



A Newsletter for Water and Wastewater Treatment Plant Operators!

THE WATERDRUM

April 2023

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REGISTER NOW

AWWAO is excited to announce that we are having an Exam Prep conference in Windsor the week of June 5th, 2023.

Courses:
OIT or
WWTI &II or
Basic Chemistry + WQA

The course contains a four-day classroom prep, followed by a fifth day Provincial Certification Exam.



Sponsored by: Indigenous Services Canada and First Nations Inuit Health Branch



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 Health Canada 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.

Aboriginal Water and Wastewater Association of Ontario's newsletter is published quarterly by the AWWAO at Box 20001, RPO, Riverview Postal Outlet
Dryden, ON P8N 0A1
Tel: (807) 216-8085
E-mail: info@awwao.org

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

AWWAO Welcomes New Staff Member

AWWAO is pleased to announce that Corinne Louther recently joined the organization in the role of Assistant Coordinator on a part-time basis. Corinne will be helping Sara Campbell, AWWAO Coordinator, in serving AWWAO members and the board of directors.

Corinne has been involved in adult education and training for many years, specifically, in the drinking water industry since 2005, when she started working at the Walkerton Clean Water Centre (WCWC). During her time there, she held several positions until her retirement earlier this year from the role of Manager of Training Operations.

Over the last several years, in her work with WCWC, Corinne has been involved in various initiatives to provide training and services to First Nation operators and communities and has worked together with several organizations that serve First Nations including AWWAO. As well, she has collaborated with ministries and provincial agencies on the important work of supporting First Nations.

As an advocate for safe drinking water for everyone, she looks forward to working with AWWAO as an organization providing information for water environment, operator training, certification issues and technologies.

She and her husband, John, live in Walkerton where they have raised their three sons, Bo, Colton and Chase. In her spare time, she enjoys getting together with family and friends, going to concerts and exploring small towns and communities throughout Ontario.



Corinne has participated as a judge for AWWAO's Water Taste Challenge in the past.

Corinne is looking forward to reconnecting in person with AWWAO members, exhibitors and trainers at the 28th Annual Training and Tradeshow Conference at Rama in May.



Thunder Bay Exam Prep Recap January 2023

In our continued quest to improve the First Nations Operator's level of certification, AWWAO hosted a Northern exam preparation course in Thunder Bay. The course contained a four-day classroom prep, followed by a fifth day Provincial Certification Exam. There was a total of 19 operators in attendance. World Water Operator Centre and LEXICON Environmental Consulting Services Inc. provided the training for these courses.

AWWAO would like to thank instructors, Dave Russell and Hany Jadaa for providing an excellent and informative exam prep course.



Electronic Log Books – Staying Connected with Your Operations

A log book or other record keeping mechanism is a legislated requirement for water and wastewater treatment facilities. An electronic log book is a web-based digital log book that fully replaces traditional paper log books.

There are many benefits to making the change to electronic log books. One of the most significant benefits is that electronic log books give you and your staff the ability to fully access data and entries remotely

The Ontario Clean Water Agency (OCWA), which partners with First Nations communities and municipalities across the province to deliver water and wastewater services, uses electronic log books at a number of the facilities we operate. OCWA has found that electronic log books offer more comprehensive real-time reporting. For example:

- All entries are legible, chronological and provide additional transparency from entries being time stamped.
- Remote access using an online application helps the Operator in Charge and Overall Responsible Operator (ORO) who are not physically onsite to log information and review the log entries made by the operator in a timely manner.
- Entries can be reviewed more frequently by ORO, Process, Compliance Technicians (PCT) and Management who can make recommendations for corrections, note opportunities for improvement or staff development, and ensure quality entries.
- Searchable entries and labels help with filtering and organizing specific records.
- After hours, operating staff can log on using a laptop, no need for several logbooks to be used for one works number.
- After hours, non-regular operating staff i.e., Managers and PCTs can log in reporting of spills, Adverse Water Quality Incidents, Overflow, Bypasses etc.
- Ensures consistency with entries by staff and all changes are tracked.
- Attachments such as pictures of watermain breaks, completed forms, etc., can be added to entries.
- Ease to provide information for inspections – create a report for the specified time frames and output it in a PDF format.

Please contact Johanna Kirkbride, Regional Hub Manager – First Nations, OCWA to learn more: JKirkbride@ocwa.com.



The screenshot shows a web interface for an electronic log book. At the top right is the OCWA logo. The main heading is "Screenshot of Electronic Log Entry Page". Below this is a table of log entries for Monday, November 21, 2022. Each entry includes a time, a category (e.g., Maintenance, Distribution, WWT, Rounds), and a description of the activity. The bottom row shows a user profile icon and a list of roles: ORO, OIC, and OIT.

Monday, November 21, 2022		
14:14	Maintenance Distribution	Train on c2 and bac samples in distribution
11:52	WWTP Maintenance	Thaw scum box control and turn air off to #1 digester
11:05	WWTP Rounds	Rounds, checks, dosage calculations and physicals
10:51	WWTP Maintenance WTP	Receive shipment of c2 cylinders
10:32	WTP Rounds	Rounds, checks and dosage calculations in Caramat
00:00		00:00:00-23:59:00 ORO: 07:00:00-15:30:00 OIC: 07:00:00-15:30:00 OIT



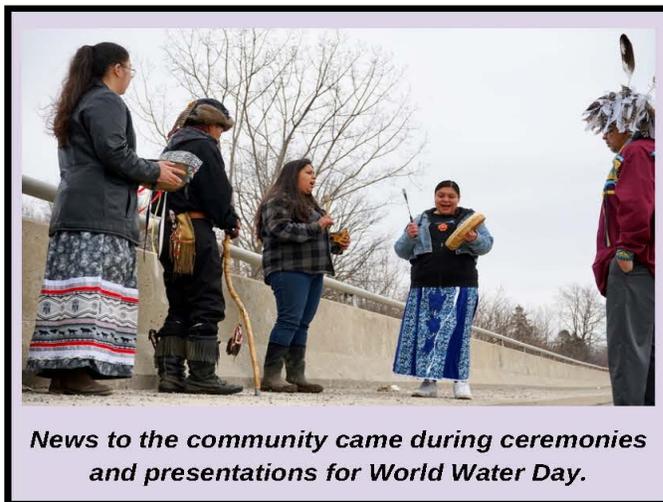
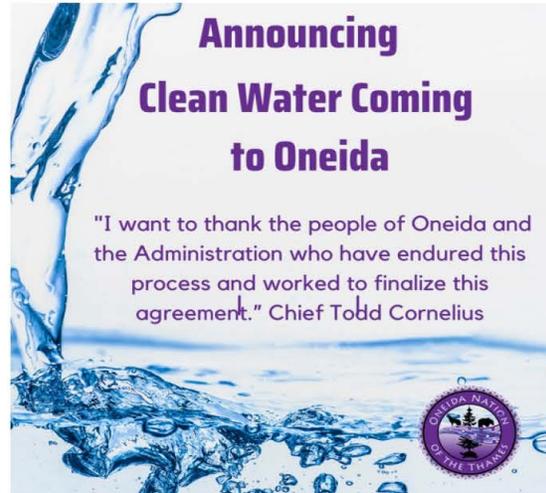
NEWS RELEASE

MARCH 23, 2023

Oneida Nation of the Thames Chief Todd Cornelius and the Honourable Patty Hajdu, Minister of Indigenous Services, are pleased to announce plans to connect the existing Oneida Water Supply System to the Lake Huron Primary Water Supply System. The new connection to the Lake Huron Primary Water Supply System will provide reliable and sustainable access to safe drinking water to approximately 528 homes and all the existing community buildings in Oneida Nation of the Thames.

The capacity of Oneida's existing piped distribution system will also be upgraded and expanded to deliver potable water and water for fire protection to the existing core community and homes planned for future development. Indigenous Services Canada (ISC) is investing over \$43 million to support the design and construction phases of this project. The water infrastructure project is projected to be completed in about 18 – 24 months. Once completed, there will be clean drinking water directly into the homes of the Oneida community.

“Members of the Oneida Nation of the Thames will have their future water needs met. I am confident that your work will protect access to fresh water for generations to come,” states The Honourable Patty Hajdu, Minister of Indigenous Services.



News to the community came during ceremonies and presentations for World Water Day.

“Water is life.” said Elected Chief Todd Cornelius, Oneida Nation of the Thames. “It’s been a long road, and while we have been resilient, we know that clean water is vital to the overall health of our community. I look forward to the day when our community can drink water by simply turning on their tap. It’s time to get to work on making this a reality.”



Frequently Asked Questions: Water Infrastructure Project



What is the state of our current water supply system?

We have a quality and quantity water issue at Oneida. As well known by all residents, we've been on a boil water advisory since 2019 because current infrastructure does not meet provincial or federal standards. As well, given our current infrastructure, our fire flow – the quantity of water available for fire-protection purposes - is inadequate for population growth in our community.

How will the Water Treatment System Upgrade Project help?

By implementing a new water infrastructure, we will be accessing clean drinking water. The project is also a long-term solution – with a 20-year outlook for growth within the community.

Where will we be getting the water from?

We will be accessing water from the Lake Huron water supply system. Lake Huron services the municipalities of London, Lambton Shores, North Middlesex, South Huron, Bluewater, Middlesex Centre, Lucan-Biddulph and Strathroy-Caradoc from a water treatment plant located north of the village of Grand Bend in South Huron. The plant has a current treatment capacity of 340 million litres per day (75 million Imperial gallons per day) and serves a population of approximately 375,000 people.

If you would like more information about Lake Huron water system, please visit their website here - [Lake Huron & Elgin Area Primary Water Supply Systems | About Us](http://LakeHuron&ElginAreaPrimaryWaterSupplySystems|AboutUs) (huronelginwater.ca)

What are the timelines for this project?

The project will take between 18 -24 months to complete. Our first step is to hire a Project Manager. The project will consist of:

- Project Plan (including a communication plan)
- A detailed design
- An overall budget
- Tenders for labor and possible other costs
- Construction





Frequently Asked Questions: Water Infrastructure Project

What is the cost of this project? Who is paying for this?

The estimated cost for the clean water connection is \$43 million. This will be fully determined when the detailed design is complete. Indigenous Services Canada will be paying for the entire project, including additional funding for fire-flow, once deemed necessary based on population growth.

Will there be employment opportunities for our community?

Once the detailed design has been completed, we will have a better idea of the skills required to complete the project. There will be a focus on training and employment opportunities for Oneida community members. Jobs and contracted positions will be posted as they become available.

Will there be a cost to households for water service?

There will be no cost for residential community members. However, commercial use of water will incur a cost. The cost will be determined with the detail design.

Can we expect any interruptions to service during construction?

No. Our current system will continue to run until the new system is in place.

How does this impact my household? E.g., will new pipeline infrastructure need to be built to my house?

This detail will be determined during the design phase. While new pipelines are required, the team will need to map the requirements based on several environmental and geographic factors.

Why is this important for our community?

Water is life. Aside from the important health benefits of clean drinking water and fire flow, having a viable and sustainable water source for years to come is vital to the overall health of our community. We will have the ability to attract Oneida members to come back to our land and thrive. As well, we will be in a better position to attract and keep businesses at Oneida that can boost our economic growth.

Feedback? Contact anyone from the Water Infrastructure Team:

Chief Todd Cornelius

W: 519-652-6161 x802

C: 519-3184605

Todd.cornelius@oneida.on.ca

Ron Elijah

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C: 226-374-6392

ron.elijah@oneida.on.ca

Pam Tobin

Chief Executive Officer

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C: 519-319-9582

ceo@oneida.on.ca

Water Taste Challenge



Bring a sample of your First Nation community's potable water for the

2023 Water Taste Challenge

AWWAO invites its members to participate in the Water Taste Challenge each year. This event is takes place at the 28th Annual Training and Trade Show Conference, May 1st to 5th, 2023, at Rama.

To enter, bring one U.S. gallon of potable water from your water treatment facility. A panel of judges will determine the winning entries, one from the North region and one from the South region. Winners will be presented with the Water Taste Challenge Cup and will receive a replica of the cup to take home to showcase in their communities. In addition, prizes will also be awarded to the winners.

2022 Water Taste Challenge Winners



Left: (South) Elijah Contreras, Colin Peters and Stacey Kicknosway from Walpole Island First Nation (presented by Phil Tangie, AWWAO board member)
Right: (North) Edward Black and Greg Edwards from Wahgoshig First Nation



Article #5 – Getting Comfortable With Unfamiliar Territories – Part 2

Operators Math Corner

By Hany G. Jadaa; C. Chem., M.Sc. Eng.

LEXICON Environmental Consulting Services Inc.

It is not too often that I get the pleasure of sharing some of my trade secrets with fellow operators and managers in this business. Well, they're not really secrets; they are merely personal practices, habits and little tricks that I have adopted over the years in my eternal quest for making life simple for all of us. And in this industry, what could be better than making math a simple yet effective tool to use and apply in our everyday life? Or, for those of you seeking higher certification levels, what could be better than giving you the opportunity of gaining an extra few marks on your certification exams? I think you would definitely like that.

Throughout my last four articles (first one appeared in the Spring of 2015), this is exactly what I have attempted to do; make math simple/simpler for you. So far I have shared with you some of the indispensable rules of solving basic math problems; shown you the most essential and fundamental units that we all need to know in this business; and introduced you to what many of my colleagues now famously call the "Hany" method of converting between units (even though I did not invent this, but thank you for the compliment!). And in my last article, I walked you through my step-by-step guide to converting between units utilizing a couple of straightforward examples using the Hany method. I hope that the graphical illustrations shown so far have proven to be of some success to you, regardless of what system of units you studied or grew up with.

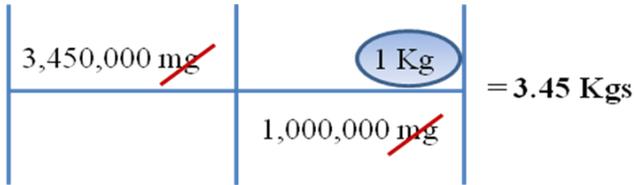
In this article I would like to explore with you the conversion process a bit further based on comments, thoughts and questions that I have received from many of you throughout my career in consulting and training.

Number 1 – this pertains to short cuts and when to use them. I prefer to call them short hauls. Let me use an analogy to explain. Consider you are taking a flight to a far destination; you want to fly from Toronto to Beijing. Using this analogy, note that Toronto is your starting location, and Beijing is your final destination. In considering your travel plans, you have several choices to make regarding flights. You can fly direct (i.e., non-stop from Toronto to Beijing); or, you can fly from Toronto to Vancouver, then from Vancouver to Beijing; or, you can fly from Toronto to Vancouver, Vancouver to Taiwan, then Taiwan to Beijing. You get the idea. The important issue to keep in mind is that Beijing is your final destination, regardless of how you choose to get there. Now obviously the flight that is most direct and would require the shortest travel time is just that – the most direct and the shortest (Toronto to Beijing). But how many of us feel comfortable doing that? Let's apply this analogy to conversions.

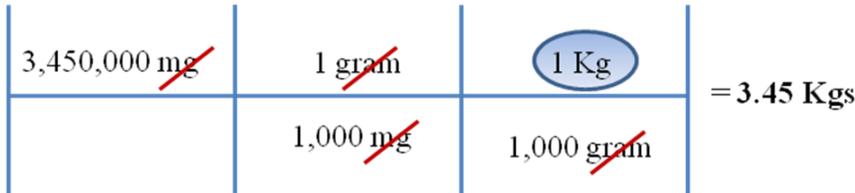
Say you need to convert 3,450,000 milligrams to kilograms. First of all, recall some of the basics I talked about in my second article titled "*The Wonderful World of Units*". Both units, "milligrams" and "kilograms" fall into the same category of measure, and that is "weight"; and accordingly, yes, you can convert from one to the other as long as you know the conversion factors involved. Second, you can choose to convert whichever way you like (and I'm not kidding). Similar to you picking your choice of flights, here are some choices. You can convert directly from milligrams to kilograms; you can convert from milligrams to grams, then from grams to kilograms; or you can convert from milligrams to grams, grams to pounds, then pounds to kilograms; etc. The choices can be many. Either route you take, you need to remember the fundamental issue at hand, and that is, milligrams is your starting point (the equivalent to Toronto in our analogy), and kilograms is your final destination (the equivalent of Beijing in our analogy). It doesn't really matter which route you take to get there, as long as you get there (most important!) and as long as you are comfortable with your choice. If you are writing certification exams, I would add that getting there in the shortest time possible is critical. Here are some options illustrated as follows:

Cont'd

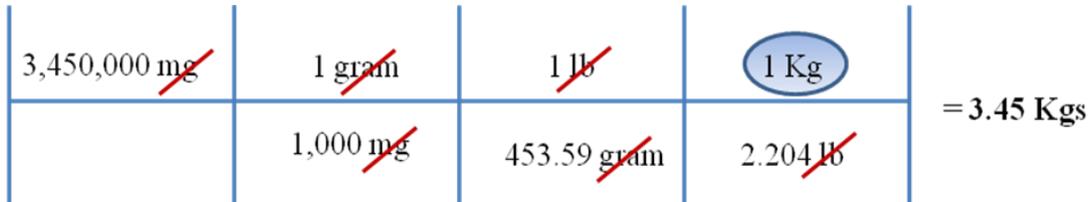
Option 1 – mg è Kg (one step)



Option 2 – mg è gram è Kg (two steps)



Option 3 – mg è gram è lb è Kg (three steps)



Notice the following. **1)** The first choice is the shortest and most direct way to do this, and the third choice is the longest and most demanding. **2)** If you go with the first choice, “mg” from the first box cancels with “mg” from the second box, and you end up with “kgs” in the most direct way. If you go with the second choice, “mg” from the first box cancels with “mg” from the second box, but that takes you only to “grams”. That’s why you need another leg of this flight to take you from “grams” in the second box to cancel “grams” in the third box so you would end up with “kilograms” as your final destination. If you choose to do it the long way, it will still get you to your final destination, but obviously this requires you to remember a couple of more conversion values. The key issue to note here again is this – always remember what your final destination is. How you get there, it is up to you and your comfort level (obviously, we are talking about how many units you want to remember or look up in a table somewhere). I choose to remember the least possible (especially when I am writing exams and time is of the essence), so I am taking the most direct route, and that is the first option. 1 kilogram is equal to 1,000,000 mg. Done.

Number 2 – you do not have to fill in every drawer in every Hany box. The above example required you to convert from mg to kg. If you examine the first box very closely, there is nothing in the bottom drawer of the first box. Why is that? Because I am dealing with a single unit here, and that is “mg”. There is no other unit. Therefore the bottom drawer remains empty as it should be.

Now if the example had said something like 3,450,000 mg/liter, then both drawers would be filled, with “mg” in the top part and “liter” in the bottom part, and the Hany box would be written as follows:



Cont'd

3,450,000 mg
liter

A quick note on this – never include “mg” and “liter” in the same drawer of the same box (see above). Always remember to keep your units separate. After you have separated your units, any required conversions after this starting point would be carried out as shown before.

Number 3 – when you have multiple conversions to go through, it doesn’t really matter which one you start with; i.e., the order of performing these conversions does not really matter. Let me illustrate this by using an example.

Let’s say you want to convert 3,450,000 mg/liter to Kg/m³. The unit “mg/L” is a typical expression of what we call “concentration” in this business. It combines the weight of some chemical (or some process parameter), measured in unit of “mg”, with the volume of some liquid (typically water) measured in unit of “liter”. Hence, the term “mg/L” is a combined unit. When converting combined units like this one, you can do it in one of two ways as illustrated below:

3,450,000 mg	1 Kg	1,000 liter	= 3,450 Kgs/m ³
liter	1,000,000 mg	1 m ³	

or

3,450,000 mg	1,000 liter	1 Kg	= 3,450 Kgs/m ³
liter	1 m ³	1,000,000 mg	

Obviously, converting weights first then volumes second yields the same result as converting volumes first then weights. The order does not matter, as long as both are done. Which brings me to the following point.

Number 4 – a lot of people ask me the question “once I have set-up my boxes, should I multiply first and then divide or the other way around”? Well, when it comes to using your calculator, I want you to notice should be (and will be) the same. Try it for yourself by performing the following operations in the same order shown below (I have selected some random numbers as an example to illustrate this concept):

6 * 5 * 1 * 2 ÷ 3 = ?

6 * 2 ÷ 3 * 5 * 1 = ?

2 ÷ 3 * 5 * 1 * 6 = ?

As you can see, the order by which this is done does not matter and the answer will always be 20. Clearly this gives you great flexibility and an added comfort level in terms of how you want to set-up the above conversion boxes.

Cont'd

Number 5 – you can always tell visually when you have set up the boxes in the wrong way and when you are going to get the wrong answer. And yes, I did say “visually”, which also means without the need to use a calculator. Let’s use the same example as above and convert 3,450,000 mg/liter to Kg/m³. Does the set-up below look like it’s been done correctly?

3,450,000 mg	1,000,000 mg	1 m ³
liter	1 Kg	1,000 liter

No, it has not been done correctly. Can you tell why just by looking at it? I want you to ignore the numerical values and just look at how the units are set up. Can you cancel any units here? If you follow through with this, you can see that the “mg” from Box #1 does not cancel with the “mg” from Box #2, and the “liter” from Box #1 does not cancel with the “liter” from Box #3. Furthermore, you will end up with the unit of mg² on the top and the unit of liter² on the bottom. Is there such a unit as mg² or liter²? This tells you that your set-up is incorrect and you need to turn Box #2 and Box #3 upside down to facilitate the cancellation of these units. And notice something else that is interesting here. I did not have to use my calculator to tell me I will be getting the wrong answer if I proceeded with it the way it is set-up now! It’s all in the units.

Number 6 – when it comes to unfamiliar units of measure, many people get confused and start asking questions like “which is bigger – a gallon or a m³”? and “if it is bigger, should I multiply by the conversion value or should I divide by it”? My answer to these questions is very simple. You do not need to know which is bigger or smaller, and you do not need to think so hard whether you should multiply or divide. Let the units guide you. Write down the given unit in the first box as I have shown you before, then set-up the desired target unit with its numerical conversion value in the opposite location (or drawer) in the following box, and voila. Using only visuals, the set-up will tell you whether to multiply or divide. If the numerical values falls above the divide line in the Hany box, you multiply. If they fall below the divide line, you divide. Simple. And no need to remember which is bigger or smaller.

Number 7 – I need to emphasize another important issue. Your calculator is the last tool you will need to solve any of these math problems, not the first tool. There is no point in punching numbers on your calculator if you do not know whether to multiply them or to divide them. If you have set up the conversion boxes incorrectly, it doesn’t matter how smart or how powerful your calculator is, you will end up with the wrong answer. Once again, let the units guide you. Focus on setting up the right units in the proper drawers of each box, then, and only then, use your calculator. Once again, if the numbers fall above the divide line, you multiply them, and if the numbers fall below the divide line, you divide them. Setting up the units properly as your first step will always guarantee you the right answer. Of course that is if you punch the right numbers on your calculator!

Number 8 – one last thought before I let you go. This is especially important for those of you planning on writing certification exams (or any exams for that matter). You know those multiple choice answers with different numerical values? In most cases, those numbers are not randomly generated values. They are typically chosen based on common mistakes that people do and then calculated accordingly. Let me show you what I mean.



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Say your chemical consumption at the plant is measured everyday at 7:00 am (beginning of the shift), and the last reading indicated you have used 75 m^3 of chemical. You have to report this on your data log sheet in the unit of mL/sec. The answer would be:

- a) 52,083 mL/sec
- b) 868 mL/sec
- c) 52 mL/sec
- d) 0.868 mL/sec

I did not just make up the above numbers. Based on common mistakes that people do, I purposely ignored or forgot to multiply (or divide) by some conversion factor (or factors) in order to generate these values. And that is exactly how it is done on many exams. So, try to become systematic, methodical, and more vigilant in your practice of unit conversions. Because it is very easy to come up with an answer that resembles any of the above choices, but only one is correct. But which one?

I'm afraid you will have to wait until the next issue to find out. In the meantime, try to figure out what went wrong when I came up with these choices and see if you can spot the mistakes I made. And as usual, if you have any questions, suggestions or comments please feel free to send me an email at lexicon@ca.inter.net.



CHECK YOUR TO-DO LIST



Nominate a candidate to join AWWAO's Board of Directors

Nominations to include a bio and brief statement of qualifications and campaign platform.

Send nominations to info@awwao.org by Tuesday, April 11th by 4 p.m. (EST).

(Note: Voting will take place electronically from 9 a.m. April 18th to 4 p.m. May 2, 2023 and results of the vote will be announced at the AGM on May 3, 2023.)



Nominate an Operator of the Year

Nominate an operator you know who goes above and beyond on the job, supports other operators and sets a good example for others. There'll be one winner for the Northern region and one winner for the Southern Region. **Send nominations to info@awwao.org by Friday, April 21st by 4 p.m. (EST).**

(Note: Nominee must be an AWWAO member and in attendance at the 28th Annual Training and Tradeshow at Rama in May.)



Nominate an Instructor of the Year

Nominate an instructor you feel has done a truly exceptional job in delivering training, making a substantial contribution to the professional development of our operators and demonstrating teaching expertise within our programs. **Send nominations to info@awwao.org by Friday, April 21st by 4 p.m. (EST).**

Update on ongoing COO Projects



Beaver house and dam, photo by Lillian Trapper

Canada Water Agency Engagement: Phase 2

The Chiefs-in-Assembly have supported Phase 2 engagement via resolution on First Nations' priorities in the creation of the Canada Water Agency (CWA). Phase 2 is expected to see the Environment Sector support workshops conducted in communities in conjunction with Provincial Territorial Organizations (PTOs) and Independent First Nations. The Environment Sector was not able to come to an agreement with Environment and Climate Change Canada on funding in time to carry out Phase 2 during the 2022-23 fiscal year, however, support is likely to be garnered throughout the 2023-24 fiscal year and moving forward.

The 2023 federal budget commits \$21 million to support the creation of the CWA, which will be headquartered in Winnipeg, MB. By the end of 2023, the federal government aims to introduce legislation that will fully establish the CWA as a standalone entity. This funding should support our Phase 2 engagement on CWA, as this will be crucial for First Nations' input before legislation is drafted.



Water Highlights

Water Legislation Engagements hosted by the COO Environment Sector in March 2023

The Government of Canada provided a 30-day review period of proposed draft legislation on water and wastewater on-reserve. As a result, the Chiefs of Ontario Environment Sector organized two (2) consultation sessions that were attended by approximately 40 representatives from First Nations, Tribal Councils and PTOs. Below is a summary of the feedback and questions generated for ISC during these sessions.

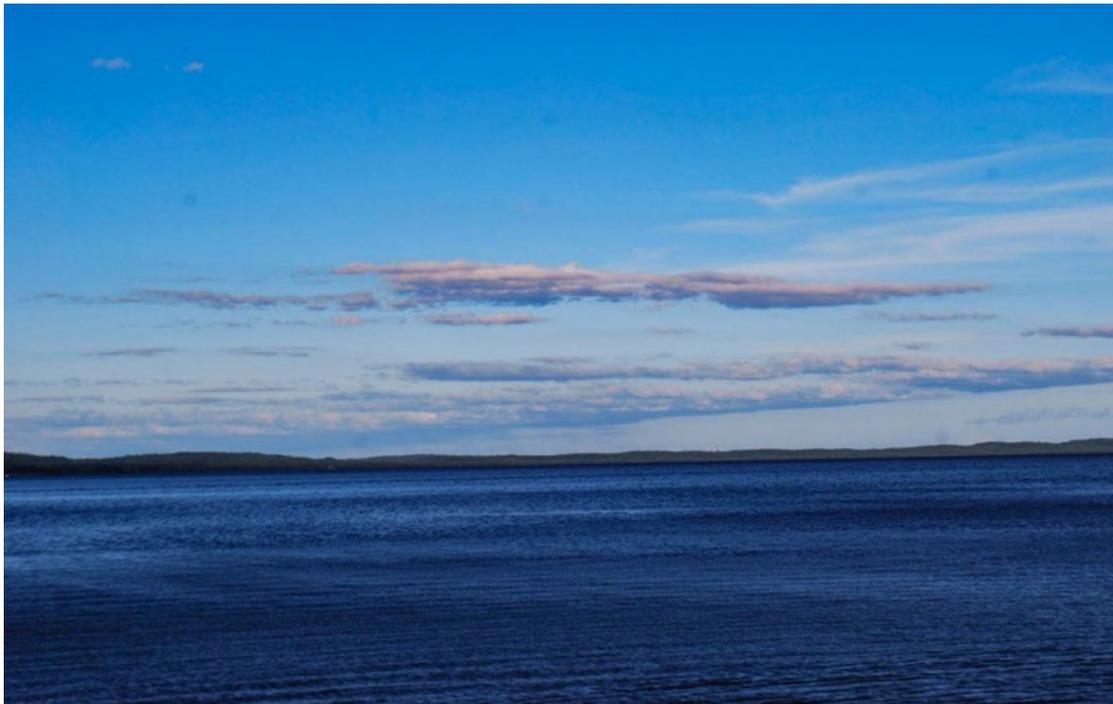


Photo of Wanapitei Lake by Sally Gaikezheyongai

What We Heard About the Engagement Process

Participants shared that they were concerned with the short timeline to provide feedback, although they did recognize that Canada's parliamentary process provides additional opportunities to propose friendly amendments to the legislation.

We also heard that participants would like more proactive engagement from the Government of Canada on the legislation. Not all participants had received information from ISC regarding online sessions, and many expressed interest in follow-up virtual meetings that would include government for further discussion. Participants recognized that ISC is the lead on the legislation but noted that they want to learn more about how other government departments see themselves as contributors to better water and wastewater outcomes in the implementation of the legislation.

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What We Heard About the Legislation

Overall, we heard that the legislation is a good starting place to improve water and wastewater on-reserve. Participants mentioned their support for the 5-year review clause and appreciated the recognition of the role of women.

Notwithstanding, participants felt that greater clarity is required in the following areas:

- **Standards:** Participants recognized that the legislation designates a process for creating standards. They spoke to the need for standards to be rigorous. As all operate within Ontario and receive training in compliance with Ontario standards, these were seen as a potential model.
- **Accountability and Enforcement:** It is not clear in the current legislation who will be accountable for ensuring that First Nations have everything they need to meet water and wastewater standards, nor is it clear what will happen if the conditions for success are not met. Participants want to understand how the legislation will be enforced and who will be held accountable.
- **Liability:** Participants sought greater clarity and certainty on liability. Participants felt that the current language seemed to create a void in accountability and that it could release all parties from liability.
- **Funding:** Participants spoke to the need for Canada to provide clear, predictable, transparent and adequate funding. We heard that the Levels of Service Standards used by Canada are inadequate for determining funding and that they should be replaced by a long-term, asset-focused funding formula tied to meeting rigorous standards.
- **Systems Approach:** Participants discussed the connection between water and wastewater, housing plans and fire suppression requirements. We heard that participants want to understand how the legislation could result in Canada aligning infrastructure asset plans and taking a long-term approach to water and wastewater infrastructure, resulting in it aligning with future housing plans and fire safety needs.
- Participants also spoke to the need for the legislation to contemplate insurance and to get clarity as to whether the legislation could impact insurance policies.
- **Procurement:** Participants spoke to ongoing procurement issues with the Government of Canada, in particular a “race to the bottom” to secure the cheapest suppliers – who sometimes underperform or end up being more expensive in the long term. We heard that participants want procurement reforms to come along with the legislation so that suppliers are chosen based on best outcomes rather than the lowest price.
- **Defining Good Faith/Consultation:** Participants spoke to the need for there to be a clearer definition of “good faith” and “consultation,” with ties back to human rights standards and the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP) Act.
- **Governance:** Participants were seeking greater certainty as to how the legislation would work vis-a-vis the Canada Water Authority. Participants also inquired as to how a First Nations water commission or a similar institution could work and spoke to their expectation that First Nations would be an integral part of decision making on a government-to-government basis.
- **Source Water Protection:** **Participants spoke to the fact that water sources extend beyond reserve boundaries, and often, the decisions of other jurisdictions will impact source water.** We heard that First Nations need to be able to have a seat at the table with all levels of governments when making decisions on matters that could impact source water, and that they expect funds to enable them to protect source water.



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- **Interjurisdictional Concerns:** Participants spoke to Ontario's role in water permitting and in permitting industrial or waste-generating activities in watersheds. We heard that Ontario should be engaged, and that First Nations will need to understand how the legislation could impact permitting processes.
- **Whole-of-Government Approach:** Participants spoke to the role of other government departments in water and wastewater, in particular, Environment and Climate Change Canada and Health Canada. We heard that participants want to understand how other departments will play a role in the legislation and how it will enable a whole-of- government approach.

Key Questions Generated During the Engagement Sessions

During the engagement sessions, participants generated the following key questions for ISC to take into consideration and provide input and insight upon:

- How will the government work with First Nations in a way that is aligned with UNDRIP legislation, is robust, is consent-based, and takes into consideration decisions that can be made through orders in council?
- How will the federal government coordinate with provincial governments and First Nations to enable source water protection?
- Does the federal government recognize that funding requirements extend to and need to consider the following:
 - Operations and maintenance; training; pay equity for water operators; source water protection measures; engineering assessments; future housing plans; and fire safety needs?
- What might a First Nations Water Authority do or be responsible for, and how would its members be selected?
- How will the legislation align with Treaty and human rights?
- How will the federal government enforce the legislation? From Canada's point of view, what accountabilities and liabilities rest with whom?
- How and when will the legislation come into effect?
- What policies does the federal government believe will need to be created or amended to implement the legislation once it is passed?
- Will the legislation result in changes to procurement policies or practices?
- Has the federal government assessed potential risks that the legislation might create for insurance policies or have they otherwise liaised with insurance companies? If it has assessed risks, what are those risks?

Ongoing and Future Work from the COO Environment Sector:

Attendees at these engagement sessions were interested in a question-and-answer online seminar with ISC Headquarters to learn more about the legislation and explore questions regarding its contents and implementation. Participants asked that these sessions have a clear agenda, that they are facilitated by a third party, and that they are not reliant on PowerPoint presentations. Chiefs of Ontario will be requesting a meeting with ISC HQ staff.

