

ALBERTA UTILITY OPERATOR

Winter 2023

Issue #49



The 48th Annual Operators Seminar

March 13-17, 2023, Banff, Alberta



The AWWOA Executive Board welcomes you to attend the Annual Operators Seminar in Banff, AB. The week offers you the opportunity to learn at technical sessions and workshops and build connections at the two-day trade show and networking events.

For more details, visit page 2 & 3.

2022 Water Week Conference

Thank You!

We appreciate all the support from our delegates, speakers and sponsors for joining us at the 2022 Water Week Conference!

AWWOA Thank You To Our Water Week 2022 Sponsors!

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DEDICATED TO THE ESSENTIALS

Pre-Seminar Workshop Information

Workshop #1 - From Clipboards to Computers - Transformation of Water and Wastewater Operations Utilizing GIS Based Mobile Technology

Presented by: Khem Aryal and Brian Brost, City of St. Albert

Monday March 13, 2023 - 8:30 a.m. - 12:00 p.m.

When a City grows, doing things the way they've always been done isn't sustainable. From clipboards to computers, change at the City of St. Albert has been embraced by personnel as essential to fulfilling a variety of system operations. This session will guide you through the journey of what was to what is, sharing many examples of innovation, best practices and the ease for other utilities to adapt.

Workshop #2 - Odour and Corrosion Control in Municipal Collection Systems

Presented by: David Speed, BioMaxx Environmental

Monday March 13, 2023 - 8:30 a.m. - 12:00 p.m.

Odour and corrosion are long-standing concerns for all municipal collection systems. This workshop will cover background information operators need to know about odours in a collection system, why they are a problem and how best they can be treated. Several detailed case studies will also be presented that outline the comprehensive monitoring and treatment programs that are in place with these systems.

Workshop #3 - Pumping & Hydraulics Introductory

Presented by: Stefan Fediw and Allan Miskolczi, John Brooks Company Ltd.

Monday March 13, 2023 - 1:00 - 4:30 p.m.

From the basics to strengths and limitations, this workshop will allow you to recognize and describe the functionality and main components of centrifugal and positive displacement pumps. The covered material will also focus on problem solving and how to trouble-shoot pumping equipment. This includes calculating basic system curves, hydraulic analysis and dealing with "flushable" wipes.

Workshop #4 - Iron and Manganese Removal Using Granular Media Filters

Presented by: David Hambley and Brett Hambley, AWI

Monday March 13, 2023 - 1:00 - 4:30 p.m.

Iron and manganese in source water is a common occurrence across North America and requires treatment to remove from drinking water. This session will review process options for iron and manganese removal, the various granular media filter types available for the removal of iron and will also include a discussion on filter system maintenance.

Workshop #5 - Root Cause Analysis: Water and Wastewater Facilities - What Truly Caused the Problem

Presented by: Grant Dixon, Owen James and Sutha Suthaker, Associated Engineering

Tuesday March 13, 2023 - 8:30 a.m. - 12:00 p.m.

While often used in Occupational Health and Safety to improve processes and overall approach to hazard control, Root Cause Analysis can also be used to analyze issues that have occurred while operating a water/wastewater facility. Using this tool, an operations team can truly understand why things occurred and make changes to avoid them in the future.

Workshop #6 - Mobile Apps, Artificial Intelligence (AI), Machine Learning (ML) and Digital Twins - What's In it for Water and Wastewater Operators?

Presented by: Lalith Liyanage, WSP Canada

Tuesday March 13, 2023 - 8:30 a.m. - 12:00 p.m.

Many digital tools are available to assist in modern-day life. The water and wastewater industry is no exception. Mobile apps, artificial intelligence, machine learning and digital twin technology are tools that can assist an operator in day-to-day operations. In addition to introducing these tools, potential future competencies will also be discussed.



****PRE-REGISTRATION IS REQUIRED** - NO ONSITE REGISTRATION IS ACCEPTED**

Seminar Registration Information

Continuing Education Unit (CEU) Information for Operators Seminar:

Attending Wed. and Thurs: 0.9 CEUs

Attending a Pre-Seminar Workshop: 0.3 CEUs
(separate pre-registration required)

Attending Friday Technical Session: 0.3 CEUs

*NOTE: You must attend to receive CEUs

Registration:

Register online at awwoa.ca

NOTE: Seminar registrations will be accepted online until **March 9, 2023**. Anyone who has not been confirmed as registered by March 9 will need to register onsite for an additional \$50 fee.

Cost:

Full Seminar Registration - \$290+ GST
AWWOA Members (Monday - Friday)

Full Seminar Registration - \$405 + GST
Non-Members (Monday - Friday)

Single Day Registration - \$150 + GST
(Wednesday or Thursday)

Trade Show Only - \$100 + GST
(One Day)

Banquet Ticket (includ. 2 bev tix) - \$70 + GST

Pre-Seminar Workshop - \$125+ GST
(Monday and Tuesday)

Upcoming AWWOA Awards

Do you know a member who has demonstrated exemplary service to the water and/or wastewater field? Nominate them for an award! These are presented each year at the AWWOA Seminar. Check out our website for the details including nomination guidelines and submission details.

- **Gerald Samuel Operator of the Year Award**
- **Ron Bayne Service Award**
- **Steve Blonsky Honorary Life Membership**

Application Deadline is **January 31, 2023**
Submit to: connect@awwoa.ca



Mike Bureaud, 2022 Ron Bayne Award from AWWOA Chair Dennis Tomushcat



Chris Flaherty, 2021 Gerald Samuel Operator of the Year Award from AWWOA Chair Dennis Tomushcat

Volunteer Opportunities

Interested in volunteering at the Annual Operators Seminar?

The AWWOA Executive has an opportunity for members in good standing, who will be attending the Seminar.

We are looking for a dozen people who can contribute 10 hours throughout the week. You will also receive free seminar registration and a banquet ticket.

Duties Include:

- **Assisting with technical presentations**
- **Front desk registration**
- **Charitable donations**

If you are interested in volunteering, please email connect@awwoa.ca with your information.



AWWOA Updates

Charitable Donations 2022

As we reflect on 2022 and look forward to new beginnings in 2023, I would like to thank the AWWOA members and our Suppliers for their continued support for the Water School.



The Water School Project



The project that our AWWOA donations will be championing in 2023 is a 'Motorized Borehole Expansion' in Petta, Uganda. Petta, is a sub-county in Eastern Uganda that has a new motorized borehole that was recently built. It serves 2,450 people across four communities.

With AWWOA's help, the plan is to extend the reach of the borehole to help an additional 2,560 people in three more villages, which will include 1,016 students at Mbula-Machari Primary School.

This 2.7 km expansion would provide 25 liters of clean water per person per day in these communities through one new public tap stand in each community and a tap stand at the school. Included in this, all 512 households in these communities will participate in Water School's flagship hygiene and sanitation training.

When our March 2023 Operators Seminar rolls around, please remember to take part in the charitable donation activities to help raise funds for this project. Perhaps consider donating a gift for the silent auction or make a generous donation by purchasing one of the donated auction items. You can also donate by taking part in the 50/50 draws.

Again, thank you for the continued support, see you in Banff!

Bert Sr. Miller

Charitable Donations Chair



Annual Golf Tournament



Thank you to everyone who joined us on Monday, September 12, 2022 at the D'Arcy Ranch Golf Club in Okotoks. It was our biggest tournament yet and we are grateful for your support!

Congratulations to our tournament winners:

**Ryan Taylor, Nick Pawliuk,
Gary Pawliuk and Brad Naka**

Save the Date

Save the date for the Annual Golf Tournament this June! Registration will open Spring 2023. Stay tuned to AWWOA.CA for full details.



**6th Annual Golf Tournament
Whitecourt Golf & Country Club
Whitecourt, AB
June 19, 2023**

Alberta Environment & Protected Areas Update

As you may or may not be aware, Tanya Hunter, Water and Wastewater Certification Team Lead has decided to take another fantastic opportunity to use her skills and has left Environment and Protected Areas and the Government of Alberta. We wish Tanya much joy and success as she begins this new chapter.



We will miss her here in the office, but I am sure you will all miss her expertise and personality as well. In the meantime, the Water and Wastewater Certification Team appreciates your patience and understanding as we transition and permanently fill the team lead role.



Remember to upload training courses in a timely manner. This will help speed up the renewal process and help us and you to identify any gaps and delays when submitting applications.

Exam and continuing education unit approvals is done every 8 weeks. Be sure to get your applications in early! The next meeting cut off is February 13, 2023.

As we continue to ensure the proper operation and maintenance of water and wastewater facilities in Alberta, protecting the health of citizens and the environment, we want to wish you a safe and happy New Year!

If you have any questions or concerns, reach out to waterandwastewateroperatorcert@gov.ab.ca.

NAIT Industry Practicum 2023



Are you planning to hire staff for the upcoming May-August 2023 season or looking to fill future vacancies within your organization? Hire a W&WW Student!

NAIT's W&WW Technician students are required to obtain a minimum of 600 hours of work experience in one or more of the disciplines in order to complete their Certificate. Approximately 70 students will be seeking employment to complete the industry practicum portion of the program. With your support, we hope to provide our students with a variety of employment opportunities on January 31, 2023

If you are interested in participating, please contact:

Darren Demchuk, Chair, P: 780-771-7081 / 780-471-7005 e: wwwpracticum@nait.ca

SAIT Industry Practicum 2023



SAIT's Water and Wastewater Treatment Operations students are required to complete a 600 hour work practicum in order to complete their certificate program. SAIT's WWTO students are also trained and prepared to write the 4th Class Power Engineering exams. With your support, we hope to offer our students a variety of practicum opportunities for spring/summer 2023.

If your organization is interested in hiring a student for the practicum, please contact:
Lisa Kleebaum, Practicum Coordinator P: 403-998-5171 e: lisa.kleebaum@sait.ca

The Old Operator

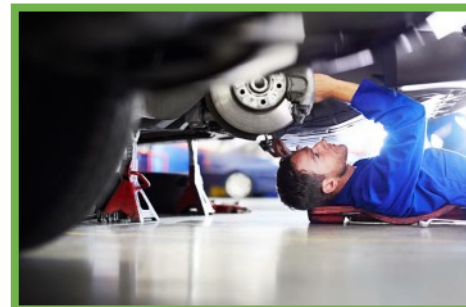
The Scorpion and the Frog



Doug Thorson

Many years ago, I helped a neighbour with some repairs to his vehicle. He commented on the few tools I had and how poor condition they were in. My only response was, "That was what I could afford." He said as a thank you, he was going to give me some better tools. At first that sounded great, I could sure use better tools.

Here is the wrinkle. The word in the industry was that this man was considered a crook. He was so nice I found this hard to believe. One evening I was under my car when this neighbour brought me a new red toolbox filled with a half inch socket set. I reluctantly refused. This was too expensive. After going back and forth over this, he left the tools with me. The tools were beautiful. On my pay, it would be years before I could afford these. For several weeks I looked at these tools but never used them.



Late one night I heard a big commotion out on the street. My neighbour had brought a company truck home with a new Chevy engine still in the crate in the truck box. A none-company truck had pulled up and two men removed the crate engine and left. This happened again several weeks later. I was left wondering if this tool kit he gave me belonged to my employer. I took the new socket set and returned it to my neighbour. The reputation of my neighbour had been shown to me, he was still stealing. The character of my neighbour had not changed. In retrospect, I was aware of his character, yet I fell into the trap.

There is a story told of a frog and a scorpion. The frog was basking by the stream when he was approached by a scorpion. The scorpion wanted the frog to carry him on his back to the other side of the stream. The frog said no, "You will sting me." The scorpion replied, "No I won't. If I did, we would both drown." The frog, with the scorpion on his back, started for the other side of the stream. In mid-stream, the scorpion stung the frog. As the two were slowly sinking, the frog said to the scorpion, "You said you would not sting me." The scorpion replied with a gurgle, "It's my nature." If by reputation or by their example, someone's nature is contrary to your morals or ethics, err on the side of caution.



*"Don't be the scorpion, unwilling to change his nature.
Don't allow your nature to hurt you or harm others."*

Get to know who you are. If you feel your nature is in question, be prepared to mould and rebuild it, not just for your benefit, also, for the benefit of others, at least that's how I see it. *The Old Operator, Doug Thorson*

The Math Corner

Answer:



David Noack

WINTER 2023

This winter's problem involves the chlorine demand of the raw water source.

QUESTION:

An operator applies 3 kg of chlorine to 400 m³ of water and after sufficient time for disinfection, measures a total chlorine residual of 2.1 mg/L. Calculate the chlorine demand.

First, calculate the dosage:
$$\frac{3 \text{ kg}}{0.4 \text{ ML}} = 7.5 \text{ kg/ML} = 7.5 \text{ mg/L}$$

Next we see that if we apply 7.6 mg/L and 2.1 mg/L remains as residual, then 5.4 mg/L is used up as demand
The chlorine demand is 5.4 mg/L.

Seminar Updates

Alberta Environment Q & A Session Annual General Meeting Notice



Date: March 15, 2023
Time: 3:30 p.m.
Location: Banff Park Lodge,
Session Room D

Do you have questions about earning and maintaining your certification? Need help navigating the Compliance365 platform? The water and wastewater certification section of Alberta Environment and Protected Areas joins us during the Annual Operators Seminar for a special Q&A session to answer your questions!



Date: March 15, 2023
Time: 3:45 p.m.
Location: Banff Park Lodge,
Main Ballroom

AWWOA's Annual General Meeting will be held on Wednesday, March 15, 2023 during the Annual Operators Seminar at the Banff Park Lodge. The following items will be discussed: AWWOA election results, finance, audit reviews and yearly updates; door prizes (must be in attendance to win); and find the hydrant draw prizes.

Seminar Networking Events

Join us for these networking events during the 48th Annual Operators Seminar in Banff!

Women in Water

We welcome all women attending the Annual Operators Seminar to join us for the new Women in Water Event! The networking hour will take place before Pub Night at the Elk & Oarsman. We look forward to promoting and sharing the many successes of women working in the water/wastewater industry.

Date: March 14, 2023
Time: 6:00 - 7:00 p.m.
Location: Elk & Oarsman, 119 Banff Ave, Banff, AB

Pub Night

sponsored by **Algae Control Canada**

Date: March 14, 2023
Time: 7:00 - 10:00 p.m.
Location: Elk & Oarsman, 119 Banff Ave, Banff, AB

Casino Night

sponsored by **Wolseley Waterworks**

Date: March 15, 2023
Time: 7:00 - 10:00 p.m.
Location: Banff Park Lodge, 222 Lynx Street, Banff, AB



Banquet 2023



Join us on Thursday, March 16 for our annual banquet at the Operators Seminar in Banff! Comedian Chuck Byrn will join us to provide the evening entertainment.

Chuck has worked professionally as a comedian since 1994 and as a national touring headliner since 1996. His credits include the *Just for Laughs Festival*, and NBC's *Last Comic Standing*.

Tickets are \$70 + GST and can be purchased at AWWOA.CA.

Upcoming Training

Check out these upcoming training opportunities:

Register online at: AWWOA.CA

February - March 2023

Biological Nutrient Removal - in Calgary

February 13-14, 2023 - Cost \$460 (\$560 Non-members) - 1.2 CEU's

Process Control: Intermediate - in Edmonton

February 13-14, 2023 - Cost \$460 (\$560 Non-members) - 1.2 CEU's

Dissolved Air Flotation - in Calgary

February 16-17, 2023 - Cost \$460 (\$560 Non-members) - 1.2 CEU's

Your Wastewater Lagoon: The Ins and Outs of Design and Operation - in Edmonton

February 16-17, 2023 - Cost \$460 (\$560 Non-members) - 1.2 CEU's

Level III/IV Water Distribution Certification Preparation - in Edmonton

February 21-22, 2023 - Cost \$460 (\$560 Non-members) - 1.2 CEU's

Level III/IV Wastewater Collection Certification Preparation - in Edmonton

February 23-24, 2023 - Cost \$460 (\$560 Non-members) - 1.2 CEU's

Pumps & Blowers - in Edmonton

March 27-28, 2023 - Cost \$460 (\$560 Non-members) - 1.2 CEU's

Flowmeter Fundamentals - in Edmonton

March 29, 2023 - \$350 (\$450 Non-members) - 0.6 CEU's

Pumps & Hydraulics Principles - in Calgary

March 30-31, 2023 - \$460 (\$560 Non-members) - 1.2 CEU's

Connect with AWWOA

Toll free: 1-877-454-7745 Local: 780-454-7745

Email: info@awwoa.ca Website: awwoa.ca

Visit us on [Twitter](#), [Facebook](#), [LinkedIn](#), [YouTube](#)



Save the Date

March 13-17, 2023

Annual Operators Seminar

Banff Park Lodge

Banff, AB

June 19, 2023

Annual Golf Tournament

Whitecourt Golf & Country Club

Whitecourt, AB

November 13-15, 2023

Water Week Conference

DoubleTree by Hilton Hotel

Edmonton, AB

Online Training Courses

AWWOA offers certification preparation courses online. Work from anywhere with Internet access and manage your training for a time that works for you!

The following courses are available for online study:

- Entry Level Training
- Small Water Systems
- Small Wastewater Systems
- Level I Cert Prep
- Level II Water Treat. Cert Prep
- Level II Water Dist. Cert Prep
- Level II Wastewater Treat. Cert Prep
- Level II Wastewater Coll. Cert Prep
- Level II/IV Water Treat. Cert Prep
- Level III/IV Water Dist. Cert Prep
- Level III/IV Wastewater Coll. Cert Prep
- Level III/IV Wastewater Treat. Cert Prep

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Alberta Water & Wastewater
Operators Association

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