

ALBERTA UTILITY OPERATOR

Winter 2022

Issue #46



The 47th Annual Operators Seminar

March 14-18, 2022 Banff, Alberta



The AWWOA Executive Board is planning for the safe return of the Annual Operators Seminar to Banff, Alberta. The in-person event includes technical sessions, workshops, trade show, networking and social opportunities.

For more details, visit page 2 & 3.

2021 Water Week Conference

Thank You!

We appreciate all the support from our delegates, speakers and sponsors for participating in the online 2021 Water Week Conference!



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DEDICATED TO THE INDUSTRY ESSENTIALS

Pre-Seminar Workshop Information

Workshop #1 - Bonnybrook WWTP Cogeneration Expansion Project

Presented by: Kyle Jensen and Ryan Balt, City of Calgary and Stantec

Monday March 14, 2022 - 8:30 a.m. - 12:00 p.m.

The Bonnybrook WWTP Cogeneration Expansion Project is currently in the commissioning phase, and is slated to complete in April 2022. This presentation will discuss the design of the system at a high level and will focus on interesting features and challenges in design and operation. Commissioning will be discussed at length, including logical planning and operator training for a facility that is unique to wastewater treatment plants in Canada.

Workshop #2 - Jar Testing for Operators, How to Optimize Water Plant Chemistry

Presented by: Doug Riddell and Dalen Crouse, Klearwater Equipment & Technologies

Monday March 14, 2022 - 8:30 a.m. - 12:00 p.m.

In the field, we often meet with operators who are unfamiliar with the math, theory, or application of jar testing which can lead to wasteful chemical use or non-optimal treatment results. This workshop will focus on the theory behind various available chemistries and what they target, the math behind stock solutions and dosages in jar testing, and the application of those results in your plant.

Workshop #3 - Oxygenation and Circulation Techniques to Improve Water Quality in Raw Water, Wastewater, Stormwater, and Managed Lakes & Ponds

Presented by: Patrick Goodwin, Good Aquatics and Raymond Menard, Algae Control Canada

Monday March 14, 2022 - 1:00 - 4:30 p.m.

This workshop will provide a comprehensive review of both theory and practice of oxygenation and circulation techniques. Participants will be provided the tools and training to be able to properly select and design oxygenation and/or circulation system to address a particular water quality issue(s).

Workshop #4 - Building a Maintenance Management Plan

Presented by: Owen James and Grant Dixon, Associated Engineering

Monday March 14, 2022 - 1:00 - 4:30 p.m.

Maintenance Management Plans are an important part of extending asset life and meeting the goals of providing a high level of service for water and wastewater facilities. In part 1 of this workshop, we will explore the concepts of a maintenance management strategy, prioritization of critical assets, and developing a schedule and reporting system. In part 2 of this workshop we will develop a maintenance management framework and start developing a plan for a pump house in the Town of Waterville, Alberta.

Workshop #5 - Resiliency Lessons Learned from Natural Disasters and How They Impact Operations

Presented by: Stephan Weninger and Neal Cody, Stantec

Tuesday March 15, 2022 - 8:30 a.m. - 12:00 p.m.

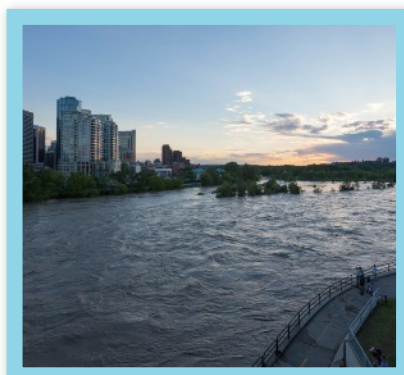
Over the years, disasters have wreaked havoc on utilities. This workshop will outline some of the impacts of recent disasters and what we have learned about our utilities as a result. In conjunction with well-informed risk assessments that incorporate the impacts of climate change, lessons learned provide us with the opportunity to proactively mitigate risks and make infrastructure and operations more resilient.

Workshop #6 - Engineered Hot Taps, Line Stops, Valve Inserts & Freezes - A Comprehensive Look at the Technology

Presented by: Brandon Pater, Pacific Flow Control

Tuesday March 15, 2022 - 8:30 a.m. - 12:00 p.m.

With 50+ year old, under capacity, inoperable or unreliable infrastructure, operators are always looking for ways to keep their infrastructure live and critical downstream clients and processes in operation. At the end of this workshop, students will understand which technology can most efficiently and cost-effectively be used to keep infrastructure live to accommodate downstream work.



****PRE-REGISTRATION IS REQUIRED** - register online at awwoa.ca**

Seminar Registration Information

Continuing Education Unit (CEU) Information for Operators Seminar:

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

Attending Wed. and Thurs: 0.9 CEUs

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 10, 2022**. Anyone who has not been confirmed as registered by March 10 will need to register onsite for an additional \$50 fee.

Cost:

Full Seminar Registration - \$280+ GST
AWWOA Members (Monday - Friday)

Full Seminar Registration - \$395 + 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) - \$65 + GST

The AWWOA and seminar venues will be following the Alberta Restrictions Exemption Program (REP). Visit the Government of Alberta website for more details as well as AWWOA.CA for the health and safety requirements to attend the event.

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, 2022**
Submit to: connect@awwoa.ca

Annual General Meeting Notice

AWWOA's AGM will be held on **Wednesday March 16, 2022**. Join us for Association updates and door prize draws!

Seminar Networking Events

Pub Night

sponsored by **Algae Control Canada**

Date: March 15, 2022 - 6:30 - 10:00 p.m.

Location: Elk & Oarsman, 119 Banff Ave, Banff, AB

Casino Night

sponsored by **Wolseley Waterworks**

Date: March 16, 2022 - 7:30 - 10:30 p.m.

Location: Banff Park Lodge, 222 Lynx Street, Banff, AB

Banquet 2022

Cost: \$65.00 + GST

Date: March 17, 2022 - 7:00 - 10:00 p.m.

Location: Banff Park Lodge, 222 Lynx Street, Banff, AB



Bob Beddow

This years' entertainment is comedian, Bob Beddow!

"Since hitting the live comedy scene in 1996, he has wowed audiences with homespun humour. His story-telling style and easy-going nature bring people into his world."

AWWOA Updates

Charitable Donations 2021

In the last several years we have only met here between the pages of our magazine. It is with great anticipation, that come March 2022 we will finally be able to renew friendships and professional contacts. Our March Operators Seminar will be back in full swing with workshops, presentations and all the other activities we have long missed.



The Water School Project

The only way your charitable donations committee can raise funds is through you, our operators, suppliers and guests. Kathy Calvin said, "Giving is not just about a donation; it is about making a difference." I couldn't agree more. When you contribute to one of our charitable donation activities, you are making a difference in a child and adult's life. Clean safe drinking water means a child does not have to haul water all day but can now attend school. Not drinking contaminated water will save a life, otherwise lost to water borne disease. Imagine half the children in school not being able to concentrate because of stomach cramps and diarrhea. When clean safe drinking water comes to their school or community, almost all children are enjoying and learning. Your donation counts and makes a huge difference in the lives of children and adults in these poorer countries.

Even with all the restrictions due to COVID-19 around the world, our partner, The Water School have actively been supplying clean safe drinking water and sanitation in Uganda and many other third world countries. I would like to remind you of the charitable activities to participate in so we can again help those in need. Many of you enjoy the 50/50 draws. We will again have two 1000 ticket draws. There is the candy guess jar which comes with a watch and wood model. Please also don't forget our silent auction and if you can, we would greatly appreciate any gift or donation.

I look forward to seeing many of you this coming March 2022 at our Operators Seminar. We make a living by what we get, but we make a life by what we give. When we learn we should teach others and pass it on; when we receive, we should pass it on by giving. See you in March.

Doug Thorson
Charitable Donations Chair Person

The Math Corner

WINTER 2022

The green formula sheet tells us that flow (Q) is equal to velocity times the cross sectional area. When given the velocity and area life is easy. That's not life though. Often flowmeters are available and we know the diameter of the pipe so the area can be calculated. That leaves us manipulating the formula to get the velocity.

QUESTION:

If the flow is 12 MLD and the pipe diameter is 365 mm, what is the velocity expressed in the units of m/sec?



David Noack

Answer:

$$\begin{aligned}
 Q &= Vel \times A \text{ so } Q / A = Vel. \\
 12 \text{ MLD} \times 1000 \text{ m}^3/\text{ML} / 24 \text{ hrs/day} / \\
 60 \text{ min/hr} / 60 \text{ sec/min} &= 0.139 \text{ m}^3/\text{sec} \\
 A &= 0.785 \times d \times d \\
 &= 0.785 \times 0.365 \text{ m} \times 0.365 \text{ m} \\
 &= 0.105 \text{ m}^2 \\
 \text{So then: } 0.139 \text{ m}^3/\text{sec} / 0.105 \text{ m}^2 &= 1.324 \text{ m/sec.}
 \end{aligned}$$

The Old Operator

What is Your Anchor in Life, What Holds you Fast?



Doug Thorson

When the storms of life are rattling and trying to bang down your door, what is it that gives you the will to go on, or that inner peace? For some folks, it may be themselves, for others it may be a strict code of ethics, yet for others it may lay in financial security, and for others still it is a higher power than themselves.

What if I suggest to you that you already possess all you need? Sometimes when trouble is at our door, we think we must immediately react when we should really step back and take a moment to analyze the problem. When we fail to first study our problem, sometimes our emotions take over and we are not clearly thinking. The storms of life gain the upper hand and cause us to be tossed and turned by even the smallest wave.

“It is the set of the sails and not the gales that shows us the way to go.”

The set of the sails represents your core belief and character which has more to do with how you allow the storms of life to affect you. The storms of life are the troubles that greet us at the door every day. You can turn and run, ignore them, and hope they will go away, try, and shove them onto some other person, or you can choose to work through them. I say, face your troubles head on. They are usually never as bad as we have initially imagined. We tend to imagine the worst. When we do this, we have already allowed the problem to defeat us.



When you face your troubles head on, think of a seamstress with needle and thread. Carefully and dutifully the needle weaves the thread into a delicate pattern. Imagine the trouble in your life as a needle, you are the thread. Step by step as you work through your trouble your character is being built, just as the needle is weaving a pattern with the thread. The finished garment is your improved character, more resilient than before, better prepared to meet the next challenge. When the needle weaves, the reward is strength of character woven into a better more resilient you. Mohammad Ali put it this way,

“Too many victories weaken you. The defeated can rise up stronger than the victor.”

To do this we must resign ourselves that we will meet every problem head on. In your fight against the storms of life, you must always remain positive. When you dwell on the negative, you give it all the power it needs to defeat you. Be patient. Clear thinking is yours if you can control your emotions. If you lose your patience, you lose the fight.

Sometimes we fear most what we are unsure of, when we are hesitant of the way forward. As you move forward step by step in a positive attack on your problem, in spite of your fears, you have shown yourself the way forward. Victory lies just over the next hill, or wave.

You have everything you need to conquer your problems, step back, study the problem, do first things first, patiently focus on what you want to achieve. What first appears to be a stumbling block can just as easily be a steppingstone, it's all in your point of view, at least that's how I see it.

News from the Field

City of Red Deer Builds a Residuals Management Facility

Over the last five years, the City of Red Deer has been working on the design and construction of a new facility to handle the residuals produced from their Water Treatment Plant. The facility, known as the Residual Management Facility, has been designed to treat the waste produced by the Water Treatment Plant's Actiflo clarification system.

This new process will remove suspended solids and turbidity from the liquid waste streams to an acceptable level for discharge to the Red Deer River. It will also reduce the volume of residual sludge that requires disposal and process it to a level acceptable for landfill disposal.



City of Red Deer Water Treatment Plant and Red Deer River

This project is nearing its end of construction and the crew at the Water Treatment Plant is looking forward to the system coming online and beginning to be able to ensure that the Red Deer River watershed continues to be protected.

Bert J. Miller, City of Red Deer

Red Deer wins Bronze Envision award for sustainability

The City of Red Deer Water Treatment Plant (WTP) Residuals Management Facility (RMF) has earned Envision® Bronze verification for leadership in sustainable infrastructure.

"It is an honour for this project to be recognized as a leader in sustainable infrastructure," said Kingsford Amoah, Environmental Planning Engineer.



City of Red Deer Residuals Management Facility

"Our drinking water and our environment are high priorities for the City and improved treatment will reduce the visible plume and solids sedimentation from the discharge as well as lessen associated impacts on fish habitats."

This project is a proactive step in ongoing upgrades to the water treatment plant and demonstrates the City's environmental leadership and commitment to achieving environmental sustainability.

Achievements of the project include minimizing noise and vibration from plant operations, reduced operational energy consumption and preventing surface and groundwater contamination.

Envision® Awards are available to projects that have successfully completed the Envision verification program offered by the Institute for Sustainable Infrastructure. The project was evaluated based on Envision's 60 sustainability criteria that address major impact areas of quality of life, leadership, resource allocation, natural world and climate and risk.

For more information on how Red Deer's water is treated visit www.reddeer.ca/city-services/water-wastewater--stormwater/water/.

The City of Red Deer Corporate Communications

Alberta Environment & Parks Update

Discipline Specific Training

Happy New Year from the Water and Wastewater Operator Certification team!

Discipline specific training is required for renewals beginning this year. Make sure to become familiar with this new requirement to avoid delays at the end of year thinking you have enough CEU's when you do not.



There are examples in Compliance 365 under the Resource Tab on your profiles. The document is called **Renewal Training Examples 2022 and onward**. Make sure to become familiar with this document.

Certification Renewals and Exams

A \$130.00 renewal fee is required when you renew on time for all the disciplines that you hold. If you do not renew on time and need to reactivate, it is \$130.00/discipline.

Exams sessions are held every two months in 2022. Make sure to apply for your exam as soon as you are eligible and we will do our best to make sure your application is put with the next available exam session processing/approval.

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

NAIT Industry Practicum 2022



Are you planning to hire staff for the upcoming May-August 2022 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, 2022.

If you are interested in participating, please contact:

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

SAIT Industry Practicum 2022



Hire a student for a 4-month practicum in spring/summer 2022 to support your seasonal staffing! SAIT's 1-year certificate program is unique in Western Canada, since our students will have completed two full semesters of applied learning in integrated industrial and domestic treatments, including ABSA Power Engineering 4th class certification.

To graduate, our students require 600 hours of work experience in water treatment, water distribution, wastewater collection and/or wastewater treatment in a municipal or industrial setting.

For more information, please contact:

Lisa Kleebaum, Practicum Coordinator, E: lisa.kleebaum@sait.ca
or SAIT Career Advancement, E: student.employment@sait.ca

Upcoming Training

Check out these upcoming training opportunities:

To register and review the requirements to attend in-person training, visit AWWOA.CA.

February - March - April 2022

Process Control: Intermediate - in Edmonton

February 14-15, 2022 - Cost \$460 (\$560 Non-members) - 1.2 CEUs

Level III/IV Water Distribution Certification Preparation - in Edmonton

February 22-23, 2022 - Cost \$460 (\$560 Non-members) - 1.2 CEUs

Level III/IV Wastewater Collection Certification Preparation - in Edmonton

February 24-25, 2022 - Cost \$460 (\$560 Non-members) - 1.2 CEUs

Pumps & Blowers - in Edmonton

March 28-29, 2022 - Cost \$460 (\$560 Non-members) - 1.2 CEUs

Flowmeter Fundamentals - in Edmonton

March 30, 2021 - Cost \$350 (\$450 Non-members) - 0.6 CEUs

Pumps & Hydraulics - in Edmonton

March 31-April 1, 2022 - Cost \$460 (\$560 Non-members) - 1.2 CEUs

Level II Water Treatment Cert Prep - in Edmonton

April 4-5, 2022 - Cost \$460 (\$560 Non-members) - 1.5 CEUs

Level II Water Distribution Cert Prep - in Calgary

April 4-5, 2022 - Cost \$460 (\$560 Non-members) - 1.2 CEUs

Membrane Treatment in Wastewater - in Edmonton

April 7-8, 2022 - Cost \$460 (\$560 Non-members) - 1.2 CEUs

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 14-18, 2022

Annual Operators Seminar

Banff Park Lodge

Banff, 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 Certification Preparation
- Level II Water Treatment Cert Prep
- Level II Water Distribution Cert Prep
- Level II Wastewater Treatment Cert Prep
- Level II Wastewater Collection Cert Prep
- Level II/IV Water Treatment Cert Prep
- Level III/IV Water Distribution Cert Prep
- Level III/IV Wastewater Treatment Cert Prep
- Level III/IV Wastewater Collection Cert Prep

PM 41796530

Alberta Water & Wastewater
Operators Association

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