work.
- Just do it!!!



Northern Exam Prep Week

AWWAO held a one week certification and CEU session (October 1-5, 2018) in Sault Ste Marie for First Nation Operators culminating in the OWWCO Exam. There was a total of 25 operators in attendance. Keewatinook Centre of Excellence (KCE) provided the training for this course.



Northern Exam Prep Week

The courses and instructors for the certification week were: Michael Gillis (OIT) and James Haskell (WT I, II, III)



Michael Gillis and Jason Fox



Jason Fox and James Haskell



Nominate an operator!

Welcome Chiefs/Operators

AWWAO recognizes that there are First Nation Operators in Ontario who go above and beyond doing a good job; they provide an example for others of the many facets of being an Operator, particularly in supporting the other activities of other Operators. They make the extra effort to support their fellow Operators, and teach others what they have learned through many years of working in the field. Often they encourage others to become more involved including training opportunities. They go out of their way to help everyone in the water and wastewater field. They volunteer to help others, they serve on committees, and all while doing the things that are necessary to be considered "good at their job." If you know of a First Nation Operator who is an AWWAO Member that fits this bill, please **nominate him/her**. AWWAO will be announcing a North and South Winner at the upcoming 24th AGM & Training Conference & Tradeshow, January 2019.

The lucky recipient will receive the Operator of the Year Award(North and South) and will be included in the AWWAO Waterdrum!

Nominate Now

Please fax or email form to:

Fax: 807-223-1222 Email: info@awwao.org

JUST A LITTLE *Reminder*

1. 2019 Membership renewals will be sent out shortly.
2. Save the date for the upcoming 24th AGM & Training Conference & Tradeshow.
3. Nominate an operator!

