2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Newly Released Lead & Copper Rule

Presenter: Amy Word **Job Title:** Natural Resource Specialist 3

Employer: State of Oregon - Drinking Water Services

Phone #: 541-214-8105 **Email:** amelia.a.word@dhsoha.state.or.us

Summary of Lesson Content: The presentation will cover the newly re-released LCRR (lead and copper rule) and the impacts on community water systems. Will cover available guidance documents and take aways for water systems.

CEU Relevancy: The presentation is relevant as it directly relates to recently released lead and copper rule revisions that impacts all community water systems. There are several critical elements that will affect water systems and this presentation will review those along with current guidance documents.

Professional Background: na

Primary Knowledge/Skills/Abilities Related to Presentation: Worked for DWS since 2008 - currently on the workgroup for the LCRR

Education: B.S. Biology

Professional Registration/Certification: Registered Environmental Health Specialist

Related Papers/Instruction Given: several EOR short schools - last was March 2021 LCRR

Professional Organizations/Activities: National Environmental Health Association

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: The Top 5 Mistakes Public Agencies Make When Hiring An Engineer

Presenter: Andy Perry **Job Title:** Business Relations Director

Employer: Anderson Perry & Associates, Inc.

Phone #: 5417862473 **Email:** aperry@andersonperry.com

Summary of Lesson Content: This presentation will review common mistakes that public agencies make when hiring an engineer. Items discussed will include developing a good RFP, the pitfalls of asking for price, how to define a good scope, and league requirements often overlooked.

CEU Relevancy: Understanding the items presented will help attendees better plan for their projects, expedite their project timelines, and save their agencies time and money. It will also help attendees better understand how to scope a project to ensure that projects will meet agency requirements and improve a water/wastewater system to protect water sources and public health.

Professional Background: Andy started with Anderson Perry & Associates, Inc. in 2001 and helps to direct client relation efforts, the firm's marketing programs, oversees the Information Technology (IT) team, and GIS team, is a member of the firm's management committee. Andy has a B.S in computer science from Brigham Young University and an M.B.A from the University of Phoenix. Andy is also a licensed FAA Unmanned Aerial System (UAS / Drone) pilot and conducts flights for the firm. Andy regularly competes in triathlons and enjoys spending time in the mountains with his kids.

Primary Knowledge/Skills/Abilities Related to Presentation: Nearly 20 years of experience working with Public Agencies to procure A/E Services

Education: BS, MBA

Professional Registration/Certification:

Related Papers/Instruction Given:

Professional Organizations/Activities: ACEC Oregon / Various Committees

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Water Quality Sampling

Presenter: Beth Read **Job Title:** Rural Development Specialist

Employer: RCAC

Phone #: 5419059613 **Email:** BRead@rcac.org

Summary of Lesson Content: Developing sample plans. Representative and valid samples. Correct sample collection and techniques.

CEU Relevancy: Assist entities increase their understanding of the necessity to test for health and safety needs, and to maintain compliance through testing.

Professional Background: Provide rural communities and tribes in Oregon and Washington with technical, managerial, and financial assistance related to their water and wastewater needs. Conduct water and wastewater rate analyses, assist with funding applications, provide utility operator trainings and technical assistance to help bring water and wastewater systems into regulatory compliance.

Before joining RCAC, owned an environmental laboratory specializing in water and wastewater testing. Worked with water, wastewater, industry, tribal, private and government entities to help increase their understanding of the necessity to test for health and safety needs and to maintain compliance through testing.

Teach CEU classes for water and wastewater personnel certification..

Primary Knowledge/Skills/Abilities Related to Presentation:

Water and wastewater quality testing and regulatory compliance

Education: Bachelor of Science

Professional Registration/Certification: N/A

Related Papers/Instruction Given: Numerous short schools and conferences, instructor for Professional Training Association

Professional Organizations/Activities: NA

Course Sponsor: Eastern Oregon AWWA/PNCWA

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Instructor Background & Information

Presentation Title: Groundwater Well Operation and Rehabilitation

Presenter: Brandon Mahon **Job Title:** Project Engineer

Employer: Anderson Perry & Associates

Phone #: 541-263-1547 **Email:** bmahon@andersonperry.com

Summary of Lesson Content: The presentation will cover the operation and rehabilitation of drinking water wells. Topics will include well construction, well development, well operating principals, monitoring well performance and well rehabilitation methods. Both alluvial and basalt aquifer wells will be discussed in the presentation.

CEU Relevancy: The proper operation and maintenance of groundwater wells is critical to continued efficient use of groundwater as a source for water systems. A certified operator will be able to utilize the information presented to monitor the "well being" of groundwater wells in their systems to ensure they are functionally properly, and providing quality water to their patrons. The presentation will give operators background information that will allow them to troubleshoot and assess potential options for remedying issues.

Professional Background: I have been involved with multiple well projects including for the City of Dufur, the City of Hines, and the Oregon Military Department. The projects ranged from installing submersible well pumps and motors into existing wells, cleaning, pump testing and drilling of a new well.

Primary Knowledge/Skills/Abilities Related to Presentation: Professional civil engineer, have been involved with multiple well projects, including drilling new wells and refurbishing and maintaining existing wells.

Education: Oregon State University, B.S. Civil Engineering

Professional Registration/Certification: Professional Engineer, Certified Water Rights Examiner

Related Papers/Instruction Given: N/A

Course Sponsor: Eastern Oregon AWWA/PNCWA

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Instructor Background & Information

Presentation Title: Fire Hydrants & Valves Basics

Presenter: Brian J. Anderson **Job Title:** Territory Manager

Employer: American Flow Control

Phone #: 503-784-0835 **Email:** banderson@american-usa.com

Summary of Lesson Content: Fire hydrant types, maintenance, record keeping. Valves types, use, maintenance, record keeping. Hands on hydrant repair.

CEU Relevancy: All water systems have fire hydrants and valves.

Professional Background: 10 years Clackamas W.D, 5 years A and A Drilling Service, 32 years American Flow Control

Primary Knowledge/Skills/Abilities Related to Presentation: 47 years water industry

Education: High School

Professional Registration/Certification:

Related Papers/Instruction Given: Fire Hydrants & Valves, EOR AWWA

Professional Organizations/Activities: AWWA, OAWU, IRWA, MRWS, AWWMA

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Innovative Biosolids Technologies

Presenter: Chris McCalib **Job Title:** President

Employer: Treatment Equipment Co.

Phone #: 2069091546 **Email:** chris@tec-nw.com

Summary of Lesson Content: Various collection of emerging and newer solid stabilization and processing technologies ranging from Class A processes to unique thickening applications side stream nutrient and non-conventional tank technologies.

CEU Relevancy: The presentation highlights alternative methods of solids treatment that provide capital and operational advantages compared to conventional methodologies.

Professional Background: 25 plus years in the Wastewater/Water Operations Experience

Primary Knowledge/Skills/Abilities Related to Presentation: All facets of the water/wastewater industry

Education: Some college, and military experience

Professional Registration/Certification: Group IV Wastewater Operator

Related Papers/Instruction Given: Various local conferences over the past 15 years

Professional Organizations/Activities: On the PNCWA Biosolids Committee Chair, Former Executive Board Member and President of MBMA

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Chlorine Shortage Case Review

Presenter: Chris Sutton **Job Title:** Regional Coordinator

Employer: Oregon Office of Emergency Management

Phone #: 9717190650 **Email:** chris.sutton@mil.state.or.us

Summary of Lesson Content: A regional supplier for chlorine was taken offline due to an infrastructure failure. This was compounded by other suppliers being offline at the same time, resulting in a shortage of chlorine for water treatment. Our presentation will review the response to this shortage, while also discussing emergency management and operator partnerships for more resilient communities.

CEU Relevancy: This presentation will include four core topics for discussion: review of the Oregon Emergency Management structure, the response to the chlorine shortage, lesson learned, and how to promote effective partnerships that promote resilience during supply chain challenges. This incident affected both water and wastewater operators. Operators can use the information presented to build relationships with the Emergency Management community with the goal of increased preparedness.

Professional Background: Public Safety and Emergency Management Professional for over 20 years.

Primary Knowledge/Skills/Abilities Related to Presentation: Coordination of emergency management and water operators

Education: BS of Public Safety and Emergency Management

Professional Registration/Certification:

Related Papers/Instruction Given:

Professional Organizations/Activities:

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Instructor Background & Information

Presentation Title: Protecting the Collection System

Presenter: Doug Troyer **Job Title:** Owner

Employer: Underground Tech

Phone #: 5419902791 **Email:** doug@undergroundtech.net

Summary of Lesson Content: What to inspect for in storm or sanitary sewer systems and a look at a few technologies available to protect and extend the life of your infrastructure.

CEU Relevancy: Stopping inflow and infiltration can be a huge benefit in many ways. Lowering treatment costs, avoiding overflows, maintaining and extending the life of manholes and pipes. Knowing what to look for and what technologies are available to repair or prevent I&I will help operators make informed decisions in the field.

Professional Background: Excavation/Asphalt Paving 2011-2018

Owner of Underground Tech 2018-present

Primary Knowledge/Skills/Abilities Related to Presentation: I started Underground Tech 4 years ago, we specialize in Manhole Rehabilitation. Spent the last 4 years sealing leaks, applying coatings.

Education: high school

Professional Registration/Certification:

Related Papers/Instruction Given:

Professional Organizations/Activities:

Course Sponsor: Eastern Oregon AWWA/PNCWA

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Instructor Background & Information

Presentation Title: Meter & Automation

Presenter: Dougals Kubik **Job Title:** AMR/AMI Specialist

Employer: Ferguson Enterprises

Phone #: 509.655.1995 **Email:** doug.kubik@ferguson.com

Summary of Lesson Content: General Metering and Automation info. Including AMR/AMI

CEU Relevancy: Helps to educate operators on current, new and emerging technologies to help improve efficiencies and accuracies within their operating systems

Professional Background: Worked for a hydrant and valve manufacturer prior to starting work for Ferguson Metering and Automation Group.

Primary Knowledge/Skills/Abilities Related to Presentation: Over a decade of experience in Hydrants and Mains.

Education: Ag Degree

Professional Registration/Certification:

Related Papers/Instruction Given: Hydrants & Mains Install & Mainteneace CEU Coarse - National Parks Water Staff(

Professional Organizations/Activities:

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Instructor Background & Information

Presentation Title: Safe Handling of Asbestos-Cement Pipe in the W/WW Utilities

Presenter: Eric Fullan **Job Title:** Safety Manager

Employer: Carollo Engineers

Phone #: 5037075479 **Email:** efullan@comcast.net

Summary of Lesson Content: This presentation will discuss the hazards associated with A-C pipe and the safe handling procedures using wet methods established in the Letter of Agreement between your utility and Oregon OSHA

CEU Relevancy: W/WW Operators working with Asbestos-Cement pipe need to understand the hazards associated AC pipe as well as measure they can take to protect themselves from exposures

Professional Background: 30 years safety experience in the W/WW industries

Primary Knowledge/Skills/Abilities Related to Presentation: 30 Yrs experience

Education: College

Professional Registration/Certification:

Related Papers/Instruction Given: Multiple Short schools

Professional Organizations/Activities: ASSP..AWWA APWA

Course Sponsor: Eastern Oregon AWWA/PNCWA

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Instructor Background & Information

Presentation Title: On-Site Sodium Hypochlorite Generation as a Safe and Efficient Alternative

Presenter: Ethan Brooke **Job Title:** Regional Manager

Employer: UGSI Solutions

Phone #: 17248143756 **Email:** ebrooke@ugsicorp.com

Summary of Lesson Content: This presentation will provide water system managers, operators and engineers a practical understanding of the science and implementation behind on-site sodium hypochlorite generation (OSHG) as a source of chlorine disinfection capacity for water and wastewater plants as well as distributed well systems.

CEU Relevancy: Attendees will understand the basics of on-site generation of hypochlorite as an option for water or wastewater disinfection versus gas chlorine or commercial strength bleach. Attendees will understand the roles of OSHG components as part of an overall OSHG system Attendees will be able relate to many applications of OSHG in both large and small plants as well as in applications distant from plants in the well fields or distribution systems

Professional Background: Ethan Brooke is an internationally recognized expert on aeration technologies for trihalomethane (THM) removal. A summary of his master's thesis on THM aeration was published in the Journal American Water Works Association and resulted in three patents which are held by the University of New Hampshire. Ethan has a background in civil engineering and product management and has worked on a variety of water, wastewater and distribution system infrastructure improvement projects. He has been a senior product manager at PAX Water Technologies since 2013.

Primary Knowledge/Skills/Abilities Related to Presentation: Has worked on a variety of water, wastewater and distribution system infrastructure improvement projects.

Education: B.S. Physics, Antioch College, 2000, M.S. Civil engineering, University of NH, 2009

Professional Registration/Certification: E.I.T, CA-NV AWWA Distribution System Water Quality Committee Chair

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Distribution System Water Quality Improvements with Implementation of Active Tank Mixing

Presenter: Ethan Brooke **Job Title:** Regional Manager

Employer: UGSI Solutions

Phone #: 17248143756 **Email:** ebrooke@ugsicorp.com

Summary of Lesson Content: The presentation will provide water system managers, operators and engineers a practical understanding of the science behind applying mixing energy to water in reservoirs or tanks as a means to improve water quality in distribution networks.

CEU Relevancy: Attendees will understand the role of tank mixing as a fundamental step to improving water network quality Attendees will understand the roles of various types of mixers in achieving a “well mixed” tank without excessive energy consumption. Attendees will be able to understand the role of tank mixing as a first step to THM removal and active residual improvement or boosting

Professional Background: Ethan Brooke is an internationally recognized expert on aeration technologies for trihalomethane (THM) removal. A summary of his master’s thesis on THM aeration was published in the Journal American Water Works Association and resulted in three patents which are held by the University of New Hampshire. Ethan has a background in civil engineering and product management and has worked on a variety of water, wastewater and distribution system infrastructure improvement projects. He has been a senior product manager at PAX Water Technologies since 2013.

Primary Knowledge/Skills/Abilities Related to Presentation: Ethan has a background in civil engineering and product management and has worked on a variety of water, wastewater and distribution system infrastructure improvement projects.

Education: B.S. Physics, Antioch College, 2000, M.S. Civil engineering, University of NH, 2009

Professional Registration/Certification: E.I.T, CA-NV AWWA Distribution System Water Quality Committee Chair

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: The Role of Smart Tanks in Distribution Water Quality Management

Presenter: Ethan Brooke **Job Title:** Regional Manager

Employer: UGSI Solutions

Phone #: 17248143756 **Email:** ebrooke@ugsicorp.com

Summary of Lesson Content: Today, the two most common distribution network violations that water utilities contend with are disinfection by products (DBPs) and violations of the Revised Total Coliform Rule. With the promulgation of the EPA's Stage 1 and Stage 2 Disinfection Byproduct Rules, water treatment operators and utilities scrambled to ensure their treatment plants were in compliance with THM limits and more carefully monitored plant chlorine dosing – or switched to the more persistent (long-lived) chloramine as a secondary disinfectant – which had a much lower propensity to form THMs. However, chloramine levels remain difficult to maintain in networks due to their unique chemistry and degradation mechanisms.

CEU Relevancy: This presentation will examine the under-utilized water storage tank as an asset that can be used to improve distribution water quality with several methodologies. Several cases studies that illustrate "Smart Tank" technology improving chlorine residuals, reducing THM's and maintaining chloramine residuals will be included in the presentation.

Professional Background: Ethan Brooke is an internationally recognized expert on aeration technologies for trihalomethane (THM) removal. A summary of his master's thesis on THM aeration was published in the Journal American Water Works Association and resulted in three patents which are held by the University of New Hampshire. Ethan has a background in civil engineering and product management and has worked on a variety of water, wastewater and distribution system infrastructure improvement projects. He has been a senior product manager at PAX Water Technologies since 2013.

Primary Knowledge/Skills/Abilities Related to Presentation: Ethan has a background in civil engineering and product management and has worked on a variety of water, wastewater and distribution system infrastructure improvement projects.

Education: B.S. Physics, Antioch College, 2000, M.S. Civil engineering, University of NH, 2009

Professional Registration/Certification: E.I.T, CA-NV AWWA Distr Sys Water Quality Comm

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Instructor Background & Information

Presentation Title: Distribution System Optimization

Presenter: Evan Hofeld **Job Title:** Environmental Engineer 3

Employer: Oregon Health Authority - Drinking Water Services

Phone #: 503-504-8222 **Email:** evan.e.hofeld@dhsoha.state.or.us

Summary of Lesson Content: This presentation will cover tips and techniques to help optimization distribution systems to minimize DBP formation, water age, and chorine residuals.

CEU Relevancy: Learning how to optimize distribution system operation and set optimal water quality goals helps ensure harmful disinfection byproducts are minimized and disinfection systems are effective in preventing bacterial growth.

Professional Background: Registered engineer in Oregon with 20 years of experience in drinking water.

Primary Knowledge/Skills/Abilities Related to Presentation: Regional Engineer with OHA-Drinking Water Services for 19 years and have provided training on optimization of treatment systems as numerous operator schools throughout those years. I am responsible for conducting water system inspections and reviewing con

Education: Grant High School (Graduated in 1991), Oregon State University (Graduated with a B.S. in Environmental Engineering in 1998)

Professional Registration/Certification: Registered Professional Engineer in Oregon (58011PE)

Related Papers/Instruction Given: Developed content and was the trainer for the following three 6-hr classes Conventional and Direct Filtration (OESAC ID 3829), Slow Sand Filtration (OESAC ID 4149), Essentials of Surface Water Treatment (4147)

Professional Organizations/Activities: Area Wide Optimization Coordinator for OHA-DWS

Course Sponsor: Eastern Oregon AWWA/PNCWA

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Instructor Background & Information

Presentation Title: Celebrating the 40th Anniversary of the Eastern Oregon Short School, Reflections on 50 years of the Safe Drinking Water Act and Clean Water Act.

Presenter: Gary Burnett **Job Title:** Retired

Employer: Burnett

Phone #: 541-969-8144 **Email:** gfburnett@gmail.com

Summary of Lesson Content: One purpose of this presentation is to acknowledge those who recognized the value of operator training 40 years ago and started the Eastern Oregon Short School. This presentation will also review the history, regulatory process and implementation of the Safe Drinking Water Act and Clean Water Act. The implications and importance of wastewater and water operator certification will be discussed.

CEU Relevancy: The background on how drinking water and wastewater regulations are developed and evolve will help operators in understanding the importance of continuing education to keep up with regulatory changes and advancements in technology.

Professional Background: Public Health Engineer with Oregon Drinking Water Program, Water Utility Manager Walla Walla Washington, Consulting Engineer

Primary Knowledge/Skills/Abilities Related to Presentation: Professional Engineer and Water Distribution Manager IV certification

Education: BS Civil Engineering, 1973, Oregon State University

Professional Registration/Certification: Registered Professional Engineer (Ret.) OR & WA; Water Distribution Manager IV (Ret.), WAon & Washingtonon &

Related Papers/Instruction Given: State Board of Health to Oregon Health Authority, Coliform Sampling - The Rise of E.coli, April 2013, Eastern Oregon Short School.

Professional Organizations/Activities: American Water Works Association (Ret. Membership)

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Utilizing Acoustic Inspection Technology to Prioritize Sewer Cleaning

Presenter: Gene Hallum **Job Title:** Northwest Territory Sales Manager

Employer: InfoSense, Inc.

Phone #: 360-929-7627 **Email:** ghallum@infosense.com

Summary of Lesson Content: Effectively deploying resources daily to reduce sanitary sewer overflows (SSOs) is a tricky challenge. Cleaning resources are wasted when deployed to pipes that are functioning properly. But SSOs may occur if a blocked pipe is overlooked. Acoustic inspection technology, namely the SL-RAT, has proven to be a useful tool for hundreds of utilities looking to rapidly screen their small diameter gravity sewer lines. This presentation will discuss the acoustic programs of several utilities, discussing in depth the implementation process, program results and technology limitations.

CEU Relevancy: Cleaning a sewer line typically requires ~5 gallons of water per ft of sewer pipe. Since most sewer pipes cleaned on a time-based interval are functioning properly, the water allocated towards this routine maintenance is wasted. This presentation will discuss how utilities can deploy an acoustic inspection tool to understand the condition of a pipe prior to allocating cleaning resources. This tool called the Sewer Line Rapid Assessment Tool, or SL-RAT, is helpful for understanding where cleaning resources are necessary. Case studies will be used to demonstrate that by cleaning based on need, utilities can improve resource deployment and efficiency, resulting in significant cost, water, and time savings.

Professional Background: Gene is the Northwest Manager for InfoSense, manufacturer of the Sewer Line Rapid Assessment Tool, or SL-RAT. He has over 50 years of professional experience starting and managing several technology related companies in the fields of electronics, data collection and nutraceuticals. He studied business administration at the University of Washington (Seattle).

Primary Knowledge/Skills/Abilities Related to Presentation: Gene has given dozens of presentations and trainings regarding acoustic inspection technology as the NW territory manager for InfoSense.

Education: University of Washington, Business Administration

Professional Registration/Certification: N/A

Related Papers/Instruction Given: Prioritizing Cleaning & Improving Efficiency with Acoustic Inspection Technology, 8-23-2021, OAWU Seaside Conference

Professional Organizations/Activities: PNCWA member, OAWU member

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Instructor Background & Information

Presentation Title: Flushing & Sampling for Water Quality and Pipeline Maintenance

Presenter: Geoff Robinson **Job Title:** Territory Sales

Employer: Frank J Martin Company

Phone #: 15036799091 **Email:** geoffr@fjmartin.com

Summary of Lesson Content: Course Goal: For participants to demonstrate detailed understanding of requirements and procedures related to total coliform and chlorine residual tracking of drinking water samples. To achieve this goal, course will explore a history of drinking water quality, intensify awareness of dead-end management in water systems, and confirm best-practice procedures for collection of drinking water samples. Also, participants should be able to identify conventional and uni-directional flushing philosophies and evaluate the application of those types of flushing operations in water systems. A short quiz will enable participants to demonstrate learning from the course.

CEU Relevancy: Water sampling stations and flushing hydrants enable maintenance and quality analysis for the distribution main, so are vital links in the drinking water delivery chain. Familiarization with equipment installation and operation is a requirement for successful water systems.

Professional Background: Water professional for over 20 years

Primary Knowledge/Skills/Abilities Related to Presentation: certified OESAC instructor for 12 years

Education: Pike County High School, Zebulon, GA; Seattle Central College; BA Built Environment - Depaul University Chicago, IL; MS Software Engineering - DePaul University Chicago, IL

Professional Registration/Certification:

Related Papers/Instruction Given: Flushing and Sampling for Water Quality & Pipeline Maintenance - Ongoing; Service Lateral Anatomy; Air Mitigation in Fluid Conveyance Systems

Professional Organizations/Activities: AWWA, PNCWA, OAWU, ERW,

Course Sponsor: Eastern Oregon AWWA/PNCWA

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Instructor Background & Information

Presentation Title: Air mitigation in fluid conveyance systems

Presenter: Geoff Robinson **Job Title:** Territory Sales

Employer: Frank J Martin Company

Phone #: 15036799091 **Email:** geoffr@fjmartin.com

Summary of Lesson Content: Participants will understand how entrained air accumulates in systems, as well as understand pipeline behavior during random air intrusion and catastrophic emptying. Participants will be able to associate and recognize common corrosion damage as well as cross-contamination events as air-related phenomena and begin to master management of efficient air mitigation programs. Participants will be able to choose and size air valve types for specific applications.

CEU Relevancy: Air mitigation is critical to safe operation of any pressurized liquid conveyance

Professional Background: Water professional for over 20 years

Primary Knowledge/Skills/Abilities Related to Presentation: certified OESAC instructor for 12 years

Education: Pike County High School, Zebulon, GA; Seattle Central College; BA Built Environment - Depaul University Chicago, IL; MS Software Engineering - DePaul University Chicago, IL

Professional Registration/Certification:

Related Papers/Instruction Given: Flushing and Sampling for Water Quality & Pipeline Maintenance - Ongoing; Service Lateral Anatomy; Air Mitigation in Fluid Conveyance Systems

Professional Organizations/Activities: AWWA, PNCWA, OAWU, ERW,

Course Sponsor: Eastern Oregon AWWA/PNCWA

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Instructor Background & Information

Presentation Title: Service lateral anatomy

Presenter: Geoff Robinson **Job Title:** Territory Sales

Employer: Frank J Martin Company

Phone #: 15036799091 **Email:** geoffr@fjmartin.com

Summary of Lesson Content: Detailed discussion of corporation service laterals and related valves, fittings, material, and appurtenances. Familiarization with component application scenarios, potential safety hazards, material hazards, and system integration. Discussion of system characteristic parameters and wear-level items awareness.

CEU Relevancy: Service laterals are integral to drinking water distribution systems.

Professional Background: Water professional for over 20 years

Primary Knowledge/Skills/Abilities Related to Presentation: certified OESAC instructor for 12 years

Education: Pike County High School, Zebulon, GA; Seattle Central College; BA Built Environment - Depaul University Chicago, IL; MS Software Engineering - DePaul University Chicago, IL

Professional Registration/Certification:

Related Papers/Instruction Given: Flushing and Sampling for Water Quality & Pipeline Maintenance - Ongoing; Service Lateral Anatomy; Air Mitigation in Fluid Conveyance Systems

Professional Organizations/Activities: AWWA, PNCWA, OAWU, ERW,

Course Sponsor: Eastern Oregon AWWA/PNCWA

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Instructor Background & Information

Presentation Title: Bloodborne Pathogens- Workplace Dangers and Disease Prevention

Presenter: Greg Lacquement **Job Title:** Regulatory Specialist

Employer: City of Pendleton

Phone #: 15419660249 **Email:** greg.lacquement@ci.pendleton.or.us

Summary of Lesson Content: Designed for those who are at risk for on the job exposure to blood and other bodily fluids in the workplace. The course teaches students how bloodborne pathogens are spread, how to avoid exposure and what to do if exposed to infectious material.

CEU Relevancy: This Bloodborne Pathogens for Water and Wastewater Operators Class addresses the highly infectious nature of bloodborne pathogens and illnesses transmitted via contact with blood. Because accidents on the job site may potentially carry serious risks beyond the initial incident, this class will teach individuals to be aware of how to avoid the spread of disease, as well as the appropriate response to exposure thereof.

Professional Background: I've been an EMT-B/P within Municipal Fire Departments for 17 years and a Combat Medic in the Military where Bloodborne Pathogens have been an annual requirement. I have taught Bloodborne Pathogens at a company level, city level and a regional level. I try to relate as much real-world scenarios that pertain to the audience during each training session.

Primary Knowledge/Skills/Abilities Related to Presentation: I have spent the previous 3 ½ years as the Regulatory Specialist for the City of Pendleton. Prior to my position as a Regulatory Specialist, I spent 17 years in the Fire Service rising from the rank of Firefighter to Captain with a municipality in Western

Education: B.A.S. Emergency Management

Professional Registration/Certification: Emergency Medical Technician, Fire Instructor III, Fire Officer III

Related Papers/Instruction Given: Bloodborne Pathogens, Various Emergency Medical Topics, Various Leadership Topics

Professional Organizations/Activities: OEMA, AWWA, APWA, VFW, Sons of the Flag

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
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Instructor Background & Information

Presentation Title: Why Customer Service Matters in the Public Sector

Presenter: Greg Lacquement **Job Title:** Regulatory Specialist

Employer: City of Pendleton

Phone #: 15419660249 **Email:** greg.lacquement@ci.pendleton.or.us

Summary of Lesson Content: Customer service is a management strategy that focuses on meeting customer expectations. It is based on the concept that the organization will reach its goals effectively and efficiently through satisfaction of the customer. This presentation of identifying, understanding and focusing on customer needs, processes are designed to satisfy customer expectations.

CEU Relevancy: The focus on customers requires a detailed analysis by all employees of the service delivery process. The changes in process result in satisfied customers and a more efficient and effective organization. Public Works employees are in daily contact with the citizens their perspective City, County, or agency in a variety of ways. This presentation will reinforce with attendees that the citizen is our customer, and that they are the most visible part of the public service we provide.

Professional Background: I have spent the previous 3 ½ years as the Regulatory Specialist for the City of Pendleton. Prior to my position as a Regulatory Specialist, I spent 17 years in the Fire Service rising from the rank of Firefighter to Captain with a municipality in Western Oregon. An opportunity arose to which then took me to Pendleton, Oregon where I served as the Assistant Fire Chief prior to my current position as the Regulatory Specialist.

Primary Knowledge/Skills/Abilities Related to Presentation: Dedicated Public Service Employee with strong qualifications in public safety, emergency response, training, resource management, personnel affairs, and budgeting. Well-developed leadership and analytical skills as evidenced by ability to continuously imp

Education: BAS Emergency Management

Professional Registration/Certification:

Related Papers/Instruction Given: Emergency Medical Technician, Fire Instructor III, Leadership I, II, III for the Fire Service, Fire Officer I, II, III

Professional Organizations/Activities: OEMA,, AWWA, APWA, VFW, Sons of the Flag

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Operator Math 1-2, Operator Math 3-4

Presenter: Jadon Herron **Job Title:** Project Engineer

Employer: Anderson Perry & Associates, Inc.

Phone #: 541-805-9328 **Email:** jherron@andersonperry.com

Summary of Lesson Content: Algebraic processes, unit conversion, level 1 and 2 sample problems, level 3 and 4 sample problems.

CEU Relevancy: Ensure the calculations necessary for proper operations, maintenance and reporting are done correctly.

Professional Background: I have been a civil engineer for Anderson Perry & Associates, Inc. for 7 years.

Primary Knowledge/Skills/Abilities Related to Presentation: The presentation is Operator Math 1-2 and 3-4. As part of my engineering degree, I completed 24 credits of mathematics. During college I also won the Consortium on Mathematics and its Applications 96 hour worldwide math competition. As a professional engineer I apply mathematics to water and wastewater related topics on a routine basis.

Education: Oregon State University Bachelor of Science Civil Engineering

Professional Registration/Certification: Professional Engineer, Certified Water Rights Examiner

Related Papers/Instruction Given:

Professional Organizations/Activities:

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022

Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Pump and motor troubleshooting

Presenter: Jason Carman **Job Title:** Rural Development Specialist

Employer: Rural Community Assistance Corporation

Phone #: 9164479832 **Email:** jcarman@rcac.org

Summary of Lesson Content: This will be an extensive course in the most common pumping and electrical system issues regarding water and wastewater pumping systems.

Participants will learn:

- Electric motor troubleshooting and common issues
- Basic types of centrifugal pumps and their characteristics
- How to calculate TDH in a fluid pumping system
- How to calculate friction loss
- How to read pump curves
- Centrifugal pump performance testing and troubleshooting techniques

CEU Relevancy: This course is targeted at operators and technicians to increase their skill and overall knowledge of fluid handling and electrical systems. This knowledge will assist them with not only with troubleshooting issues, but with day to day operations. Being more familiar with operating characteristics and common issues will make the systems they are responsible for much more understandable.

Professional Background: Jason Carman joined RCAC in 2019. He has over 20 years of experience with water, wastewater, and industrial infrastructure operations, maintenance/repair and capital improvement. He provides technical and managerial assistance and training for rural water and wastewater systems. He also fosters positive working relationships with various state and federal partners dedicated to rural community advocacy.

Before joining RCAC, Mr. Carman was a water operations supervisor for the Eugene Water and Electric Board where he was responsible for water distribution system operations, the backflow/ cross-connection program, customer metering, and the electrical/control/SCADA work for the water production and distribution systems. Working with the water engineering team, he was

also responsible for capital improvement plan creation and execution. He served as the Oregon Health Authority's Direct Responsible Charge (DRC) for the water distribution system.

Previously, Mr. Carman was the Water Production Foreman for the Springfield Utility Board where he was responsible for pumping and storage system operations, treatment operations, pressure zone control, and all electrical/control/SCADA work for the water production and distribution systems.

Primary Knowledge/Skills/Abilities Related to Presentation: Drinking water operations, electrical and industrial automation systems.

Education: AAS

Professional Registration/Certification: Oregon WD4/WT3, LME

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: The Science of Polymer Activation

Presenter: Jeff Rhodes **Job Title:** VP of Commerical Development

Employer: UGSI Solutions

Phone #: 970-556-2001 **Email:** jrhodes@ugsicorp.com

Summary of Lesson Content: The presentation will provide water system managers, operators and engineers a practical understanding of the science behind polymer and polymer activation as well as the techniques used to optimize the use of polymer in plant settings.

CEU Relevancy: Attendees will understand the basic structure and chemistry of water and wastewater treatment polymers. Attendees will understand how to use the fundamental science of polymer chemistry to properly activate polymer which leads to better treatment efficiencies and costs

Professional Background: Jeff Rhodes serves as the Vice President of Commercial Development and as a technical specialist in chemical feed applications for the central United States. He maintains over 30 years of experience in chemical feed, analysis and control for water and wastewater treatment processes. Jeff earned his industry experience serving in municipal, industrial and agriculture markets. Additionally, Jeff is the co-inventor on three patents in the area of disinfection control and polymer activation.

Primary Knowledge/Skills/Abilities Related to Presentation: 30+ years in chemical feed and polymer activation

Education: BA in Business Administration

Professional Registration/Certification: Co-inventor on 3 patented (2 polymer activation, one on disinfection control)

Related Papers/Instruction Given: Over 100 times

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Unleash Your Inner Superhero

Presenter: Jennifer Bouman-Steagall **Job Title:** Attorney

Employer: Red Kite

Phone #: 503-704-4991 **Email:** Jennifer@redkiterising.com

Summary of Lesson Content: Consider the traits of a superhero: (1) they earn the respect of others; (2) they are helpful in solving problems; (3) they help everyone in need without regard to protected class status; (4) they exhibit courage in the face of fear; and (5) they put the needs of the many (e.g., the organization) above their own self-interests. Don't look now, but your inner superhero just showed up! Each of us has untapped courage, power and potential; if only we could give that potential a voice and a mission. Swoop in and join us for this fun and empowering program as we explore powerful tips and strategies for unleashing your inner superhero to achieve more personal and professional growth.

CEU Relevancy: Personal and professional growth are a critical part of any organization's overall development. It leads to higher levels of engagement, productivity, efficiency, and even innovation when the right opportunities present themselves. Empowering people to find and capitalize on their inner strengths assists in both the performance of great work and the delivery of great services to others.

Professional Background: Over 21 years' experience working with small-medium size law firms representing Pacific Northwest Employers with Employment Law matters, Leadership Development, Team Communication, and Organizational Development

Primary Knowledge/Skills/Abilities Related to Presentation: Over 21 years Employment Law and Leadership Development experience.

Education: J.D.

Professional Registration/Certification: National Speakers Association Professional Member; Certified Facilitator for Everything DiSC Solutions; Accredited Facilitator for Five Cohesive Behaviors of a Team

Professional Organizations/Activities: National Speakers Association

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Employee Engagement: Unlock the Secrets of Silent Defectors

Presenter: Jennifer Bouman-Steagall **Job Title:** Attorney

Employer: Red Kite

Phone #: 503-704-4991 **Email:** Jennifer@redkiterising.com

Summary of Lesson Content: Does your workplace have an odor of negativity, low morale, and poor performance? Have some employees mentally or emotionally quit but still take up space and collect a paycheck? If so, you are experiencing the impact of low employee engagement, and it is likely increasing your stress and decreasing the results of your team. As the downward spiral of disengagement continues to churn, it can spread like a disease and negatively impact everyone on your team and your overall results. Imagine what work might be like with a fully functional, highly productive workforce! Suitable for employees at all levels, this informative program explores the principles of employee engagement, the hidden reasons behind employee turnover, low morale and decreased production, and effective retention strategies.

CEU Relevancy: Low Employee Engagement impacts everyone from the person who is disconnecting, to the coworkers who have to pick up the extra work, to leadership struggling to turn things around, and even to the community you serve when service is not the quality we expected. Employee engagement principles impact all aspects of an employee's work life and work experience, and it can usually explain why standard leadership strategies may not be producing the desired or expected results. Understanding the motivations behind silent defectors is key to finding solutions to turn things around for them and the team.

Professional Background: Over 21 years' experience working with small-medium size law firms representing Pacific Northwest Employers with Employment Law matters, Leadership Development, Team Communication, and Organizational Development

Primary Knowledge/Skills/Abilities Related to Presentation: Over 21 years Employment Law and Leadership Development experience.

Education: J.D.

Professional Registration/Certification: National Speakers Association Professional Member; Certified Facilitator for Everything DiSC Solutions; Accredited Facilitator for Five Cohesive Behaviors of a Team

Professional Organizations/Activities: National Speakers Association

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Simple Industrial Wastewater Treatment

Presenter: Jon Neuenschwander **Job Title:** Outside Sales Representative

Employer: Owens Pump & Equipment

Phone #: 503-442-0419 **Email:** jon@owenspump.com

Summary of Lesson Content: Simple Industrial Wastewater Treatment is an overview of all types of wastewater treatment. The purpose of this presentation is to help municipal wastewater operations to inform, suggest, and assist their industrial customers with options for handling process wastewater before it is sent to the wastewater treatment plant.

CEU Relevancy: Simple Industrial Wastewater Treatment is an overview of all types of wastewater treatment. Although technology and outreach has advanced in the industry of the past several years, the industrial market continues to have more process wastewater. Few have any treatment at all, and some have portions of treatment that do not always assist municipal treatment plants in treating this wastewater stream. This includes High Flows, Wide Swings in Flows, High Loading (BOD, TSS, TDS, and large solids), High Temperatures, pH Swings, Cleaners & Surfactants, Segregation from Domestic Waste Streams and more.

The purpose of this presentation is to help municipal wastewater operations to inform, suggest, and assist their industrial customers with options for handling process wastewater before it is sent to the wastewater treatment plant.

Professional Background: n/a

Primary Knowledge/Skills/Abilities Related to Presentation: 10 years of Pump & Equipment Sales

Education: High School and College

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Revolutionizing Sludge Dewatering

Presenter: Jon Neuenschwander **Job Title:** Outside Sales Representative

Employer: Owens Pump & Equipment

Phone #: 503-442-0419 **Email:** jon@owenspump.com

Summary of Lesson Content: Revolutionizing Sludge Dewatering is an overview of all types of sludge dewatering equipment options for wastewater treatment facilities.

CEU Relevancy: Sludge dewatering is a necessary requirement of many wastewater operations. Keeping sludge out of our waterways and any unpurified sludge off the land is beneficial to both waterways, the land and to public health. This is an overview of sludge dewatering equipment options so that management and operators can choose the best possible options for their dewatering needs. This presentation explores common problems, types of solutions, the pro's and con's to each solution and installation examples.

Professional Background: n/a

Primary Knowledge/Skills/Abilities Related to Presentation: 10 years of Pump & Equipment Sales

Education: High School and College

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Collections Plugging Solutions

Presenter: Jon Neuenschwander **Job Title:** Outside Sales Representative

Employer: Owens Pump & Equipment

Phone #: 503-442-0419 **Email:** jon@owenspump.com

Summary of Lesson Content: Collections Plugging Solutions is an overview of the problems facing municipal wastewater collection systems and the solutions that are available.

CEU Relevancy: Many municipalities face collections system plugging and clogging due to debris entering the collection system such as rags, plastics, so-called flushable cleaning products and much more. System plugging causes maintenance issues, downtime, labor costs and manpower. This presentation explores the common problems, possible solutions, the pro's and con's of each solution and installation examples

Professional Background: n/a

Primary Knowledge/Skills/Abilities Related to Presentation: 10 years of Pump & Equipment Sales

Education: High School and College

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Energy Savings Performance Contracting for Infrastructure Upgrades

Presenter: Kathleen Kelleher **Job Title:** Account Executive

Employer: Ameresco

Phone #: 775-385-3472 **Email:** kkelleher@ameresco.com

Summary of Lesson Content: Deferred maintenance, open-bid contracting let downs and being short-staffed are all concerns we hear at Ameresco from our municipal clients. I want to present another method of procurement available to both water treatment and wastewater treatment facilities meant to protect public funds and provide the needed equipment upgrades at facilities: Energy Savings Performance Contracting. This form of contracting has been around for decades and used heavily in the education and municipal space; it can and has been applied locally to our PNW WWTPs with great success to obtain needed equipment utilizing the resources of an Energy Services Company (ESCO) all under a performance guarantee.

CEU Relevancy: This presentation would provide information for financing and contracting avenues to obtain equipment and infrastructure upgrades that might not be familiar to the staff. It will also emphasize what to look for in their process to see if their system is a good fit for this type of procurement vehicle.

Professional Background: In the various roles I have served, the overarching theme is my passion for all things water. As a young professional I worked in the water treatment space focusing on water efficiency and reuse through mining circuits, wastewater facilities, paper mills among others. I transitioned to equipment filtration as a Regional Manager for a filter manufacturer in municipal and industrial applications. Now with Ameresco I can utilize my knowledge to partner with clients to implement the best technologies for the facilities in a performance based structure to minimize project risk, protect public funds and deliver a project the client is happy with.

Primary Knowledge/Skills/Abilities Related to Presentation: Funding strategies to obtain WWTP facility improvements with performance guarantees

Education: Bioresource Science & Engineering, University of Washington ; MBA, University of Utah

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Pendleton Chlorine Conversion

Presenter: Kyle Willman **Job Title:** Operations Technician

Employer: City of Pendleton

Phone #: 5413778600 **Email:** kyle.willman@ci.pendleton.or.us

Summary of Lesson Content: Overview of the process the city of pendleton took to switch from using gaseous chlorine to liquid chlorine. Discuss the dos and don't s that the operation and engineering firms discovered during the process.

CEU Relevancy: this is relevant to any water treatmnet system as chlorine is the most commonly use chemical to treat water wether it is waste water or drinking water.

Professional Background: 10 years farming and processing corn-eyed brown-trout.

Primary Knowledge/Skills/Abilities Related to Presentation: waste water treatment

Education: Eastern Oregon University

Professional Registration/Certification: WW Lvl 3

Professional Organizations/Activities: Eastern Oregon AWWA/PNCWA Committee

Course Sponsor: Eastern Oregon AWWA/PNCWA

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Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Real World Strategies for Managing Aging Infrastructure

Presenter: Leo Newberg **Job Title:** Facilities Manager

Employer: Inn at Otter Crest

Phone #: 5413511403 **Email:** Newberg.l.g@gmail.com

Summary of Lesson Content: This presentation discusses tools and strategies for managing aging infrastructure. We discuss the logistics, tools and motivational tactics that are required for successfully mapping out a plan of attack for operating, funding and renewing the underfunded and often unidentified maze of infrastructure components that we are in charge of. This presentation is equally relevant to a small community, a water utility, or a large urban city.

CEU Relevancy: This presentation discusses tools and strategies for managing aging infrastructure. We discuss the logistics, tools and motivational tactics that are required for successfully mapping out a plan of attack for operating, funding and renewing the underfunded and often unidentified maze of infrastructure components that we are in charge of. This presentation is equally relevant to a small community, a water utility, or a large urban city.

Professional Background: I was a professional boatbuilder for 20 years prior to becoming a licensed general contractor in Oregon. In addition to building boats I also built the boatyards that we worked in. This gave me a strong background in project management, infrastructure buildouts, infrastructure financing and making the most out of very little. As a general contractor I specialized in renovation of old buildings and in managing large and complex rehabs and expansion projects of commercial and residential buildings. I am currently rehabbing a 50 year old ocean front private municipality that is an excellent, scalable case study in how to approach the challenges of managing aging infrastructure.

Primary Knowledge/Skills/Abilities Related to Presentation: 35 years experience managing facilities, Construction, engineering and design work. Currently rehabbing a 50 year old small private municipality, taking on GIS mapping, water line inspection and renewal, sewer line inspection and renewal, electrical grid

Education: University of Maryland - Associates Degree Computer Science

Professional Registration/Certification: CCB General Contractor License 18 years, Small Water System Operator Inn at Otter Crest, Board Of Directors Beverly Beach Water District, Board of Directors Johnson Creek Water District

Related Papers/Instruction Given: Managing Aging Infrastructure - presented at OAWU Annual Conference Sun River March 2019, March 2020, OAWU Summer Classic Seaside, Oregon August 2020, August 2021

Professional Organizations/Activities: Oregon Association of Water Utilities - guest speaker/ lecturer, the Surfrider Foundation - recent past President of Newport Chapter

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: AMI Options

Presenter: Matt Zellers **Job Title:** Territory Manager

Employer: Mueller Systems

Phone #: 503-310-5993 **Email:** mzellers@muellerwp.com

Summary of Lesson Content: Ami Options: The technology to read water meters is changing rapidly. There are new technologies emerging that have changed the upfront and on-going costs associated with deploying an AMI System. New Technologies like LoraWAN and Cellular AMI may now allow even small systems to afford this technology. This presentation will compare and contrast the different new AMI technologies.

CEU Relevancy: Water Meters, and the way that utilities collect the reads, are the revenue engine of any water utility. Accurately and efficiently reading a water meter systems is very important. As more responsibilities are added to operators, and the number of workers is declining, reading a water meter systems in the least amount of time is a growing priority. Selecting the right technology to read a water meter system is an increasingly important decision for even small utilities.

Professional Background: I have 9+ years of Account Management. I work closely with utilities large and small to help determine the best water meter system for each utility.

Primary Knowledge/Skills/Abilities Related to Presentation: Water Meter Systems

Education: BS Mechanical Engineering from Penn State

Professional Registration/Certification: None

Related Papers/Instruction Given: Meter Questions and Decision, 2021,

Professional Organizations/Activities: AWWA

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Communicating with Engineers - Getting Non-Communicators to Understand Each Other

Presenter: Michael Grimm **Job Title:** General Manager

Employer: West Slope Water Dist **Phone #:** 5037290544 **Email:** mgrimm@wswd.org

Summary of Lesson Content: Engineers and operators often speak different languages and have different perspectives on the same project. How can operators effectively communicate with engineers to achieve the desired results for their project? How can operators and engineers understand one another?

CEU Relevancy: To achieve the desired results for any project, there needs to be clear communication between water utility staff (operators) and consulting engineers. To effectively communicate with each other, each has to know the needs of the other. For the consulting engineer to know what design meets the water utility's needs, the water utility needs to communicate clearly through proposals and scopes of work.

Professional Background: 1986-2004: Water quality manager/engineer with OHA; 2004-2009 Senior water engineer with City of Gresham & Sunrise Water Authority; 2009-2013: Senior water engineer for Cadmus (private engineering and environmental consulting firm); 2009-2015: Owner and president of Aquamize, LLC consulting firm; 2015-Present: General Manager for West Slope Water District

Primary Knowledge/Skills/Abilities Related to Presentation: General Manager of a water district, consulting engineer, ability to work with operators and engineers to complete projects

Education: B.S. Civil Engineering - Oregon State University

Professional Registration/Certification: Registered Professional Civil & Environmental Engineer

Professional Organizations/Activities: Member of AWWA since 1986

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: NPDES and WPCF Permit Planning Document Requirements

Presenter: Mike Lees **Job Title:** Project Manager

Employer: Anderson Perry & Associates, Inc.

Phone #: 5416059704 **Email:** mlees@andersonperry.com

Summary of Lesson Content: The presentation will briefly go over the various planning documents often required in Oregon DEQ WPCF or NPDES Permits such as Recycled Water Use Plans, Biosolids Management Plans, Hauled Waste Plans, Groundwater Monitoring Plans etc. and discuss the overlap between these planning documents and Permits. We will also look at the annual reporting requirements associated with these planning documents and some of the calculations that go into filling out DEQ required forms annually.

CEU Relevancy: A WPCF or NPDES Permit sets the framework for protecting public waters and public health. Compliance with a Permit is directly related to the operation and maintenance of a water system. The intent of the presentation is to bridge the gap between a Permit and Plan(s) so operators understand the relationship between Permit compliance and compliance with Plan requirements.

Professional Background: I worked as a general contractor and carpenter for 10 years before going back to college for civil engineering in 2010. Throughout college, I interned for a construction management company working on municipal projects. After graduation, I came to work for AP in 2016 working with municipalities on water, wastewater, and transportation projects and have managed projects though each phase of planning, funding, design, and construction. I received my professional license in 2019.

Primary Knowledge/Skills/Abilities Related to Presentation: Throughout my career, I have helped municipalities with DEQ permit compliance and special planning documents.

Education: Bachelor civil engineering

Professional Registration/Certification: P.E.

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Automatic Control Valves

Presenter: Mike Uthe **Job Title:** Northwest Area Manager

Employer: Mueller Water Products

Phone #: 406-223-2192 **Email:** muthe@muellerwp.com

Summary of Lesson Content: This course will explain to operators how to assemble, set and troubleshoot diaphragm actuated automatic control valves. We will also cover how control valves help solve common system issues of over/under pressurization, excessive water leakage, inadequate storage tank turn over, cavitation, water hammer and surge. Throughout the course we will explain the hydraulic fundamentals and there will be live demonstrations.

CEU Relevancy: Automatic control valves are in almost every distribution system and the inner-workings are not widely understood. This course will focus on how to operate and maintain these common valves along with tips and tricks for utilizing them in large-scale pressure management. This course can be considered an introduction to control valves.

Professional Background: I have been working in the water/ wastewater industry for the past 8 years. I cover our technology products in 8 states of the USA. This includes pressure management, water quality control, and asset management. I also have a focus on Smart Water initiatives.

Primary Knowledge/Skills/Abilities Related to Presentation: 8 years in the industry

Education: Master's in Mechanical Engineering (Montana State University)

Professional Registration/Certification:

Related Papers/Instruction Given: Several

Professional Organizations/Activities: Several

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Instructor Background & Information

Presentation Title: Cross Connection and Backflow Protection Certification Overview

Presenter: Molly Keller **Job Title:** Program Analyst 2

Employer: OHA - DWS

Phone #: 360-907-4487 **Email:** molly.a.keller@dhsoha.state.or.us

Summary of Lesson Content: An overview on what is required for Tester/Specialist certification and how to renew your certification. Including tips and tricks for Specialists and what is up and coming for the DWS certification program.

CEU Relevancy: The presentation will help operators understand what is required for tester/specialist certification and if they already have tester/specialist certification it will allow them to familiarize themselves with renewal requirements and keep them up to date with the direction of the certification program.

Professional Background: NA

Primary Knowledge/Skills/Abilities Related to Presentation: I run the Cross Connection and Backflow Prevention program for the State of Oregon Drinking Water Program.

Education: BA - Environmental Policy and Planning

Professional Registration/Certification: NA

Related Papers/Instruction Given: NA

Professional Organizations/Activities: NA

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Instructor Background & Information

Presentation Title: SCADA

Presenter: Rick Patton **Job Title:** Sales

Employer: Advanced Control Systems

Phone #: 208-991-7174 **Email:** rick@advancedcontrol.com

Summary of Lesson Content: Introduction to Supervisory Controls and Data Acquisition (SCADA) in a cloud hosted system. Explain what it is, why it is and advantages and disadvantages.

CEU Relevancy: Nearly all municipal water & wastewater employees are affected by SCADA systems

Professional Background: 30 years sales engineer

Primary Knowledge/Skills/Abilities Related to Presentation: Instrumentation, SCADA, controls

Education: BSEE

Professional Registration/Certification: n/a

Related Papers/Instruction Given: Multiple for EOR conferences

Professional Organizations/Activities: n/a

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Instructor Background & Information

Presentation Title: Pressure Control Valves: Hydraulics, Operation, and Maintenance

Presenter: Robert Velasquez **Job Title:** Water Management Consultant

Employer: Cimco-GC Systems

Phone #: 253-353-9620 **Email:** robert@cimco-gcsystems.com

Summary of Lesson Content: This class will cover the basic hydraulics, operations, and maintenance of control valves, including pressure reducing, pressure sustaining, and pressure relief functions.

CEU Relevancy: Operators will leave this class with a base level of knowledge for how control valves affect their system, how to operate them, and what maintenance is required to keep them running smoothly.

Professional Background: Based in Western Washington, Robert Velasquez trains and consults engineers and water districts across the Pacific Northwest. Over the last several years he has conducted dozens of trainings from maintenance to system design, and enjoys developing new presentations on pressing topics such as electronic controls, building redundancy in water stations, and how control valves can help improve water quality. He has conducted accredited trainings with the PNWS-AWWA, ERWOW, IRWA and OAWU organizations.

Primary Knowledge/Skills/Abilities Related to Presentation: 3 years experience consulting water districts in a sales and service roles

Education: Bachelors in Business Administration

Professional Registration/Certification: Factory Trained

Related Papers/Instruction Given: Full Day Control Valve Operators Course with PNW-AWWA Chapter

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Checking in on Check Valves: Operations & Selection

Presenter: Robert Velasquez **Job Title:** Water Management Consultant

Employer: Cimco-GC Systems

Phone #: 253-353-9620 **Email:** Robert@cimco-GCSystems.com

Summary of Lesson Content: This course will examine the operation of common check valves used in water and wastewater systems and compare the valves to aid in selecting the correct check valve type for a particular job.

CEU Relevancy: Check valves are used throughout water and wastewater systems to prevent reverse flow. Understanding their operation is essential or operators to troubleshoot their system and protect systems from underside reverse flow and water hammer.

Professional Background: Based in Western Washington, Robert Velasquez trains and consults engineers and water districts across the Pacific Northwest. Over the last several years he has conducted dozens of trainings from maintenance to system design, and enjoys developing new presentations on pressing topics such as electronic controls, building redundancy in water stations, and how control valves can help improve water quality. He has conducted accredited trainings with the PNWS-AWWA, ERWOW, IRWA and OAWU organizations.

Primary Knowledge/Skills/Abilities Related to Presentation: 3 years consulting with engineers, operators, and distribution, and extensive field time with Cimco-GC Systems's service department.

Education: Bachelors in Business Administration

Professional Registration/Certification:

Related Papers/Instruction Given: Check Valves Overview with Evergreen Rural Water Spring 2021

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Instructor Background & Information

Presentation Title: How to Cast a Cover in 563 Easy Steps

Presenter: Sue Barmon **Job Title:** Regional Sales Manager

Employer: Olympic Foundry

Phone #: 503-875-7601 **Email:** sue.b@olympicfoundry.com

Summary of Lesson Content: An overview of the casting process, from specification and material choice, traceability and load ratings, to the final cast part. Includes videos taken at the foundry from pattern through final machining.

CEU Relevancy: This presentation includes information on the quality aspects of castings and highlights important criteria to look at when selecting products....such as traceability, material, specifications and load ratings.

Professional Background: 35 years in the metals industries, including Reynolds Aluminum and Olympic Foundry.

Primary Knowledge/Skills/Abilities Related to Presentation: 18 years in the foundry industry.

Education: BS in Economics

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

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Instructor Background & Information

Presentation Title: What happens after calling 911; Fire at Water Plant

Presenter: Sue Lawrence **Job Title:** Public Works Director

Employer: City of Rainier

Phone #: 5033961736 **Email:** slawrence@cityofrainier.com

Summary of Lesson Content: The City of Rainier experienced a fire a the Water Treatment Plant. The presentation will go into details about the cause of the fire, what happend in the immediate after math, steps taken to keep water service intact. Experience in rebuilding and dealing with insurance.

CEU Relevancy: The lessons learned can be used for both water and wastewater operators. The steps to address the aftermath of a fire is applicable to both.

Professional Background: 31 years in Wastewater and 5 years in Public Works

Primary Knowledge/Skills/Abilities Related to Presentation: Responsible for the facility and Repair

Education: Blue Mt Community College

Professional Registration/Certification: Wastewater Grade IV, Collections Grade IV

Related Papers/Instruction Given:

Professional Organizations/Activities:

Course Sponsor: Eastern Oregon AWWA/PNCWA

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Instructor Background & Information

Presentation Title: Managing a Water Meter Project- What to expect

Presenter: Tammy Rogers **Job Title:** Project Manager

Employer: Ferguson Enterprises

Phone #: 15032094902 **Email:** tammy.rogers@ferguson.com

Summary of Lesson Content: We will provide basic information on how to a. prepare for a water meter project b. how to manage project during deployment c. how to close out a meter project

CEU Relevancy: This information will help prepare an operator as they take on a meter replacement project, or upgrade their reading system. This will help with customer notification, tracking a project and provide safety protocols. In conclusion we will identify key milestones to confirm a meter project is complete and fully functioning.

Professional Background: i will send my bio

Primary Knowledge/Skills/Abilities Related to Presentation: 27 years industry experience.

Education: some college

Professional Registration/Certification: Certified Sensus Project Manager, 10 hr OSHA Certification

Related Papers/Instruction Given: Metering and Conservation, 9/20, EORAWWA, Conservation and Efficiency through Metering, 8/2019 , Evergreen Rural Water Association

Professional Organizations/Activities: AWWA, Eastern Oregon PNCWA/AWWA Committee

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: The Future of Biosolids

Presenter: Tanner Hartsock **Job Title:** Consultative Sales Rep

Employer: BioLynceus

Phone #: 9703425297 **Email:** tanner@biolynceus.net

Summary of Lesson Content: Sustainable biosolids handling strategies are becoming increasingly difficult to develop. Even landfill applications are uncertain: recently, the state of California banned the use of biosolids as an alternative landfill cover. Now more than ever, WRRFs are considering innovative, even novel technologies for managing their biosolids. As regulations become more stringent, the time to consider new technologies for biosolids reduction is now.

CEU Relevancy: There is perhaps no contemporary challenge in wastewater greater than the future of biosolids handling. Wastewater operators need to know what regulations are coming, what technologies are currently available, and what they can do to stay ahead of the curve.

Professional Background: University of Iowa, Teaching and Research Assistant 2017-2019

BioLynceus, Consultative Sales Rep 2019-

Primary Knowledge/Skills/Abilities Related to Presentation: Background in the wastewater industry

Education: University of Iowa, M. Sc., 2019

Professional Registration/Certification:

Related Papers/Instruction Given: The Future of Biosolids, 9/13/2021, PNCWA Annual Conference

Professional Organizations/Activities: ERWOW, OAWU, PNCWA

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Wastewater Operator Certification

Presenter: Tiffany Yelton-Bram **Job Title:** Water Quality Manager, NW Region

Employer: Oregon Department of Environmental Quality

Phone #: 503 229 5219 **Email:** tiffany.yelton-bram@deq.oregon.gov

Summary of Lesson Content: The presentation will cover the basics of becoming and maintaining certification in Oregon.

- DEQ's Wastewater Operator Certification Program, and webpage navigation
- Current Application Forms
- Getting Certified
- The Basics of Wastewater Permits and System Classification
- Staying Certified – Renewal, Reinstatement, and Continuing Education
- Other Support: a brief tour of more wastewater management organizations
- Questions and answers

CEU Relevancy: Water quality permitted facilities in Oregon that treat sewage are required by rule to have at least one certified operator per shift. Oregon DEQ offers the Wastewater Operator Certification Program to provide that certification. Wastewater operators demonstrate their experience, education and pass an exam in order to become certified.

Professional Background: I have 32 years of experience in a variety of environmental programs at both the state and local government level. Areas I have worked in include water conservation, water quality permitting, pretreatment of wastewater, hazardous waste management, and solid waste facility permitting.

Primary Knowledge/Skills/Abilities Related to Presentation: I have developed and presented training for DEQ staff and the general public on aspects of DEQ's work including how water quality permits are written, what to expect during a water quality permit inspection, home to use EPA software for the submitting dis

Education: BA in Environmental Policy, The Evergreen State College

Professional Registration/Certification: Certificate in Business Administration, University of Washington

Related Papers/Instruction Given: NetDMR Basics, Clackamas Community College Water Environment Short School, March 2017

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Basics of "Your DEQ Online"

Presenter: Tiffany Yelton-Bram **Job Title:** Water Quality Manager, NW Reg

Employer: Oregon Department of Environmental Quality

Phone #: 503 975 0046 **Email:** tiffany.yelton-bram@deq.oregon.gov

Summary of Lesson Content: Oregon DEQ is developing a web based system to provide services such as applications and approvals for certificates, permits and authorizations. This new system is called Your DEQ Online. It is being rolled out in stages. To use the service, you set up an account. This presentation will go over account set up and will highlight some of the features of the service.

CEU Relevancy: Your DEQ Online will become the means for certified operators to apply for and pay for their certification. Operators may also use the service for other tasks, such as filing reports, reporting spills and applying for permits. Basic knowledge of the new system will help operators be ready when portions of the service are rolled out.

Professional Background: I have 32 years of experience in a variety of environmental programs at both the state and local government level. Areas I have worked in include water conservation, water quality permitting, pretreatment of wastewater, hazardous waste management, and solid waste facility permitting.

Primary Knowledge/Skills/Abilities Related to Presentation: I have developed and presented training for DEQ staff and the general public on aspects of DEQ's work including how water quality permits are written, what to expect during a water quality permit inspection, home to use EPA software for the submitting dis

Education: BA in Environmental Policy, The Evergreen State College

Professional Registration/Certification: Certificate in Business Administration, University of Washington

Related Papers/Instruction Given: NetDMR Basics, Clackamas Community College Water Environment Short School, March 2017

Course Sponsor: Eastern Oregon AWWA/PNCWA

2022 Eastern Oregon Operators Conference

March 28 – 30, 2022
Four Rivers Cultural Center, Ontario Oregon

Instructor Background & Information

Presentation Title: Upgrading Lagoon Based Treatment Systems to Meet More Stringent Limits for BOD, TSS and Nutrient Removal

Presenter: Tom Birkeland **Job Title:** Director of Project Development

Employer: Lemna Environmental Technologies

Phone #: 6126168392 **Email:** tbirkeland@lemna.com

Summary of Lesson Content: Many small communities need to upgrade their lagoon systems in order to meet current and future effluent requirements with cost effective and simple to operate wastewater treatment solutions. Learn about wastewater project development from conceptual design to final commissioning and ongoing customer support. The focus of this talk will be upgrading lagoon systems in cold climates to more effectively treat BOD, TSS and ammonia.

CEU Relevancy: Many small communities need to upgrade their lagoon systems in order to meet current and future effluent requirements with cost effective and simple to operate wastewater treatment solutions. Learn about wastewater project development from conceptual design to final commissioning and ongoing customer support. The focus of this talk will be upgrading lagoon systems in cold climates to more effectively treat BOD, TSS and ammonia.

Professional Background: Tom Birkeland is the Director of Project Development for Lemna Environmental Technologies (LET). He previously held project management positions with North American Wetland Engineering, Jacques Whitford, Stantec and Natural System Utilities, where he was responsible for 35 sustainable, decentralized water and wastewater treatment projects throughout Minnesota. He holds Class C Water and Wastewater licensees and the projects he managed received over 20 awards from the Minnesota Pollution Control Agency for operational excellence and compliance. He is a graduate of the University of Wisconsin-Madison and resides in Minnesota.

Primary Knowledge/Skills/Abilities Related to Presentation: Lagoon Process Design. Water and Wastewater Operations

Education: University of Wisconsin: BS in Chemistry and Biology

Course Sponsor: Eastern Oregon AWWA/PNCWA