

# Class Descriptions

## Tuesday 9:30am-10:30am

### **Steve Helm-Arizona Tap Master Inc.-Fire Hydrant Maintenance & Repair-Part 1 of 2**

This class will cover the basics of fire hydrant repair and maintenance, covering several major brands. Power points, handouts, real main valve seats from various brands as well as a cut away fire hydrant will be available for class room participation.

### **Shailer Nicholas-SUEZ Advanced Solutions-Sustainable Well Maintenance**

The Water Well Asset Management Program is a custom designed preventative maintenance program that includes regularly scheduled cleaning and monitoring to maintain peak performance, lower operational costs and extend service life.

### **Mike Luecker-USDA Rural Utilities Service-Who, What, When, Where, Why and How: Funding for Rural Water and Wastewater Projects**

This presentation will provide an overview of funding availability and application process within the United States Department of Agriculture's Rural Utility Service in the Rural Development (RD) for water and wastewater projects. Overall, this presentation will explain: WHO is eligible; WHAT funds are available; WHEN funds are available; WHERE to begin the application process; WHY RD has these programs; and HOW the application process works. The presentation will be geared to Utility Owners and Engineers, highlighting eligibility, funding availability and the application process. Attendees will have a better understanding of how to get an application started, and recognize critical path items that are part of the application, including the Preliminary Engineering Report, Environmental Documentation and Financial Information. A new online application process (RDAPPLY) and new on-line Electronic Preliminary Engineering Report platform (ePER) will be briefly discussed.

### **Bill Beck-Orenco Systems Inc.-Life Cycle Costs of Alternative Sewers**

This presentation will discuss effluent sewer, grinder sewer, and gravity sewer technologies. It will compare of the differences in installation, capital costs, and life-cycle costs.

# Class Descriptions

## Tuesday 10:45am-11:45am

### **Steve Helm-Tap Master Inc.-Fire Hydrant Maintenance & Repair-Part 2 of 2**

This presentation is a continuation of Part 1

### **Anthony Bussio-Armorock, LLC-Polymer Concrete Manholes Over The Years**

\*Please check back for an update

### **Briton Baxter-Arizona Corporation Commission-ACC Small Water Ombudsman Program and Water Loss Policy Discussion**

Representatives from the Arizona Corporation Commission will be on hand to discuss the ACC's Small Water System Ombudsman Office and how they can assist Class D and E water and wastewater utilities with the various regulatory filing requirements such as rate case applications, emergency surcharge and financing requests, and addressing compliance issues. There will also be a discussion of the Commission's new Water Loss Policy and what it means to small rural utilities.

### **Lourdes O'Brien-Tank Industry Consultants-AWWA Tank Standard D101 The Development of the "Inspection of Water Tank Related Facilities" Standard**

This presentation will give a brief overview of the AWWA Tank Standards, the standard development and revision process, and how tank owners and engineers can utilize the standards to obtain quality tank construction and rehabilitation projects and facilitate communication between all parties. The presentation will provide insight into what will and will not be included in the new D101 standard and how it will become a valuable tool for tank owners and operators nationwide.

# Class Descriptions

## Tuesday 1:00pm-2:00pm

### **Don Iwanski-Axiall Corp. A Westlake Company-Tablet Chlorination vs. Alternative Chlorination Methods**

The presentation is a comparison of tablet chlorination to gas, bleach and on-site chlorine generation alternatives for water treatment. A description of the four common chlorination methods for water disinfection including the operational, regulatory, safety, and economic considerations for each method will be presented. An Xcel based economic model that can be used by engineering consultants and operating utilities to assess the relative economics of each technology will also be presented.

### **Shawn Whitmer-Probiotic Solutions- Wastewater Microorganisms: When, Where & Why**

Microorganisms are a key factor in treating wastewater. Microorganisms play an important role in the bioremediation of wastewater, but it is essential that the wastewater plant operators understand how this biological system functions, as well as when and where they function within the system to properly ensure effective treatment. A basic understanding of what types of microorganisms exist and what roles they play and how to affect their processes in their ecosystem will greatly improve the effectiveness and sustainability of a healthy treatment system.

The consequence of neglecting the state of the microorganisms can be significant. Signs of oncoming problems include sludge bulking, foaming, poor settle ability, inefficient removal of suspended solids, excess sludge, and inefficient removal of BOD or COD. For example, many foaming, and sludge-bulking issues are due to excessive filamentous bacteria that thrive in systems that is out of balance. It is important to understand when, where and how the systems' microbes are relied on to breakdown/consume the contaminants in the wastewater to ensure more stable and efficient wastewater treatment processes.

### **Jerry Postema-Yarnell Improvement District-Emergency Preparedness & Disaster Recovery**

This presentation focuses on the impact of the natural disaster to the water system, the recovery efforts, the lessons learned from the disaster and recovery. A natural disaster can strike any community at any time. How to prepare for a natural disaster and the things to do to best prepare for recovery from the destruction to the water system were learned in Yarnell and this is an opportunity to help other communities to be better prepared for an emergency and the ensuing recovery.

### **Crystal Flitton-GSM Arizona-Air Valve Maintenance-Part 1 of 2**

This presentation discusses the importance and benefits of properly working air valves. Three basic types of air valves will be reviewed. When properly sized and placed, air valves can assure efficient and safe water transmission and distribution mains and wastewater force mains, greatly decreasing piping system damage and consequent economic, health, and environmental problems. Air valve specifications and maintenance issues will be covered, and any questions will be answered.

# Class Descriptions

## Tuesday 2:15pm-3:15pm

### **Tim Wellman-Souder, Miller & Associates-Groundwater and Wells for Operators 101**

This presentation will highlight the key elements of groundwater hydrology, specifically as they apply to wells and well operation. The participants will be guided through aquifer types, groundwater movement, well drilling methods, groundwater well pump types and general well troubleshooting. By the end of the session and Q&A, the participants will have increased their knowledge on the subject area to feel confident in groundwater wells and pumps terminology, principals and issues.

### **Jason Joynes-Town of Florence-SBR Optimization (Operations)**

Intro-Current Process Description-SBR Process and how it works in Florence  
Getting to know your plant-permits-operations-Biology  
Working with your plant-Compliance Testing-Process Testing  
Understanding your plant-What does data mean-Calculations & Formulas  
Q&A

### **Crystal Flitton-GSM Arizona-Air Valve Maintenance-Part 2 of 2**

This presentation is a continuation of Part 1

# Class Descriptions

## Tuesday 3:30pm-4:30pm

### **Carlos Guerra-Hose Solutions-The Economic Significance of a Flexible Drop Pipe**

Using Flexible drop pipe in a water well you can achieve many benefits over your standard rigid pipe. We will discuss friction loss (50% Less than your rigid pipe), Electrical savings, different installation and retrieval methods, quick installation (8min install of 750'), quick retrieval, the ability to maintenance and rehab your well quick and efficiently, test pumping. We will also talk about the Hose life expectancy, Hose constructions, tensile strength, PSI capability, Max Depth setting, and Zero Corrosion, as well as other benefits.

### **Shailer Nicholas-SUEZ Advanced Solutions-Ice-pigging: Low risk pipeline cleaning for Water & Wastewater**

Ice Pigging combines the operational advantages of flushing with the cleaning impact of soft pigging. The Ice Pig is a semi-solid that is pumped like a liquid and flows through changes in diameter, bends and fittings without blockage. Ice Pigging has a minimum impact on operations. The ice pig is simply pumped into and recovered from a hydrant at each end of the pipe section without excavation or modification to the hydrant.

### **Chris MacDonald-Construction Product Marketing-Pipe Assessment & Rehab**

\*Please check back for an update

### **Troy Hertog-PRIMEX-Cloud SCADA, Is it Right for You?**

Many communities are at a crossroads with their automation systems and are in the process of considering adding a new SCADA automation solution or are in need of upgrading their existing SCADA systems. Cloud/Web based SCADA platforms offer several advantages and a few disadvantages over the typical resident SCADA systems. But, they are not right for everyone.

This presentation will provide an overview of what Cloud SCADA is and an objective comparative, functional and cost, evaluation with typical resident SCADA systems. The presentation will breakdown the components of each system and makes recommendations towards reliability and security of traditional and or Cloud SCADA systems. Attendees will have a basic understanding of Cloud/Web based SCADA and associated advantages and disadvantages allowing them to make a more aware decision as they add or upgrade SCADA to their automation system(s)

# Class Descriptions

## Thursday 8:15am-9:15am

### **Noah Adams-ADEQ-Operator Advancement and Certification**

\*Please check back for an update

### **N. Emery Layton-Engineered with Layton, PLC-Arsenic Rule and System Optimization**

\*Please check back for an update

### **Edris Taher-Environmental Operating Solutions, Inc. (EOSi)-Biological Nutrient Removal Fundamentals & Case Studies-Part 1 of 3**

BNR WIKIPEDIA FOR OPERATORS & ENGINEERS is an interactive workshop on Biological Nutrient Removal subject. Attendees will participate in active learning through sharing their experience, critical thinking, group discussion, and problem solving. In the first part of the workshop, the wastewater characterization, nitrification, denitrification, chemical phosphorus removal and enhanced biological phosphorus removal subjects will be discussed. After a break, different process configurations and the design parameters will be discussed with their application. The process control parameters in wastewater treatment facilities is the next topic that will be covered in this workshop and will be followed with real world examples and design calculations. In the last part of this workshop, participants will be challenged to troubleshoot 3 cases (High effluent ammonia, High effluent nitrate, and Foaming).

At the end of this training, participants will be able to better understand and improve their theoretical and technical biological nutrient removal knowledge. This workshop will assist in troubleshooting Nitrification, Denitrification, Foaming, Chemical and Enhanced Biological Phosphorous Removal (EBPR) processes.

This workshop is designed and intended for mid to high level wastewater operators and engineers. All participants must have at least one-year experience in working in the wastewater treatment field, as well as have a basic familiarity with biological nutrient removal (BNR).

# Class Descriptions

## Thursday 9:30am-10:30am

### **Chelsey McGuire-ADEQ-Lead and Copper Rule (LCR)-Part 1 of 2**

\*Please check back for an update

### **Brian Heble-TMMI-User Friendly and Programming Free Reporting**

There are three reasons Water and Waste Water customers want an easy to use reporting solution.

First, there are reports mandated by regulatory agencies such as FDA, EPA, GAMP, etc. Without the proper compliance information, you can't do business. This requirement is the most likely driver of automated reporting solutions and the Water and Waste Water industry is by far the most regulated in this respect.

The second driver for information comes from the need to generate information that helps you run your plants better. These can be reports about equipment operation, energy or chemical utilization or maintenance. While Compliance information is mandated, the data you must have, Performance data is the real data that you want to have to improve your operations. The challenge has been that the tools to generate Compliance data have been very good at that, but not flexible or easy enough to apply for general purpose Performance data. As a result, the delivery of good quality and widely shared plant Performance information is typically lacking.

The third reason for information access is for troubleshooting. When numbers don't look right, for either Compliance or Performance, you need the tools to perform ad-hoc queries of your data, to pan and zoom trends, search and sort tables and export data for analysis in other tools, possibly as simple as Excel.

Ease of use and flexibility means that those that need information can generate it themselves. In the past, generating a report meant developing a specification, justifying the effort with IT departments or System Integrators and then iterating on the result until you get what you want. This process is both time consuming and expensive. Please join us as we explore a solution that does not require programming or scripting and can put the power of report generation into the hands of those that need it.

### **Edris Taher-Environmental Operating Solutions, Inc. (EOSi)-Biological Nutrient Removal Fundamentals & Case Studies-Part 2 of 3**

This presentation is a continuation of Part 1

# Class Descriptions

## Thursday 10:45am-11:45am

### **Chelsey McGuire-ADEQ-Lead and Copper Rule (LCR)-Part 2 of 2**

\*Please check back for an update

### **Andrew Carey-Compass Tools Inc.-Mobile Data GPS Collection**

This efficient geospatial data collection software utilizes cloud-based data management services, which bring mapping grade functionality to the devices you already use every day. The software is a platform independent (Windows Mobile, iOS, Android), making it a valuable compliment to any existing mapping workflow. Multiple users allow projects to be organized and reviewed from remote locations with the data returning from the field via central servers, eliminating the need for paper forms or returning to upload. Smartphones and Tablets receiving a GPS signal can store collection data and re-sync with a cellular signal to upload when reconnected with a network. Final output of data can be exported into XML, CSV, or KML formats through post processing within the software.

### **Edris Taher-Environmental Operating Solutions, Inc. (EOSi)-Biological Nutrient Removal Fundamentals & Case Studies-Part 3 of 3**

\*This presentation is the final part of a 3-part presentation