



Speaker Biographies and Abstracts

Tuesday November 27, 2018

Presentation Title: Do you think like a leader?

Presented by: Glenn Galey & Doug Mauger



Glenn has over 40 years of experience in the area of teaching and curriculum development. Over the past ten years, Glenn has been with the School of Instructor Education (Vancouver Community College) as an instructor and Department Head. Glenn is also a current sessional instructor with Simon Fraser University, delivering both undergraduate courses (Evaluation of Learning) and graduate level courses in their M.Ed (Masters of Curriculum and Instruction) programs on a variety of topics, including program evaluation and program implementation. Glenn is also co-founder and consultant with Think Differently



Doug is the principle co-founder of Think Differently and has over 35 years of experience in the area of teaching and curriculum and instructional design. Doug brings his passion for creating learning environments into all aspects instructional design. Doug has extensive experience not only teaching but also applying models like ADDIE, DACUM, Agile Design, and 70-20-10. One of his aims as a curriculum consultant is to help organizations to create learning environments and material that bring about changes through active learning strategies and assessment as learning.

Abstract:

This energizing session will be led by Glenn Galey and Doug Mauger, both experienced, engaging and downright fun instructors who have delivered a number of BCWWA courses over the years.

Doug and Glenn will be talking about practical leadership techniques all operators can use, whether in a managerial capacity or in everyday working life.



Presentation Title: Jar Testing - Tips, Tricks and the Cheater Method

Presented by: Mark Carey, Waterhouse Environmental Services



Mark Carey has a B.Sc. in Chemistry from the University of Victoria and has over 8 years of experience working in the municipal water and wastewater environment. Servicing the better part of Western North America, Mark travels extensively to provide on-site technical support to many plants in the municipal sector.

Abstract:

During this presentation we will discuss everything from jar testing theory, coagulants vs. flocculants, the importance of efficient organic removal, monitoring techniques & equipment and how to set up and run a jar test the traditional way... as well as the "Cheaters Way" to save time in the plant. We will have a live demonstration to you visualize the entire process and help show what your ideal results should be.



Presentation Title: Contaminants of Emerging Concerns (CECs): Implications for Water and Wastewater Systems

Presented by: Lalith Liyanage, Stantec



Dr. Lalith Liyanage is a Principal with Stantec Consulting Ltd. He has 28 years of experience in the water and wastewater treatment. His experience in water wastewater include infrastructure design, operation and troubleshooting. In addition to being a practicing engineer, he has published large number of publications in the area of water and wastewater treatment. A regular speaker of workshops and conferences, Dr. Liyanage is also working as an operator trainer of various water and wastewater operation related subjects for more than 10 years.

Abstract:

More and more public are being made aware of the contaminants of emerging concerns (CECs) and their potential impacts on the human health and the environment. Over the years, we have been accumulating a significant knowledge of and about these CECs, however a significant amount of mis-information or information taken out of context exists compounding the public perceptions about the CECs.

Water wastewater operators are at the fore-front of the communities & stakeholders who are asking questions and demanding answers from water and wastewater operators. As public trust on the water wastewater infrastructure operation is critical for the industry, it is imperative that water and wastewater operator personnel be aware of the status of the scientific understanding of the CECs so that not only they can plan to mitigate potential impacts but also be able to respond to public inquiries.

This 1 hour presentation covers:

- Key types and major groups of CECs
- their occurrence in water sources, drinking water, treated wastewater, and biosolids
- fate of key CECs during water and wastewater treatment and biosolids management
- what operators can do to minimize CECs in the environment
- planning tools such as source control and public education



Presentation Title: Construction permits and watermain breaks - Best practices and guidelines**Presented by: Michael Wu, Vancouver Coastal Health**

Michael Wu is a Professional Engineer in British Columbia. He has a M.Sc. in Public Health Engineering from the Imperial College and a Master of Engineering Degree in Environmental Engineering from UBC. He has worked in municipal governments and health authorities, in areas of solid waste management, rainwater management, water supplies and swimming pool design. Michael was the Public Health Engineer in Northern Health and is the Public Health Engineer for Vancouver Coastal Health. He is responsible for issuing construction permits for water systems and public swimming pools as well as providing engineering support in these areas to health inspectors in the field.

Abstract:

Under the Drinking Water Protection Act, any construction on a water supply system requires a construction permit from the Health Authority. This presentation will outline the general requirements for obtaining a construction permit. The approval process and information required for the permit will be discussed. Emergency repair like watermain break does not require construction permit. Good engineering practice should be followed to safeguard public safety. Guidelines recommended by Vancouver Coastal Health will be presented.



Presentation Title: Passive Membranes for Drinking Water Treatment in Small and Remote Communities**Presented by: Pierre Bérubé, University of British Columbia**

Dr. Pierre Bérubé is a Professor in the Department of Civil Engineering at the University of British Columbia. He has over 25 years of research and consulting experience dealing with technologies for water quality assessment and treatment. He is internationally recognized for his work on membrane technologies, with over 100 journal publications and conference proceedings on the subject. His work has generated new research tools, and in partnership with industry, new processes and products that have become standards in the membrane community.

Abstract:

Ultrafiltration membranes are generally considered to be too expensive and/or complex for drinking water treatment in small and/or remote communities. However, recent studies demonstrated that stable operation could be achieved without the need for any physical or chemical cleaning when operating at a low permeate flux, significantly reducing the cost and complexity of membrane systems. The ability to sustain a stable permeate flux is enabled by the microbial community that can establish itself on the membrane surface. These communities promote the formation of a porous foulant layer on the membrane surface and degrade some of the retained material. To prevent the excessive accumulation of material in the system, we developed a gravity based system that does not require any mechanical components, such as pumps or blowers, to provide air scouring.

The passive (i.e. microbial and gravity base) system is ideally suited for use in small and remote communities. In Canada alone, there are over 30,000 communities that are considered small and/or remote. We are now in the process of developing a commercial passive membrane system, in partnership with Filterboxx, that will be piloted in a small First Nation community on Vancouver Island.



Presentation Title: Compare and Contrast - Gravity and low Pressure Sewer Systems**Presented by: Christine McTavish, John Brooks Company**

Christine McTavish is a municipal pump specialist for John Brooks Company Ltd., working with engineers and municipalities throughout BC to provide safe and effective sewage collection systems. Using the latest in pump technology, Christine believes in simplifying the collection process while lowering life cycle costs and reducing confined space risks.

Christine has been involved with BCWWA for the past three years, teaching and presenting to bring new ideas and process discussions to sewage collection workers. Her passion is to make collection easier and less maintenance-intensive.

Christine studied construction project management at the University of Alberta, finishing first in her class and earning the highest GPA award from the Edmonton Construction Association.

Abstract:

Today's municipal sewer infrastructure is an interesting mix of old and new collection systems. Land previously left undeveloped has become valuable and desired in today's housing market, presenting the opportunity to evaluate the best way to approach sewer in any particular area. Older systems are in varying states of aging and require retrofit work. New technologies provide opportunities for wastewater operators to learn alternate methods and work with different types of equipment.

The two basic approaches, traditional gravity sewer and low-pressure sewer systems, have both been used effectively throughout British Columbia and worldwide. Some municipalities have utilized both within their larger sewer network. We will discuss when each is appropriate and what impacts each method has on construction, costs, and maintenance. We will explore the equipment you as an operator will see and discuss how it is maintained and by whom. Participants will take away a broader understanding of the range of methods and equipment available for new installations or retrofitting aging stations.



Presentation Title: Chlorine Residual Measurement Techniques

Presented by: Brendan Whelan, Cleartech



I've been working with ClearTech for the past 7 years, serving BC municipalities with chemicals and equipment for water and waste water treatment. When I'm not at work you used to be able to find me out rock climbing, but now that I have kids I spend a lot more time at the park.

Abstract:

Reported chlorine residual is only as accurate as the measurement. I'll give an overview of different ways chlorine residual is measured, details on how each different method works and what confounding factors may skew results. I'll also provide a quick way to calculate what your expected dosage should be to reach a desired residual.



Presentation Title: Water Utilities during Crisis- the Fort McMurray Interface Fire from the Water Operator's Perspective

Presented by: Lane Simon, Wood Buffalo Regional District



Lane is an experienced operations professional who has worked for leaders in the pulp and paper industry, such as Tolko and Fabco. His first interaction with the water and wastewater sector was when he became involved in the effluent treatment plant at a pulp mill. In 1998, Lane became a Wastewater Treatment Plant Operator for the City of Merritt. Later, he worked for the Comox Valley Regional District. He is currently employed by the Regional Municipality of Wood Buffalo, Alberta.

Abstract:

Lane will be sharing his moving firsthand account of water operations during the 2016 Fort McMurray wildfires, when he stayed behind with first responders to ensure that the water stayed on. He covers the important lessons learned, evacuation, and post fire challenges, including:

- communication best practices
- emergency management plan and annual revision
- emergency preparation & specialized people
- infrastructure management



Presentation Title: Solids Handling in Lift Stations

Presented by: Deirdre Moran and Mike Donnelly, Waste 'n WaterTech



Deirdre is an Engineer in Training working with Waste 'n WaterTech, a leading manufacturer's representative of water and wastewater treatment technologies in Western Canada. She studied mechanical engineering and has experience with a variety of different pumping and process applications in the water and wastewater industry.

Mike Donnelly is the Canadian Sales Manager with Vaughan Company. Vaughan is a pump manufacturer well known for their unique Chopper Pump and hydraulic mixing technologies. Mike has worked in the pumping industry for over 30 years in a wide range of applications. Based in Langley, BC

Mike has travelled the world with his current and past employers and has vast experience with pumps of all sorts. Mike has experience teaching and offers centrifugal pump maintenance courses in his spare time.

Abstract:

This presentation will provide a review of centrifugal pumps including different styles and configurations available. With relation to lift stations and solids handling, submersible style pumps will be the focus of discussion. Common issues with solids handling in lift stations will be discussed, along with methods for troubleshooting and design and operation recommendations. Tips on preventative as opposed to reactive maintenance will be provided in conjunction with examples from case studies.





**Operator Continuing Education Day &
Trade Show**
November 27, 2018

**Anvil Centre
New Westminster BC**

Presentation Title: Driving the Digital Enterprise in the Water Industry

Presented by: Vincent Brocard, Siemens Canada

Vincent Brocard, Manager of Process Instrumentation, Siemens Canada. Vincent has been in this role in Canada for about 1.5 years, with 16 years experience at Siemens Head Quarters in Germany prior to that. He is very knowledgeable about not only the products, but also the application and implementation of systems and as for this topic: Digitalization and Industrie 4.0.

Abstract:

By creating the right applications, this data could be analyzed and converted into valuable information. What if you could easily analyze all the pressure transmitter in a plant, for the last 10 years? And cross it with your product quality, or system failure? The data is available, and much more will become available.



Presentation Title: Inline Work without Shutdowns

Presented by: Brandon Pater, Pacific Flow Control Ltd



With a decade of experience as a Project Manger, Superintendent and Field Engineer on large scale projects such as Sea to Sky Highway, Port Mann Highway 1, South Fraser Perimeter Road and Tsawwassen Mills Mall Brandon brings a global project look to the world of flow control techniques.

As one of the owner of Pacific Flow Control Ltd, Brandon acts as the go between for the Municipalities, Project Engineers and Manufacturers Engineers in the design and implementation of standard and specialty hot taps, line stops, valve inserts and engineered fittings.

Brandon brings a strong technical and practical knowledge to the world of engineering and construction within live water and sewer infrastructure. He knows what does and doesn't work as well as what to watch out for.

Abstract:

Have you ever had to work on critical underground infrastructure that could not be shut down? Ever wondered how to replace a PRV, lift or booster station, bypassing or leaking valves, dead end a line or remove a blind flange without interrupting the operation of your system?

Well let's figure this out!

This session will give you a general overview of three different technologies. Hot tapping, line stopping and valve insertion. Then we'll review 4 - 6 local case studies and discuss how they were best able to work inline without shutdown.

1. Case Study 1 – Langley WWTP – 24" RCP Wall – Hot Tap
2. Case Study 2 – Port Moody – 24" Blind Flange Hot Tap
3. Case Study 3 - Delta – Hot Tap & Line Stop on Hyprescon C301L
4. Case Study 4 – YVR – Line Stop and Full Bypass on HDPE Pipe
5. Case Study 5 – Port McNeill - Valve Insertion and Bypass Taps
6. Case Study 6 – City of Victory / Calgary – Pipe Lining Project

Throughout the class we will talk about safety and quality control concerns and requirements in carrying out this work. We will also discuss typical "tapping traps" and the best way avoid and recover from them.



Presentation Title: Motor & VFD Reliability Matters

Presented by: Aaron Johnson, Spartan Controls

Abstract:

Variable Frequency Drives (VFDs) are applied to pumps, fans, and other rotating equipment for energy savings and improved process control in Water/Waste Water applications.

Although VFDs are often treated as a ubiquitous commodity, operations and equipment reliability are important when selecting a VFD.

This workshop will present fundamentals, best practices, and practical examples for application of VFDs, to realize the expected process benefits, operational uptime, and life-cycle efficiency.

Key topics covered in this session;

- Implications & Solutions for Motor Reliability, Power Quality, Operational Uptime
- Selecting control methods for Performance
- Process & Equipment Protection Features
- Operations & Maintenance Tools: VFD Health Monitoring and Issues Resolution



Presentation Title: Where the rubber hits the road - water and wastewater treatment advancements that actually make an operator's life easier

Presented by: Chris Howorth, Veolia



Chris Howorth is a Professional Engineer in BC with over 20 years experience working in water and wastewater treatment.

He graduated from the University of Plymouth in England a long time ago with a bachelor's degree in civil engineering.

He has worked for both private and public sector organizations, in Europe and in Canada.

He is currently responsible for Veolia Water Technology's municipal business in British Columbia and Alberta, based in North Vancouver.

Abstract:

The challenges treatment plant operators face aren't getting any easier to deal with. Nobody likes paying tax, so budgets are often tight. Regulators continuously seek to improve standards, raising the bar we're aiming for. And climate change is making our water cycle less stable, resulting in increasingly extreme conditions to be overcome.

The tools operators have must be up to these challenges (not make them worse!). Key criteria include:

- Reliability
- Simplicity
- Robustness
- Performance
- Ease of maintenance

This presentation reviews some recent developments in water and wastewater treatment technologies, and presents some case studies demonstrating how these technologies stepped up to help operators overcome the challenges they faced.

