Speaker Biographies and Abstracts

**Keynote:**

**Presentation Title:** Water and Wastewater Treatment Plant Simulation: The Path Forward in Hands-On Operator Training  
**Presented by:** Spencer Snowling – Hydromantis Environmental Software  
Spencer has enjoyed working on many interesting and challenging simulation projects during his 20 years as part of the product development team at Hydromantis Environmental Software Solutions. He’s had the opportunity to apply advanced simulation technologies to process troubleshooting and optimization projects at municipal and industrial wastewater treatment systems around the world. Spencer also enjoys a keen interest in the development of simulation-based teaching tools, and using them to expand the understanding of wastewater treatment processes through virtual play and problem-solving. Spencer is also an adjunct professor at McMaster University in the Dept of Civil Engineering.

**Abstract:**  
Spencer Snowling will be discussing the history of simulation technology in the wastewater industry, including the evolution of simulators as operator training tools. Similar to the way airline pilots are trained in simulated flight decks, an increasing number of water resource facility operators are using simulated treatment facilities to explore and expand their knowledge. Virtual treatment plants provide a safe and engaging environment to experiment with operational issues in the activated sludge process. Spencer will share experiences from several years of WEF Operations Challenge competitions and WEFMAX training programs to highlight the fun and successful application of simulation technology in educational environments.

**WATER TREATMENT STREAM**

**Presentation Title:** Efficient Water Disinfection for Small Systems using UV  
**Presented by:** Babak Adeli – Acuva Technologies  
Babak gained extensive research and engineering expertise through his nearly decade-long experience in academia and the industry. His experiences span several aspects, including modeling, simulation, and control, as well as nanofabrication of semiconductors, electrochemistry and optoelectronics. Currently, Babak is responsible in research and development of Acuva products through virtual prototyping (optical and integrated simulation of water disinfection systems), microbiological performance evaluation, and optical characterization of UV-LEDs. Babak has a PhD in Chemical and Biological Engineering from the University of British Columbia, where Acuva’s patented technology was first developed and validated. He has published a number of research articles in prestigious peer-reviewed journals, and received several national and international awards, including the 2016 IC-IMPACT Excellence in Collaboration & Creativity.

**Abstract:**  
Ingesting microbiologically contaminated water is among the most common sickness routes for people living off the grid. Ultraviolet radiation is the most effective water disinfection method. However, conventional UV lamp-based water purifiers cannot be utilized for off-grid applications due to their electrical power requirements and frequent maintenance. On the other hand, ultraviolet light emitting diodes (UV-LED) based water treatment systems enable low energy consumption and maintenance-free operation.
In this presentation, we elaborate the advantages of UV-LED water treatment systems and present the results of several case studies for benchmark microorganisms, such as E. coli, Total Coliform, T1UV and MS2. Further, effectiveness of UV-LED water treatment devices will be explained through case studies on the off-grid disinfection of Grand River and Laurel Creek. It is shown that UV-LED systems operated on 15VDC can provide microbially safe drinking water from contaminated water sources, which are identified unsafe not only for drinking, but also for recreational activities.

Presentation Title: On Line Help Centre for Small Systems
Presented by: Kalpna Solanki – Environmental Operators Certification Program (EOCP)

Kalpna Solanki has been the CEO of the EOCP for almost four years, and it has been quite a roller-coaster ride. But she likes roller-coasters, so that’s ok! Kalpna is passionate about water – ice in cocktails, water to drink, and water to play in (swimming and outrigger paddling). She is also a founding partner and board director with Operators Without Borders, and is about to embark on Disaster Management Supervisor training with the Canadian Red Cross.

Abstract: TBC

Presentation Title: Dealing with the new Maximum Acceptable Guideline (MAC) for Manganese
Presented by: Deanne Mould – BPI Pure Water

Deanne Mould, B.A., has been the Marketing Manager and technical writer for BI Pure Water for 7 years. BI Pure Water is a BC manufacturer that has been providing custom water and waste treatment systems to BC communities for more than 20 years, with hundreds of systems in Western and northern Canada.

Abstract:
In this presentation, Deanne Mould will take a look at a current case study of a community using a test skid to pilot test for Manganese removal to meet recent increased Canadian Guidelines for Drinking Water Quality. Deanne will also look at how Greensand systems are performing in the communities of Powell River, Mill Bay, Vancouver Island, and Watson Lake, YK. She will review sampling Greensand media to see if it’s exhausted, and see how and when to replace media.
Presentation Title: Small Water Systems with Shallow Wells  
Presented by: Freda Leong – AESL

Freda is an infrastructure engineer with over 20 years’ experience with feasibility studies, design and construction related to water supply, treatment, storage, and distribution, sewage collection, and residential and community roads and drainage systems. She is currently the Manager for First Nations Infrastructure and has been working with First Nations communities since 2005. Freda loves working with her communities to come up with solutions that meet their needs and ensure long-term solutions are put in place.

Abstract:
Associated Engineering was retained by the Bridge River Indian Band to upgrade the drinking water systems for two of their communities located in the Fraser Canyon area. The area is known for dry and hot summers, and finding adequate drinking water supplies is always challenging. This presentation walks through some of the challenges that are common for many small water systems in the area, and how these challenges were overcome, including:

- Finding water in an area where supply is scarce or of low quality
- Working out treatment and water supply protection for wells classified as GARP/GUDI
- Upgrading existing infrastructure that is either undocumented or in an unknown condition
- Adding alarms and a monitoring system
- Minimizing confined space entry infrastructure
- Troubleshooting problems with the older infrastructure that revealed themselves when the new infrastructure was added

Presentation Title: A New Approach to Filtration Using Ceramic Ultra Filtration  
Presented by: Thomas Munding – WSP

Thomas Munding is a Senior Process Engineer with over 25 years of experience providing expertise on the design of clarification, flotation, filtration and membrane systems. His core strength is ultrafiltration/microfiltration (UF/MF) and reverse osmosis (RO) membranes which are typically preceded with clarification and filtration stages. Thomas holds both a Bachelor’s and Master’s degree in Mechanical Engineering from McMaster University. He has extensive experience with process controls, membrane systems, RO, potable water treatment systems, development of piping and instrumentation diagrams, and commissioning of water treatment plants.

Abstract:
Ceramic membrane ultrafiltration process has been selected for two new water treatment plants (WTPs) in British Columbia, making them the first municipal WTPs in Canada using ceramic membranes for potable water treatment. The first WTP for the Village of Granisle is near completion of construction with two ceramic membrane trains (Purifics M-36 CUF platforms), each rated for 955 m3/day filtrate production. The second WTP for Bowen Island Municipality will be constructed in 2020 and will have two ceramic membrane trains (Purifics M-36 CUF platforms), each rated for 1200 m3/day filtrate production with allowance for future WTP expansion capacity to 3600 m3/day. The Bowen Island WTP will include a sludge dewatering recovery unit producing residuals sludge cake suitable for land disposal making this a ‘zero liquid discharge’ facility. This presentation will use these two WTPs as case studies to describe the detailed ceramic membrane treatment process and their various features and benefits.
Presentation Title: Best Practices to Deal with your Water Quality Data – Interactive Session
Presented by: Brian Kut – WaterTrax

Brian Kut is passionate about the water industry. He has spent the last 6+ years in the water and wastewater industry speaking with industry specialists, attending industry events, and gathering industry best practices to apply to his role as Customer Success Manager. He’s traveled through North America assisting utilities with data management solutions to expedite data collection, consolidation and reporting in order to satisfy provincial, state, or national regulatory standards.

Abstract:
Brian’s sessions will serve as an introduction to modern alternatives to pen and paper or Excel-based data management. We’ll walk through how WaterTrax can be used to collect, consolidate, and report on sampling result data for the separate drinking water and wastewater streams. The presentation will focus primarily on field or in-plant data, but will also touch briefly on contract lab data as well. The objective of this presentation will be to highlight the pros and cons of the water data collection solutions available today.

WATER DISTRIBUTION STREAM

Presentation Title: Leak Detection: Meaningful Results that Pinpoint Leakage in your Distribution System
Presented by: Dan Leger – Martech Inc.

Abstract: TBC

Presentation Title: SCADA 101 for Operators
Presented by: Tom Dunn – WSP

Tom Dunn is a SCADA and communications specialist with WSP Infrastructure Automation group. Tom has a Senior Engineering Technician’s Certificate from the British Columbia Institute of Technology (BCIT). He is a member of the British Columbia Water and Waste Association (BCWWA) where he serves on the BCWWA SCADA & IT committee and the International Society of Automation (ISA). Tom has been with WSP (formerly Opus/Dayton & Knight Ltd.) since 1999 and is involved in Regional Wide Supervisory Control and Data Acquisition (SCADA) systems and wireless communications projects. Prior to WSP, Tom worked for 18 years with Motorola Communications and specialized in integrating RF telemetry systems designed and built by Motorola’s Fixed Data Group. He retired from the Canadian Naval Reserve as a Naval Radio Operator and Chief Petty Officer 2nd Class. He is also an advanced amateur radio operator (VE7TD) and a member of the North Shore Emergency Communications Team with Emergency Management BC (EMBC).

Abstract:
During this presentation, we will briefly touch on what comprises a basic SCADA system. A basic system will have one or more PLC or RTU controllers that gather data from the field instrumentation, use logic to assemble the data, and possibly make control decisions locally. Data is then sent back to a host from each site over a communications channel. The host computer with HMI software running on it will present the data on screens for operator action. Other software will send alarms to operators and may allow remote viewing of the site data. Historical and Alarm data is logged on the Host computer and could generate historical graphs of changing data. The remote controller will have logical programming based on “functional descriptions” of the site PLC/RTU. There are a number of different programming language which we will mention and briefly describe.
Presentation Title: A Meter Installation Case Study: Tricks & Traps of Vancouver’s Meter Program
Presented by: Neal Klassen – City of Vancouver

Neal Klassen is an expert in developing and implementing potable water conservation and efficiency programs. He has a Master’s degree in Environmental Education and over 23 years of water management experience in private companies, as an owner of a consulting firm, and in municipal government. Klassen is perhaps best known for his work with the City of Kelowna water conservation program. He was also the public education coordinator for the Columbia Basin Water Smart program, which was the largest integrated water conservation program in the province. For many years, Klassen was the author of Conservation Corner, a regular column in BCWWA’s Watermark magazine. Klassen is now a Policy Analyst for the City of Vancouver, responsible for residential water conservation and water metering.

Abstract:
The City of Vancouver currently meters single family homes on properties larger than 0.4 acres, new homes, and homes undergoing major renovations. While all meter data is good data, the water consumption at these homes is skewed and does not represent the city’s remaining 70,000 unmetered single-family homes. In order to get an idea of consumption at an average Vancouver home, the city installed water meters on a random sample of 300 homes in 2017. To get a true idea of their consumption, these homes remained on the flat rate for water and no consumption information was provided to the homeowner, with the exception of homes with egregious leakage.

This presentation is about that pilot program: the operational challenges of retrofitting existing homes with a water meter, and the somewhat surprising results of the consumption analysis.

Presentation Title: Setting Up and Managing an Effective Backflow Prevention Program
Presented by: Jeff Blair – Barclay Sales

Jeff Blair is the president of Barclay Sales, an agency representing manufacturers in Western Canada for over 48 years. He has been representing Conbraco, a division of Aalberts Industries for over 20 years. Conbraco is one of the manufacturers of backflow preventers used to prevent cross connection. One of the original members of the Cross Connection Control Committee when it was formed in the 90’s, Jeff was involved in the promotion of setting up programs to the provincial government and to cities across BC.

Abstract:
Cross Connection prevention is a requirement set out by the code when new buildings are built, but if no one maintains the backflow preventors, the chance of cross connections into the water purveyor systems are high. A method to track and monitor the backflow preventors is needed to protect the purveyor from potential liabilities. This short presentation will give an overview on what a program can look like, why it is needed, and examples of different types of programs in our province.
Presentation Title: Cellular Meter Reading: Turn Your Data into Proactive Intelligence – Interactive Session
Presented by: Dennis Plican – ICONIX Waterworks

Dennis is responsible for the strategic account development and sales of Badger Meter water meter and AMI/AMA sales in Western Canada. He has more than 15 years of experience with AMI/AMR and water meter product sales, and provides support for technical issues for both external customers and internal personnel. Dennis has been instrumental in the successful sale and deployment of Sensus and Badger Meter AMA, AMI, AMR and cellular AMA solutions. Some key projects include the City of Weyburn, City of Surrey, Town of Okotoks, City of Prince Albert and City of Leduc. With these solutions, he has been responsible from the RFP stage, contract, start-up, project management, and training of staff. He also works closely with ICONIX project managers during implementation of the AMA, AMI, and water meter installations.

Abstract:
Fast, easy access to powerful information is imperative for utilities. You need it. Your customers expect it. And increasing government regulations demand it. The AMA managed solution from Badger Meter brings a new level of utility-optimizing information to light, combining the power of intuitive software with proven Cellular technology to provide greater visibility and control over management of your water meter system. Cellular endpoints utilize LTE-M technology that delivers data across existing cellular and future 5G networks without ever skipping a beat. They communicate with the encoder every 15 minutes and capture readings and meter status information. At a predetermined interval, the endpoint broadcasts readings, status, and event data via the cellular network, and the information is captured and analyzed in the hosted AMA software. The hosted AMA managed solution is engineered to utilize endpoints with cellular modems connected to each water meter to send data through the existing cellular network, and as such, proprietary fixed network data collectors or repeaters are not necessary. The only required hardware for the hosted AMA managed solution is the Cellular endpoints for all meters/encoders in your system.

Presentation Title: Control Valve Maintenance and Repair – Interactive Session
Presented by: Jerry Ponikvar – Singer Valve

Jerry Ponikvar is the Canadian Regional Sales Manager for Singer Valve. Jerry has over 25 years’ experience in the water and wastewater industry designing, building and commissioning water treatment and filtration systems for industrial and municipal applications. He is currently a registered Professional Engineer in Ontario and graduated from the University of Waterloo with a Bachelor of Science degree in Mechanical Engineering. He later studied at the University of Toronto and received his Master’s degree in Business Administration. Over the past two years, Jerry has conducted Control Valve training seminars to Engineers and Operators across Canada.

Abstract: TBC
WASTEWATER COLLECTION STREAM

Presentation Title: The Latest in Distribution Sampling and Analysis Equipment – A Hands-On Session
Presented by: Jeff Spencer – BI PureWater

Jeff Spencer, B.Sc., is the Sales Manager (Technical Sales) for BI Pure Water. BI Pure Water is a BC manufacturer that has been providing custom water and waste treatment systems to BC communities for more than 20 years, with hundreds of systems in Western and northern Canada.

Abstract:
An opportunity to look at equipment that can be used for continuous Sampling and Analysis of raw and treated water and/or waste/water. Sampling and Analysis can be used to improve the performance and efficiency of a treatment process. Process data, obtained from continuous monitoring and analysis can be used to confirm consumption rates of process inputs (consumables) to better establish budgetary forecasting.

Presentation Title: What You Need to Know About Sewer Maintenance and Video Inspection – Interactive Session
Presented by: Rosa Hawkes – ABC Pipe Cleaning Services Ltd.

Abstract: TBC

Presentation Title: Impacts of Flow Velocities and I/I in Wastewater Collection Systems
Presented by: Darcy Dragonetti – Dragonetti Group

Having served the public for over 3 decades, Darcy Dragonetti is a highly accomplished industry leader in the area of Public Operations. As a registered Applied Science Technologist in BC and Alberta, Darcy has worked in numerous operator and managerial positions throughout Western Canada, including leadership roles in water and wastewater operations, solid waste and sustainability, eventually concluding a very successful career as the Regional Director of Environmental Services before retiring from the public sector after nearly 33 years of service. Being long since involved in developing and delivering training programs to help operators achieve provincial certification in both the water and wastewater fields, Darcy remains focused on operator education as founder and principal instructor of the Dragonetti Group, Public Operations Training and Consulting Services. Darcy now makes his home in Vancouver, BC enjoying family and friends along with his wife Linda and their golden retriever Grace Kelly.

Abstract:
Inflow and Infiltration (I&I) can have a tremendous impact on our ability to move wastewater through a typical gravity flow collection system. The portions of wastewater discharge from domestic, commercial, industrial, and institutional use – along with incoming volumes of inflow and infiltration – will be considered in this presentation, arriving at the total amount of water to be conveyed to the plant for treatment. We will also review flow velocity limits and those operational influences that result in the sufficient movement of liquid and solids within the piping network to ensure peak flows are well-contained.
Presentation Title: WorkSafe BC – Guidance on Revising your Confined Space Program to Meet New Requirements
Presented by: Geoff Clark – WorkSafe BC

Geoff Clark is a Senior Occupational Hygienist at WorkSafe BC. He is a Certified Industrial Hygienist (CIH), a Registered Occupational Hygienist (ROH) and holds a Masters degree from the University of British Columbia. Geoff has conducted thousands of assessments in many areas of occupational hygiene, including asbestos, lead and silica exposure, mould contamination and confined spaces. He is a chief author of the "Safe Work Practices for Handling Asbestos" book, the "Safe Work Practices for Handling Lead" book and the confined spaces in agriculture booklets. His main focus – at present – is to help prevent workers from contracting occupational diseases.

Abstract:
Confined spaces are not the type of places in which people normally work. The risk of an accident is greater and minor mistakes can have major consequences. Eighteen workers have died in confined spaces in B.C. since 2000 and many others have been injured. For any storm or sanitary sewage system there are many hazards that can be encountered, including engulfment or immersion, exposure to toxic gases or vapours, oxygen deficiency and flammable atmospheres. Workers must be protected from these hazards while working in confined spaces. One of the challenges in sewer and wastewater systems is to isolate the worker from the hazards. Traditional methods, such as disconnecting or blanking the piping won’t work or are not practicable. In this session, we will be discussing these issues and describing alternate ways in which workers can be protected.

Presentation Title: Best Approaches to Dealing with Lift Station Maintenance and Failures
Presented by: Pat Balducci – City of Langley

Pat Balducci has over 22 year’s experience working in municipal water and wastewater, all for Langley City. For the last 10 years, he has served as their senior operator in water distribution and wastewater collection. He has developed and oversees the maintenance program for both utilities. He has worked recently in updating the city’s safe work procedures for confined space entry and wet well work.

Previously, he was in the role of Acting Superintendent of Public Works from 2008 – 2010. He holds his EOCP Level 3 in Water Distribution and Level 3 in Wastewater Collection.

Abstract:
In this presentation, Pat Balducci will cover the importance of a solid maintenance program, keeping good maintenance records/log books, sustaining consistency within your maintenance practices, costly repairs and maintenance fails, emergency planning, and station isolation planning.
Presentation Title: Dealing with Odour Control in your Collection System  
Presented by: Mark Carey – Waterhouse Environmental

Mark Carey has a Bachelors in Chemistry from the University of Victoria, and has been working in the municipal sector since 2007 in a variety of roles. Since 2016, he has been working with Waterhouse in a technical sales position, helping diagnose and solve unique treatment issues in both water and wastewater applications.

Abstract:
Have you ever wondered why some parts of your collection system smell, while others remain odour-free? This presentation will simplify the main parameters affecting odour formation, explore different treatment options and explain the consequences of generating these toxic gases in your sewer. Data from real world trials in BC will be shown, and we will share the lessons learned from each of them to help make our treatment options more efficient in the future.

Presentation Title: Getting the Best Control and Performance from your Lift Station  
Presented by: Aaron Johnson – Spartan Controls

Aaron Johnson has been providing industrial control & electronics solutions over 18 years, with a passion for collaboration with his clients for mutual success. His experience includes OEM machinery, product development (including a deal on Dragons' Den), and many successful pursuits throughout BC & US industries. He has served in a variety of industries, including marine, mining, engineered woods, pulp & paper, food & beverage, and municipal water & wastewater. Aaron is currently an Account Manager, Process & Infrastructure with Spartan Controls Ltd, based in Burnaby, BC.

Abstract:
Variable Frequency Drives (VFD) are now common place in Water & Waste Water Applications on pumps, fans, and compressors. Generally VFDs are deployed for improved process control and energy efficiency; however, there are several considerations to be aware of for equipment reliability. Modern VFDs have advanced features for equipment protection, detailed diagnostics, and detailed predictive health monitors. These features can increase operational uptime and reduce maintenance costs, but are often overlooked or not taken advantage of in implementation. This presentation will explore the benefits and practical considerations of VFDs for operations & maintenance reliability.

Presentation Title: Wastewater Collection System Flushing: A Better Way of Taking Care of “Business” – Interactive Session  
Presented by: Ken Billingham – KEG Technologies Inc.

Ken Billingham is the International Product Specialist for KEG GMBH, a German manufacturer of highly efficient pipe cleaning tools and camera systems and KEG Technologies Inc. the North American distributor for these products. His responsibilities include customer and reseller support for all of Canada, Australia and New Zealand as well as the Western United States. The many years of experience, as well as the diverse knowledge of the many different collections systems throughout his area of responsibility are instrumental in helping him find solutions for the many
challenges his customers regularly face. Born in Calgary, Alberta, he was raised in Quebec and currently lives in Abbotsford, BC with his wife Judy, who often travels with him on his many extended trips.

**Abstract:**
This presentation will be beneficial to operator, supervisor, manager and business owners alike as we will explore the relationship between flow and pressure and how they affect each other. Nozzle designs will be discussed, as well as how matching a nozzle to the task can help improve efficiency. We will talk about nozzle tiers and what that means, as well as a close look at “The Blown Toilet Syndrome” and ways to reduce or even eliminate this unpleasant side effect of pipe cleaning.

Finally, we will examine cleaning methods and how it is possible to increase productivity and reduce maintenance and costs with a few simple changes to the way we approach the task.
Abstract:
This presentation intends to deal with these 6 biggest component areas of treating high strength wastewater: B.O.D., T.S.S., D.O., Phosphorous, Nitrogen, and Pathogens (E. coli, total coliform, etc.). As a group, we will determine the most important components and discuss those. We will discuss how items are inter-connected and can affect each other, as well as simple but effective solutions to high strength wastewater. Effective wastewater management should include a simple inexpensive annual maintenance program that is proactive and eliminates the source of the problems, instead of a reactive approach that includes call-outs, expensive fixes, regulatory concerns and operator anxiety. Feedback and input based on your working knowledge will be encouraged and contribute to a successful learning experience for all.

Presentation Title: Moving from Secondary to Tertiary Wastewater Treatment: What Really Changes?
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 with a bachelor’s degree in civil engineering. He has worked for both private and public sector organizations, both in Europe and in Canada. He is currently responsible for Veolia Water Technology’s business development in British Columbia and Alberta.

Abstract:
More and more wastewater treatment plants are moving to tertiary treatment levels, driven by both increasingly stringent effluent discharge limits, as well as the desire and opportunity to reuse wastewater. This trend is only likely to accelerate, as climate change makes water resources more stressed and receiving waters more sensitive; and public awareness and scientific knowledge increases the list of contaminants of concern. Tertiary treatment approaches are varied, including filtration, oxidation and clarification. This presentation explores various treatment methods, including their pros and cons and O&M requirements. It also presents tertiary treatment case studies from recent projects in BC and other western Canadian provinces.

Presentation Title: Managing Biosolids Case Study: What Really Works?
Presented by: Jonathan Lowe – WSP

Jonathan Lowe is a Senior Water & Wastewater Engineer with WSP in Kelowna. Over the past 14 years, Jonathan has focused on the design, implementation, and assessment of water & wastewater treatment facilities and pump stations. Specializing in process design and optimization, Jonathan enjoys identifying system improvements and developing practical solutions. He has successfully taken projects from “big picture” to final design and commissioning, working closely with both design teams and operators to deliver projects. Jonathan has been involved in a wide variety of projects from small water systems assessments across BC, to the recently completed 180 MLD Duteau Creek Water Treatment Plant UV Disinfection Facility near Vernon, to irrigation projects in the heart of Kenya’s Turkana Desert. Since 2017, Jonathan has been involved with the Regional Biosolids Composting Facility operated by the City of Kelowna and is here today to share lessons learned from a recently completed Biosolids Management Strategy Review and discuss common approaches to biosolids management.

Abstract:
Disposal of wastewater sludge or biosolids has continued to receive increased attention from the public over the past number of years, and while many people take the stance “not in my backyard,” biosolids are a derivative of our ever-densifying urban lifestyles and development - to which we all somewhat benefit. Biosolids can easily be considered a nuisance by-product that requires out-of-sight disposal, but in fact they are rich in nutrients such as nitrogen and
phosphorus, which are vital for life. This presentation will review the approach taken by the City of Kelowna and City of Vernon to turn their wastewater solids into a publicly available commercial compost, labelled Ogogrow. Alternative biosolids management technologies will be presented along with the risk-based decision strategy used to select the best apparent biosolids management approach.

Presentation Title: Emergency Planning: How to Deal with Emergencies in your Wastewater System – Interactive Session
Presented by: Tony Smerychynski – CRD

Tony Smerychynski is currently the Field Supervisor at the under-construction Capital Regional District’s (CRD) McLoughlin Point Wastewater Treatment Plant. He has 22+ years of operational experience with various organizations, including Metro Vancouver, EPCOR, and teaching water/wastewater at the Northern Alberta Institute of Technology (NAIT). He currently holds a EOCP Level IV Water and Wastewater Treatment certification and operated 3 different water treatment plants and 5 different wastewater treatment plants, soon to be 6. Tony previously helped develop procedures and emergency response plans for the Seymour Capilano Filtration Plant, and he is now putting those skills to use developing Emergency Response Plans and safe work procedures for the CRD.

Abstract:
Wastewater system emergencies are a continual battle. Proper Emergency Planning can reduce workloads and improve responses. Additionally, regulators demand that Emergency Response procedures are put into place. There is currently little formal training available on the creation of wastewater specific emergency response plans. This session will introduce the operator to key emergency management concepts, key elements of a plan, and their application into your Emergency Response process. Attendees to this session are requested to bring a pen as this is an is an interactive session.

Presentation Title: How to Develop and Meet your Permit Requirements for Safe Work Procedures
Presented by: Tony Smerychynski - CRD

Tony Smerychynski is currently the Field Supervisor at the under-construction Capital Regional District’s (CRD) McLoughlin Point Wastewater Treatment Plant. He has 22+ years of operational experience with various organizations, including Metro Vancouver, EPCOR, and teaching water/wastewater at the Northern Alberta Institute of Technology (NAIT). He currently holds a EOCP Level IV Water and Wastewater Treatment certification and operated 3 different water treatment plants and 5 different wastewater treatment plants, soon to be 6. Tony previously helped develop procedures and emergency response plans for the Seymour Capilano Filtration Plant, and he is now putting those skills to use developing Emergency Response Plans and safe work procedures for the CRD.

Abstract:
A critical part of the operation of every Treatment Plant is the Safe Work Procedures. They are documents that standardize and codify operations across all staff. They provide a record to outside agencies such as WorkSafe BC to show how you operate your facility. This session will teach current industry best practices for the development of all safe work procedures. At the end of this session, each attendee should have a good knowledge on how to create procedures, what elements need to be included, and what will make your life easier as an operator. Procedures covered will be operations procedures, lockout procedures, and safety procedures. Attendees to this session are requested to bring a pen as this will include an interactive exercise.