

Tuesday, October 21, 2014

Session 1-Pipeline Rehabilitation

1:30-2:00 PM

***Keep It Flowing - CIPP Rehabilitation
And Bypass Station Installation on a
35-Year Old Transmission Line***

Jeff Fidelin, SRT Consultants

The presentation is a case study of a sewer force main rehabilitation project that is submitted to AWWA because of its many similarities with water transmission lines, including the necessity to maintain service when repairing even though the pressurized pipe has no redundancy, no isolation valve, and no access manways. The Granada Force Main is part of the sewage transmission system operated by the Sewer Authority Mid-Coastside in Half Moon Bay. It is a 1.7-mile long, 14-inch-diameter, ductile iron pipe that conveys flows up to 3,000 gallons per minute (gpm) and pressures up to 60 pounds per square inch (psi). The 35-year old pipe has no access manways or isolation valves and needs extensive repair. It can only be shut down for a few hours. Installing a parallel redundant pipe is not an acceptable option.

Under such constraints, a customized approach has been developed to address immediate repair needs and allow future inspection and maintenance. The priority section of pipe has been identified and repaired using Cured-In-Place Pipe (CIPP). Four bypass stations have also been installed along the non-rehabilitated portion of pipe to afford Operations Staff

opportunities for periodic inspections, maintenance, and repairs. The project required eleven pipe shutdowns and had no spills.

2:00-2:30 PM

***Replacement of a Large Diameter
Transmission Pipeline Using Slip
Lining***

Ryan Pearson and Peter Jauch, Las Vegas Valley Water District

This presentation documents the case study of the planning, design, application and construction of a fusible polyvinyl chloride (PVC) slip lining project. Internal Asset Management staff determined that the existing pipeline in Las Vegas Boulevard under I-215 was leaking using Echologics listening techniques. Closed circuit television (CCTV) inspection of the pipeline was conducted as well, which indicate corrosion correlating to locations determined during the Echologics testing. These locations appeared to be under the travel lanes of Clark County Beltway I-215. The Echo Logics and CCTV inspections indicated that the pipeline was leaking and that it needed to either be isolated repaired or replaced. The pipeline provides a secondary feed to the hotels and casinos on Las Vegas Boulevard, making it a valuable asset. It was also needed to be in service as scheduled maintenance on the primary feed to Las Vegas Boulevard was necessary in the immediate future. Therefore, it was determined that the line had to be replaced and not abandoned in place. Many installation methodologies were considered during the planning phase of

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the project. Due to challenging pipe alignment and location of the existing pipe, it was determined that typical replacement options like open cutting and bore and jacking were not feasible. Slip lining was determined to be the best installation method due to these constraints and fusible PVC emerged as the best material selection as well. Numerous pipeline materials were considered for slip lining and fusible PVC rose to the top of the material list because it afforded the largest inside diameter of all the options.

Thirty (30) inch fusible PVC was installed via slip lining in an existing thirty-six (36) mortar lined and coated steel pipe. Approximately 800 linear feet of fusible PVC was installed in six (6) segments. Insertion pits were established at bends in the existing alignment. The longest segment of slip lining was approximately 215 feet and the shortest were approximately 40 feet. The segments were tied together with ductile iron bends and fittings at the insertion pits.

2:30-3:00 PM

Water Hammer – Tackling Transients Events at San Jose Water Company

Jacob Walsh and Andy Yang, San Jose Water Company

Water Hammer and transient events occur as a result of sudden changes in flow and can be a very expensive and time consuming challenge for water utilities to identify and solve. Additionally, failures associated with these events have the potential to introduce contaminants from outside the pipe into the

distribution system. At San Jose Water Company (SJWC) water hammer events have led to service line and consumer fixture failures as well as expensive home-repair claims against the company. SJWC has begun to use hydraulic modeling surge software in conjunction with transient pressure data loggers installed at key points in the field to analyze and develop solutions for mitigating water hammer events. In this lecture, the audience will learn: how SJWC investigates real-world water hammer events; potential ways to solve water hammer events in their respective system based on SJWC's experience; and the importance of incorporating a transient analysis into booster station designs.

BREAK 3:00-3:30 PM

3:30-4:00 PM

Upgrading Large Diameter Pipelines under Challenging Seismic Conditions

Deborah Cohen, Kennedy/Jenks Consultants and Calvin Huey, Sam Young and Heather Manders, San Francisco Public Utilities Commission

In 2002, the San Francisco Public Utilities Commission (SFPUC) launched the Water System Improvements Program (WSIP) with the intent to provide seismic, delivery, and water reliability to the residents of the San Francisco Bay Area. The numerous projects performed under the WSIP will repair, replace, and seismically upgrade the system's deteriorating pipelines, tunnels, reservoirs, pump stations, storage tanks

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and dams. The Harry Tracy Water Treatment Plant (HTWTP) Long Term Improvements Project (LTIP) and the Peninsula Pipeline Seismic Upgrades (PPSU) Project are two projects that were designed and constructed as part of the WSIP.

The HTWTP LTIP project was implemented to upgrade the plant's water treatment process facilities as well as seismically retrofit various components of the plant, which is located less than a thousand feet from the San Andreas Fault and with strands of the secondary Serra Fault crossing portions of the plant. Results of a seismic investigation and evaluation recommended the replacement of multiple large-diameter pipelines ranging in diameter from 60- to 96-inches. Improvements included slip-lining a 60-inch pipeline as well as constructing two tunnels to contain 84- and 96-inch diameter pipelines. In order to improve reliability of supply from the HTWTP, the PPSU Project was developed to increase reliability during potential seismic events of three Regional Water System water transmission pipelines - San Andreas No. 2 (SAPL2), San Andreas No. 3 (SAPL3) and the Sunset Branch Pipeline (SSBPL). The three pipelines cross the Serra Fault, a secondary fault situated to the East of the San Andreas Fault that passes through Colma Valley. In addition, SAPL2 and SAPL3 are affected by the Colma Valley liquefaction zones. The recommended modifications to the PPSU pipelines are grouped into five project sites located on the San Francisco Peninsula in San Mateo County, in the cities of Colma, South San Francisco, San Bruno and Millbrae.

This presentation provides an overview and lessons learned from these designs of upgrades to large diameter pipelines under challenging seismic conditions. Challenges encountered during construction and detailed construction photographs provide additional insight of design and construction considerations for these complex projects.

4:00-4:30 PM

San Francisco Public Utilities Commission Sole Sourcing Japanese Earthquake Ductile Iron Pipe

Doug Lee and Thanh Nguyen, San Francisco Public Utilities Commission

To improve the seismic reliability of its potable and firefighting water systems, the San Francisco Public Utilities Commission (SFPUC) is sole sourcing Kubota Earthquake Resistant Ductile Iron Pipe (ERDIP). ERDIP is patented and manufactured by the Japanese firm Kubota Corporation. The seismic resistance in ERDIP is provided by the patented flexible joint system that allows angular deflection with a range of 8 degrees and expansion and contraction of $\pm 1\%$ of the pipe length. Since the 1980s, it has been installed throughout Japan and in the Middle East and Asia. The Japanese ERDIP network survived the 1995 Kobe and 2011 East Japan Earthquakes with no reported seismic induced failures in ERDIP. Recently the Los Angeles Department of Water and Power (LADWP) have successfully installed ERDIP within its service area.

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The SFPUC is designing two ERDIP pilot projects. The Potrero Avenue Ductile Iron Pipe Main Replacement and Installation Project will install 2,800 feet of new 8" diameter low pressure potable water ERDIP main (scheduled for construction in Spring 2015). This project will install a dedicated water supply line for San Francisco General Hospital. The Candlestick Point Development project will install 3,200 feet of new 20" ERDIP to expand the SFPUC's Auxiliary Water Supply System (AWSS) to the new residential development (scheduled for construction in Spring 2015). The AWSS system is a dedicated high pressure water system operating at pressures as high as 335 psi used exclusively for firefighting. The AWSS is constructed with a SFPUC patented design developed over a century ago in response to the 1906 San Francisco earthquake. Recently the SFPUC started looking into viable alternatives that are more economical, more readily available, easier to install, replace, and repair, and that may provide higher performance. The SFPUC is using these two projects to evaluate the feasibility of replacing the existing AWSS standards with ERDIP, which has the potential to reduce cost and improve seismic performance. This presentation will discuss the SFPUC experience from the planning and design phases through the competitive bid process for material procurement and installation, highlighting challenges and obstacles that potential ERDIP users in the United States may experience when working with a new technology developed by a foreign entity. In addition, SFPUC will discuss its plans for staff and contractor

training and certification to correctly inspect and install ERDIP.

4:30-5:00 PM

Before you take that pipe to rehab: Condition Assessment Considerations

Chris Ewers, Ewers Engineering, Inc.

This is an exciting time. Pipeline rehabilitation options are opening up, with tools now available to install a replacement pipeline inside an existing pipeline with strength characteristics similar to the original pipeline. The costs for these technologies are considerable, sometimes exceeding the cost of installing a new, adjacent pipeline. And specific rehabilitation technologies are not appropriate for installation in all situations. But how to evaluate what technologies are a good fit for a specific problem pipeline? Consider developing a condition assessment.

Condition assessment is intended to provide a tool for predicting when an asset must be rehabilitated or replaced, permitting the owner to marshal resources to perform the replacement or rehabilitation before an emergency develops. The allure of condition assessment has driven research and development from the federal level in the United States through large corporations in Canada and Australia for some specialized and expensive data collection technologies.

This presentation has been developed to provide the attendees with a set of questions to answer to develop an effective approach for pipeline

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rehabilitation beginning with simple condition assessment. Attendees will learn how to maximize the already available and easily available information about their pipelines to maximize the benefit of a rehabilitation effort and minimize its cost. The process is based on work with California agencies to develop an integrated condition assessment program that becomes part of the day-by-day work of the agency and a reflection of the agency's culture of commitment to its customers.

The presentation will address costs and timelines for implementation of condition assessment technologies ranging from the simple, generally applicable to the complex and highly specialized. It will also correlate with rehabilitation techniques, addressing their costs and limitations, as well.

Session 2-Safe Drinking Water Act

1:30-2:00 PM

The West Without Water

B. Lynn Ingram, University of California Berkeley

Participants will learn about paleoclimatology and what both tree ring data and sediment records indicate regarding long term droughts and cataclismic floods in California

2:00-2:30 PM

Historical Perspective on Drinking Water Regulations

Mic Stewart, MWDSC

Participants will learn about what humans have long known about water quality and US Drinking Water Regulations beginning with "The Common Cup".

2:30-3:00 PM

Looking Forward After 40 Years of the SDWA

Alan Roberson, AWWA Regulatory Affairs

Participants will learn about how drinking water regulations have evolved since the SDWA was passed in 1974.

BREAK 3:00-3:30 PM

3:30-4:00 PM

Public Health Perspectives on SDWA

Bruce Macler, Cal-Nevada Section Chair

Participants will learn about how the Safe Drinking Water Act has improved drinking water quality delivered to Americans and the resultant public health benefits in the United States.

4:00-4:30 PM

SDWA Impacts on Nevada's Drinking Water Regulations

Jennifer Carr, NDEP

Participants will learn about how the SDWA has impacted State of Nevada's drinking water program during the past 40 years.

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4:30-5:00 PM***SDWA Impacts on Drinking Water Research***

John Albert, AwwaRF

Participants will learn how SDWA has impacted water research during the past 40 years.

Session 3- Environmental, Health & Safety**1:30-2:00 PM*****Practical Guidance to Manage Drinking Water System Releases***

Marian Gonzalez, Alameda County Water District

Participants will learn about the CA-NV AWWA Best Management Practices Manual for Drinking Water System Releases. This manual provides general information and example procedures used by our industry to better manage drinking water system releases and compliance with regulatory requirements.

2:00-3:00 PM***NPDES Roundtable: Drinking Water System Discharge***

Marian Gonzalez, Alameda County Water District and David Kimbrough, Alameda County Water District

Participants will learn about the most recent updates on drinking water system discharge NPDES permitting and have the opportunity to discuss the issues with subject-matter experts.

BREAK 3:00-3:30 PM**3:30-4:30 PM*****Surface Water Regulation and BMP Implementation***

Dino Orbiso, Golden State Water Company

Participants in this session will learn about the brief history of surface water protection regulation in the United States and the various BMP technologies and methodologies currently available to comply with current regulations.

4:30-5:00 PM***Critical Role of HVAC Systems in Indoor Air Quality***

Michael Peterson, EORM

Participants will learn the role of Heating Ventilation and Air Conditioning (HVAC) in Indoor Air Quality (IAQ), common HVAC issues affecting IAQ, simple methods for evaluating IAQ at your facility, and when to get professional help.

Session 4-Security & Emergency Planning**1:30-3:00 PM*****CalWARN/NvWARN/AzWARN Joint Exercise - Part I***

Ray Riordan, CalWARN

In this full session proposal, Participants will learn how the demand and need for fuel planning before an emergency is critical. Lessons learned from Hurricanes Sandy and recent events will be reviewed

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and the interdependent need on water sector response. This session will allow attendees to contribute to the development of an emergency fuel plan for the water industry and their utility specifically.

BREAK 3:00-3:30**3:30-5:00 PM*****CalWARN/NvWARN/AzWARN Joint Exercise - Part II***

Ray Riordan, CalWARN

In this full session proposal, Participants will learn how the demand and need for fuel planning before an emergency is critical. Lessons learned from Hurricanes Sandy and recent events will be reviewed and the interdependent need on water sector response. This session will allow attendees to contribute to the development of an emergency fuel plan for the water industry and their utility specifically.

Session 5-Water Well Technology**1:30-2:00 PM*****Development of a Regional Well Rehabilitation and Replacement Program***

Russell Kyle, GeoScience

Participants will learn about the steps necessary to evaluate a large and aging groundwater production well field and rank the wells with regard to rehabilitation or replacement.

2:00-2:30 PM***City of Davis Journey by the Public Works and Parks Departments Partnering Together to Convert a Domestic Water Well to an Irrigation Well***

Tim Williams, Kennedy Jenks and Dianna Jensen, City of Davis

The City embarked on conversion of a well reaching its useful life and converting it from a potable to irrigation well for a large City park to reduce peak water demands and save cost on the City's general fund.

2:30-3:00 PM***Dewatering Wells to Accommodate Large Scale Construction in Doha, Qatar***

Kent O'Brien, GHD

The participants will learn about the unique issues related to installing and operating large scale dewatering projects in Qatar located in the Middle East. This presentation also reviews some of the consequences of large scale aquifer dewatering projects in an arid environment.

BREAK 3:00-3:30**3:30-4:00 PM*****Development and Application of Computer-based Well Management and Assessment Tools for Water Companies***

Stephen Harrison, California Water and Yemia Hashimoto, AMEC

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Participants in this session will learn how a computer-based asset management tool was designed for and how it is used by two large western water utility companies to determine budgets, justify rate increases, and focus on wells that may soon need repair.

4:00-5:00 PM

Water Well Asset Management Programs: A New Sustainable Approach to Maintaining Well Performance and Water Quality

Ray Reece and Jack Powell, Utility Services

Participants will be informed of the use of CO2 as a method for rehabilitating a well and then the ongoing use of mini treatments to

prolong the service production of capacity over time. The comparison of other cleaning technologies will be discussed.

Session 6-Engineering & Construction

1:30-2:00 PM

Using Design Build Operate Delivery for a 30 MGD Raw Water Conveyance, Water Treatment, and Delivery System for the Cities of Davis and Woodland, California

Kathy Rosinski, CH2M HILL

Participants in this session will learn about the the 30 mgd new potable water treatment plant currently being designed and constructed for the Cities of Davis and Woodland, including challenges and

novell approaches employed to optimize energy efficiency and life cycle cost.

2:00-2:30 PM

Surface Water, the Cornerstone of Fresno's Conjunctive Use Program to Mitigate Drought Impacts

Peter von Bucher, Carollo Engineers

Participants in this session will learn how the City of Fresno's new 80 mgd surface water treatment plant will serve as the cornerstone for a conjunctive use program designed to mitigate drought impacts and meet growing demands through 2050.

2:30-3:00 PM

One year later - Wellhead Treatment Plant Operation

Jim Elliot, Park Water Company with Issam Najm, WQTS, Inc.

Participants in this session will learn will learn about the knowledge gained in the operation of a wellhead coagulation-filtration arsenic/manganese treatment system. After 1

year of operation, the presentation will discuss performance, operational challenges, and lessons-learned.

BREAK 3:00-3:30

3:30-4:00 PM

Real World Implications of California's NSF/ANSI 61 Certified Concrete Requirement

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Chris Cleveland, Carollo Engineers with Kevin Peacock, DN Tanks

Participants will learn what real world challenges have been encountered in meeting California NSF/ANSI 61 certification of concrete. Case studies reviewed will include a large water treatment plant project and several pre-stressed concrete tank projects. Successful strategies will also be reviewed.

4:00-4:30 PM

How to Design an Effective Public Outreach Program for Very Disruptive Construction Projects

Tim Karlstrand, Carollo Engineers

Participants in this session will learn will hear lessons learned on how to and how not to deliver a project that is very disruptive to the public.

4:30-5:00 PM

Implementing Program Management for Delivery of the City of Fresno's Metropolitan Water Resources Management Plan.

Martin Wendels, City of Fresno with Gino Rapagna, CH2M HILL

Participants in the session will learn of how the City of Fresno is applying program management strategies for implementation of the City's Metropolitan Water Resources Management Plan, ultimately to enable the City to assure a long-term sustainable and reliable water supply for Fresno citizens and improved

water resource management for the region.

Session 7A-Energy

1:30-2:00 PM

Eastern Municipal Water District: The Roadmap to Energy Excellence

Greg Kowalski, Eastern Municipal Water District

Participants in this session will learn through an overview of the Energy Management Plan (EMP), and will be provided with a focused discussion of the evaluations and feasibility to convert existing natural gas internal combustion engine driven pumps to electric motors. The issues, challenges, GHG emissions, and regulatory requirements surrounding the conversion will also be detailed.

2:00-2:30 PM

Incorporation of Photovoltaic (PV) systems into a Water Utility's Energy Portfolio

Peter Jauch, Las Vegas Valley Water District

Participants in this session will learn how a large water utility has implemented photovoltaic systems into its energy portfolio and taken steps to mitigate power cost increases for its ratepayers.

2:30-3:00 PM

Save by going to the right Tariff

Mike Espejo, Derceto, Inc

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Attendee's will learn how to review the SCE tariffs that your pumping plants are on and what tariff alternatives are available.

3:00-3:30 BREAK

Session 7 B- Asset Management

3:30-4:30 PM

Asset Management Panel - Real World Asset Management Programs

Doug Spiers, Moderator

WestinPanel discussion by water utility personnel presenting three actual case studies of asset management program implementation. This interactive session presents the approaches, successes and challenges of implementing asset management programs within public sector water utilities, and highlights the best practices employed at each.

4:30-5:00 PM

Vertical Turbine Pump Issues and Solutions

Michael Volk, Volk & Associates, Inc.

Participants in this session will learn how vertical turbine pumps solve a wide range of application problems in water supply and distribution, while at the same time presenting a variety of challenges to reliable system operation and maintenance cost containment.

Wednesday, October 22, 2014**Session 8-A Materials Performance****8:00-8:30 AM*****Construction Cost Estimating***

Aaron Smud, Alpine Development

Many engineering and consultants develop construction estimates and schedules in a very similar fashion using a parametric approach. In short that entails identifying similar projects and comparing the cost and schedule history of those source projects. Often these costs are prorated to incorporate scope differences. Although this method can be effective it also can be flawed for a number of reasons: differing site conditions, working restrictions, design characteristics and numerous other factors can all substantially fluctuate the costs. Contractors on the other hand, typically take more of a project specific approach to develop a resource loaded definitive estimate including actual material costs, subcontractor quotes, assumed production using identified labor and equipment resources, and indirect costs consisting of project management, safety, and inspection costs. This estimate will also incorporate all project specific restrictions, design elements and other working constraints. During this presentation, participants will learn in more detailed the differences of these two estimates and guidance of how to avoid common mistakes within the estimating process.

8:30-9:30 AM***Thrust Restraint for Ductile Iron Pipelines***

Paul H. Hanson, P.E., DIPRA

Thrust Restraint for Ductile Iron Pipe Systems reviews solutions for thrust force problems. Internal hydrostatic pressure results in unbalanced forces - known as thrust forces at various locations in a pressurized piping system. These locations must be provided with proper thrust restraint. This program reviews design procedures for thrust blocks, restrained joint and other restraining techniques.

9:30-10:00 AM BREAK**Session 8-B Security & Emergency Planning****10:00-10:30 AM*****The Arid West - The Weatherman Perspective (What they expect for the next rainy season)***

Mike Alger, KTVN Channel 2 - Reno, NV

Participants will learn what is involved in predicting the weather for residents of Northern Nevada and California and whether we can expect drought or flood...and the impact on your utility.

10:30-11:30 AM***Metals Theft: The Cancer You Can Do Something About!***

Sue Lavin, Copper Theft Solutions LLC

Participants of this session will learn the extent of metals theft, who is doing it and what every utility can and should be doing to eliminate this cancer affecting our ability to reliably supply water to our customers.

11:30-1:30 LUNCH**1:30-2:00 PM*****Your Watershed's on Fire...What do you do?***

Mary Ellen Carroll, San Francisco Public Utilities Commission

Participants of this session will learn key lessons learned from a major incident affecting a water utility and how to turn these lessons into corrective actions for improvement.

Session 8-C Information Management**2:00-2:30 PM*****Smart Water in Spatial Asset Management***

John Leeuwenburg, Realworld Systems

How to apply various Spatial Asset Management applications to managing all assets related to water and how to apply

them to operations, engineering, design, maintenance and customer service.

Session 8-D Security & Emergency Planning**2:30-3:00 PM*****Resource Typing - The Innovative Approach***

Shaun Curtis, Long Beach Water; Christine Herndon, Herndon Solutions Group

Participants will learn will learn how your utility can also comply with industry resource typing directives and apply it for both deployment, as well as if your utility is the requesting authority.

3:00-3:30 BREAK**3:30-4:00 PM*****Security: A Look Into the Future***

Alan Gatlin, Leverage Information Systems

Participants will learn the value of a system approach to security using a "Next Generation Model" that is scalable and the essence of a Proactive Security/Surveillance Program and the role SCADA integration can play. This session is valuable for all utilities interested in benchmarking their security system or would like a glimpse into the future of water utility security.

4:00-5:00 PM***Lessons Learned from Recent Disasters: The Burning Man After Action Report***

James Wollbrinck, San Jose Water Company

Participants of this session will learn what knowledge was gained by those that experienced the most recent disasters that affect the water industry.

Session 9-A Communications & Customer Relations

8:00-8:30 AM

Effectively Educating Ratepayers about Investing in Infrastructure and Rate Increases: A Case Study from the SFPUC

Deborah Chilvers, Deputy Communication Director, SFPUC

Participants will learn about how the SFPUC was able to develop and implement an outreach program to effectively communicate with customers that rate increases are needed to invest in our water and wastewater infrastructure to ensure a reliable system for generations to come. Lessons learned will also be included as part of the discussion.

8:30-9:00 AM

SFPUC's "My Account" Online Portal: Increasing Water Use Awareness among Customers One Click at a Time

Alison Kastama, Communications, SFPUC;
Heather Pohl, Project Management, SFPUC

Participants will learn about how the San Francisco Public Utilities Commission is using a new online portal "My Account" to raise awareness among customers of daily water consumption and encourage conservation. Participants will also learn about the challenges and lessons learned with building and launching a portal like My Account.

9:00-9:30 AM

Communicating Rates to Customers Using the Web

Darcy Burke, Municipal Water District of Orange County

9:30-10:00 AM BREAK

10:00-10:30 AM

Videos 101: Show Them About Water

Shannon Reed, Irvine Ranch Water District

Participants will learn about the value of showing customers and stakeholders informational videos about water. This presentation will give attendees the basics of starting a Video Communications program.

10:30-11:00 AM

Media Management: Make It Work For You During Drought

Marlene Olsen, Good Standing Outreach

How to manage your agenda, especially around drought education, with media: a response to the media should be a benefit to you and your organization most of the time. How to evaluate a good opportunity, manage it and when you can say no.

11:00-11:30 AM***Making an Impact with Social Media***

Erika Blaska, Irvine Ranch Water District

Participants will learn about how to fully utilize social media to make an impact with their target audience and demonstrate results. Content includes developing a social media outreach campaign, measuring success, and getting your Board on board.

11:30-1:30 LUNCH**Session 9-B Desalination****1:30-2:00 PM*****Fertilizer Driven Osmosis and Other Novel Forward Osmosis Desal Applications***

Erik Desormeaux, Porifera, Inc

Participants in this session will learn how to utilize Forward Osmosis to reduce energy to desalinate water. This includes zero energy "Fertilizer Driven Osmosis" for agriculture and irrigation water and reduced energy applications such as "Osmotic Dilution" and "Hydraulically Combined Pressure Retarded Osmosis."

2:00-2:30 PM***Subsea Groundwater for Desalination Feedwater Supply***

Brian Villalobos, Geoscience Support Services, Inc

The participants will learn the required hydrologic conditions and investigative approach for determining the feasibility of using subsea subsurface intake systems for obtaining desalination feedwater supply

2:30-3:00 PM***Introducing Desalinated Seawater into Distribution Systems***

Helene Baribeau, Baribeau Environmental Engineering; Rod Posado, Otay Water District

This presentation will evaluate the effects of introducing and blending desalinated seawater with other water sources, with a focus on disinfectant residual, disinfection by-products, corrosion, biostability, nitrification, and boron.

3:00-3:30 BREAK**3:30-4:30 PM*****FO Pilot Test Results Recycling Secondary Effluent and Graywater***

Erik Desormeaux, Porifera, Inc.

Participants in this session will learn how forward osmosis improves water quality and reduces costs, maintenance and footprint compared to current

technologies when recycling water for high purity reuse.

Session 10-A Safe Drinking Water Act

8:00-8:30 AM

USEPA Drinking Water Regulatory Update

Corine Li, USEPA

Participants will learn about EPA's on-going and recent changes in drinking water regulations

8:30-9:00 AM

Nevada's Drinking Water Program Regulatory Update

Jennifer Carr, NDEP

Participants will learn about Nevada's recent changes in drinking water regulations

9:00-9:30 AM

Nevada's Plans for Implementing the Revised Total Coliform Rule

Jennifer Carr, NDEP

Participants will learn about NDEP's plans for implementing the Revised Total Coliform Rule in 2015

9:30-10:00 AM BREAK

10:00-10:30 AM

California's Regulatory Update

Cindy Forbes, California SWRCB

Participants will learn about California's administrative Reorganization as well as on-

going and recent changes in drinking water regulations

10:30-11:00 AM

Drinking Water Regulatory Update

Alan Roberson, AWWA Regulatory Affairs

Participants will learn about on-going drinking water impacts and developments

11:00-11:30 AM

Regulated Contaminant Monitoring Rule 3 Occurrence Data and Implications

Tarah Henrie, California Water Service Company

Participants will learn about the trends in UCMR 3 occurrence and how this may drive future regulation. The ramifications for utilities will also be discussed.

11:30-1:30 LUNCH

Session 10-B Source Water Quality

1:30-2:00 PM

EPA's Long Term 2 Enhanced Surface Water Treatment Rule (LT2)

Monica Van Natta, UL LLC

Participants in this session will learn an overview of the upcoming LT2 rule which affects all PWSs that use surface water or groundwater under the influence of surface water. This discussion will include key differences from Round 1, sample

collection options, and why Cryptosporidium is monitored.

2:00-2:30 PM

In Situ Aeration Applications

Sam Silva, California Water Service Company

The objective of this lecture is to educate the audience on practical in-situ aeration applications for surface water and drinking water treatment operations

2:30-3:00 PM

SBA Water Quality Impacts Related to the Drought

Bruce Cabral, Santa Clara Valley Water District

Participants will learn about the drought impacted raw water quality at the various treatment plants that receive water from the South Bay Aqueduct.

3:00-3:30 BREAK

3:30-4:00 PM

Maintaining Raw Water Reservoir Quality In Drought Conditions by Solar Powered Long Distance Circulation.

David Summerfield, Medora Co. SolarBee/ GridBee

Participants in this session will learn about how drought conditions can lead to poor water quality in raw water

reservoirs. Toxic cyanobacteria, also called Blue Green Algae, can create a number of water quality problems. This presentation will focus on controlling algae blooms with in-lake, solar powered, long distance circulators.

4:00-4:30 PM

Application of Hypolimnetic Oxygenation to Address TMDL for a Eutrophic Reservoir

William K. Faisst, Brown and Caldwell

Participants in this session will learn how adding oxygen to a eutrophic reservoir's hypolimnion allowed South Tahoe PUD to control algae concentration and nutrient cycling and take affirmative action to preserve recreational fishing while meeting TMDL requirements.

Session 11-A Research

8:00-8:30 AM

Geochemical Controls on Chromium Occurrence, Speciation, and Treatability (WRF Project 2842)

Mary Messer Smith, Water Research Foundation

about the influence of aquifer conditions on the release of chromium from Cr-bearing aquifer formations and potential removal techniques for Cr accumulated in recovered water in aquifer storage and recovery projects.

8:30-9:00 AM

Lessons Learned from 8 years of Operating a Hexavalent Chromium Treatment Plant

Joseph Zalla, CH2M HILL

Participants in this session will learn about an operating hexavalent chromium treatment plant, current hexavalent chromium drinking water regulations, and alternative treatment methods for removing hexavalent chromium.

9:00-9:30 AM

Where Does Chromium Go? An Assessment of the Fate of Chromium in Distribution Systems

Phil Brandhuber, HDR

Participants in this session will learn if there is evidence that chromium concentrations can increase or decrease or that chromium can change speciation once it enters the distribution system.

9:30-10:00 AM BREAK

10:00-10:30 AM

A Water Utility's Approach to Compliance with the California Hexavalent Chromium MCL

Craig Gorman, Corona Environmental Consulting

Implications of strong base anion exchange for hexavalent chromium removal from drinking water.

10:30-11:00 AM

Practical Considerations for Chromium 6 Treatment

Tarah Henrie, California Water Service Co.

Participants in this session will learn the practical considerations for selecting chromium 6 treatment, and the challenges we are working through to install treatment.

11:00-11:30 AM

Full-scale SBA-IX Cr(VI) Treatment Experience at Soquel Creek Water District

Chad Seidel, Corona Environmental Consulting, LLC

Participants in this session will learn about experiences from full-scale strong base anion exchange (SBA-IX) Cr(VI) treatment at Soquel Creek Water District, including comparisons with past bench- and pilot-scale test results and residuals management strategies.

11:30-1:30 LUNCH

1:30-2:00 PM

Fracking

Mark Nechodom, CA Dept of Conservation

Preliminary Technical Program -Wednesday

Participants will learn some of the technical challenges of oil and gas development, and specific features of hydraulic fracture stimulation. Moreover, the presentation will include key elements of the recently passed and signed Senate Bill 4.

2:00-2:30 PM

Hydraulic Fracturing: Developing Water and Oil and Gas Sector Partnerships

HYDRAULIC FRACTURING: DEVELOPING WATER AND OIL & GAS SECTOR PARTNERSHIPS

John Whitler, Water Research Foundation

This presentation will provide a review of findings from an April 2014 workshop that WRF conducted to improve partnerships between oil and gas and the water sector.

2:30-3:00 PM

EPA's Study of the Potential Impacts of Hydraulic Fracturing for Oil & Gas on Drinking Water Resources

Ramona Trovato, USEPA

potential impacts of hydraulic fracturing on drinking water resources and to identify the driving factors that may affect the severity and frequency of such potential impacts. EPA has designed the scope of the research around five stages of the hydraulic fracturing water cycle: water acquisition, chemical mixing, well injection, produced water and flowback, and wastewater treatment and disposal.

3:00-3:30 BREAK

To answer the study's research questions, EPA is analyzing existing data, creating computer models, performing laboratory studies and toxicity assessments, and examining case studies.

Session 11-B Backflow Programs**3:30-4:00 PM**

How Tester Ethics Can Damage Your Cross Connection Control Program

Chris Castaing, San Diego County Water Authority

Participants in this session will learn what the impacts of Certified Backflow Testers not performing their job properly/ethically.

4:00-4:30 PM

Backflow Preventer Testing & Maintenance: Administer or Do It Yourself

Jeff Flynt, Palomar Backflow

Participants in this session will learn about a Water Agency who conducts their Cross Connection Control program and Backflow testing in house.

Session 12- Operators**8:00-8:30 AM**

Coliform Sampling and Testing Experiences in Potable Distribution Systems

Rich Zimmer, Eurofins Eaton Analytical, Inc.

Participants in this session will learn about all of the factors that can contribute to Coliform positives in

potable distribution system samples and strategies to minimize false positive occurrence.

8:30-9:00 AM***Chemistry Sampling and Testing Strategies for Potable Compliance Analysis***

Rich Zimmer, Eurofins Eaton Analytical, Inc.

Participants in this session will learn about all of the factors that can contribute to cross contamination and strategies that can be taken to minimize the contamination potable entry point samples in the field and in the laboratory.

9:00-9:30 AM***Synergistic Benefits from Operator and Maintenance Staff Input During Design***

Craig Thompson West Yost Associates
Participants in this session will learn how engineers can collaborate with operators and maintenance staff during design to optimize the design to meet operator expectations and provide configurations that are easier to maintain.

9:30-10:00 AM BREAK**10:00-10:30 AM*****Pipe Bursting Water Mains – Process, Design, Construction and Case Studies***

George Mallakis – TT Technologies, Inc

This presentation will explain and educate to the attendees about the basics of pipe bursting. We will discuss the process, planning, design and applications of pipe bursting for water main distribution systems. Discussions on what existing pipe materials can be Pipe Burst and what new pipe materials are installed with the process. References will be made to AWWA's Rehabilitation of Water Mains M28 Manual of Water Supply Practices. Real life experiences will be shown where Pipe Bursting is being used and its effectiveness.

10:30-11:30 AM***Chemical Metering Pump System and Accessories***

Richard Hopkins, Hopkins Technical Products, Inc

Learn how to calculate chemical feed dosages. Learn how to properly size a chemical metering pump. Metering pump accessories, do I need them or not? Chemical compatibility and proper installations of the pump accessories are keys to a successful and trouble free chemical feed system

11:30-1:30 LUNCH**1:30-3:00 PM*****Operator roundtable***

Bill Cardinal, Calaveras County Water District and Conrad Tona, City of Redding
The Operator, can bring your technical questions and experience to the

Operations Community. Treatment Plant and Distribution System Operators can discuss current and past experiences with their peers.

3:00-3:30 BREAK

3:30-4:30 PM

Theory of Automatic Control Valves

Joe Passalacqua HyDEC

This presentation will familiarize operators with the theory and maintenance of automatic control valves which will increase their expertise and skill set. It will also reacquaint them with the support personnel to contact for assistance with these valves. Attendees will also understand the role that electronics play in automatic control valves.

4:30-5:00 PM

Trenchless Underground Methods and Tools Water Distribution Services Specialist

Ty Green TT Technologies

Attendees will learn how to safely, properly, and efficiently use the trenchless methods and tools of "Split and Pull" for water service replacement and rehabilitation and pneumatic boring tools for new service installations

Session 13- Financial Management

8:00-9:00 AM

Truckee Meadows-Water Without Borders

Jeff Tissier, CPA Truckee Meadows Water

Learn the approach taken for the simultaneous consolidation of three water utilities. Understand the political, operational, water resources management and financial challenges to the consolidation during the worst recession in the Reno-Sparks Metropolitan and Truckee Meadows Region.

9:00-9:30 AM

Policy Driven Financial Planning and Rate Development – City of Oceanside, CA

Alexander Bubee and Robert Grantham,Carollo Engineers

Participants in this section will learn how the City of Oceanside has and continues to utilize sound policies to proactively manage water and wastewater operations and maintenance, capital improvements, finances, and rate design.

9:30-10:00 AM BREAK

10:00-10:30 AM

Do Propositions 218 and 26 Keep You Awake at Night? Setting Utility Rates without Counting Sheep

Brian Jewett, Black & Veatch

This presentation will guide attendees through the maze of Propositions 218 and 26 in the context of setting utility rates. The presentation will go into detail

on: factors to address to be in compliance with cost of service principles, the Prop 218 noticing process, and the outcomes of various legal challenges as well as the intent of state statutes in regards to rate setting.

10:30-11:00 AM

Long Range Wage and Benefit Planning

Habib Isaac, Raftails Financial Consultants

Participants in this session will gain an understanding on the number of cost components that make-up total personnel compensation and how a long-term wage and benefit plan connects to a strong long-term financial plan of the agency

11:00-11:30 AM

Financial and Rate Setting Pitfalls

Pierce Rossum, Robert Grantham Carollo

A case study approach details six common pitfalls faced by many utilities, how they occur, why they are so often misjudged, and how to strengthen future rate and financial analyses.

11:30-1:30 LUNCH

1:30-2:30 PM

Current State of Pension Plans at CalPERS

Julian Robinson, CALPERS

The session will provide information on the current state of pension plans at CalPERS including the funding of CalPERS plans and the contribution requirements of employers. The session will also discuss recent decisions made by the CalPERS Board to strengthen the funding position of CalPERS over time and provide for a sound and sustainable fund

2:30-3:30 PM

Public Private Partnerships: Poseidon Water and the Carlsbad Desalination Project

Graham Beatty, Poseidon Water

Participants in this section will learn the fundamentals of Public Private Partnerships (PPP) using the Carlsbad Desalination Project as a case study. Learn how risk is allocated among parties during the permitting, construction and operation phases for large scale water infrastructure projects.

3:00-3:30 BREAK

3:30-4:00 PM

What in the world can we learn from California? Water budget rates successfully achieve water efficiency and revenue stability

Drew Atwater, Raftailis Financial Consultants

Participants in this section will learn what a water budget is, what it achieves and some recent experiences from agencies in southern California.

4:00-5:00 PM

Business Analysis of Conservation Investments

Edward Cebron, Cascade Water Alliance

Participants in this session will learn how a regional water supplier integrates economics and financial metrics to influence and, in many cases, drive its capital investments and operational decisions.

DRAFT

Thursday, October 23, 2014**Session 14-A Distribution System****8:00-9:00 AM*****Ice Pigging - Cleaning Mains with Ice***

Kevin Barnes and Keith Meyers, Utility Service Group

Participants will learn about a newer pipeline cleaning method that was recently introduced in the past two years to the US. They will see case studies on projects from around the country as well as here in CA. The presentation will also include how the process works and compares to other cleaning methods.

9:00-9:30 AM***Automated Disinfectant Residual Control Results from Year 1 Trial at San Bruno, CA***

Mark Reinhardt, City of San Bruno with Peter Fiske, PAX Water Technologies

Participants in this session will learn about the latest technology and results using active mixing and automated disinfectant monitoring and dosing in distribution storage tanks to control residual disinfectant levels.

BREAK 9:30-10:00**10:00-10:30 AM*****Achieving Stage 2 DBPR Compliance through System Optimization and Effluent Use of Post Filtration GAC***

Amanda Williams and Peter Thompson, Palmdale Water District

Participants will learn how utilizing GAC, as a post-filter adsorber to reduce TOC at a drinking water treatment plant, combined with additional system optimization practices can be part of a cost-effective treatment method for compliance with USEPA Stage 2 DBPR.

Session 14-B Water Treatment**10:30-11:00 AM*****Modified Activated Carbons, Their Porosity, and a Novel Method for Predicting 1,2,3-Trichloropropane Removal***

Adam Redding, Evoqua Water Technologies

Participants will learn the properties of modified activated carbon and its absorption capacity of 1,2,3 trichloropropane.

11:00-11:30 AM***A Pilot Study to Evaluate Anthracite/Sand Combinations for a WTP Filter Media Selection***

Lei Hong and Ryan Clemencic, Santa Clara Valley WD

Effective techniques for conducting a pilot filter study using anthracite/ sand media for a conventional water treatment processes with a raw water ozonation, piloting for filtration optimization, the

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criteria used to evaluate filter performance and result analysis.

11:30 AM-12:00 PM

Rapid Implementation of Ozone and UV Disinfection Systems Using Alternative Procurement and Delivery Methods

Joseph Zalla, CH2MHill

Participants in this session will learn about designing an ozone and UV disinfection facility for rapid implementation using alternative equipment procurement and construction delivery methods.

12:00-12:30 PM

Challenges in Determining and Operating at Sustainable Fluxes for Polymeric and Ceramic Low-Pressure Membranes

Leila Munla

Participants in this session will learn about the challenges involved with determining sustainable flux for long-term operation.

Session 15-A Water Management and Efficiency

8:00-8:30 AM

Drought Management under a Changing Climate: Using Cost-Benefit Analyses to Assist Drinking Water Utilities

Maureen Hodgins, Water Research Foundation with Julie Blue, Cadmus

Participants will learn about basics of benefit cost analysis and it's application for drought mitigation planning. Past examples (if found) will be presented. Case studies of about 3-8 utilities will be developed to employ these concepts, using past examples. This may or may not be completed by the presentation date.

8:30-9:00 AM

Accommodate Growth While Reducing Demand: The City of Napa Water Offset Program

Patrick Costello, City of Napa

Participants in this session will learn how the City of Napa has implemented its long-standing water demand mitigation requirements for new development, helping to reduce per capita water use and accelerate adoption of water-saving technology.

9:00-9:30 AM

Social Norms Based Messaging: Results Before and After Drought - Part I

Peter Yolles, Watersmart Software and Richard Harris, East Bay Municipal Utility District

Participants in this session will learn about how to improve outreach strategies and messaging to reduce residential water demand and how customer feedback in a social-norms-based (SNB)

efficiency program differed in a drought period compared to a non-drought period.

BREAK 9:30-10:00

10:00-10:30 AM

Social Norms Based Messaging: Results Before and After Drought - Part II

Peter Yolles, Watersmart Software and Richard Harris, East Bay Municipal Utility District

Participants in this session will learn about how to improve outreach strategies and messaging to reduce residential water demand and how customer feedback in a social-norms-based (SNB) efficiency program differed in a drought period compared to a non-drought period.

Session 15-B Communications & Customer Relations

10:30-11:30 AM

Your Customers Are Mobile, Are You Ready?

Steve Schultz, CHECK

Participants in this session will learn about trends in consumer mobile adoption, how water utilities should approach mobile customer self-service, and how several of their peer organizations have implemented mobile strategy.

11:30 AM -12:00 PM

Communication at your fingertips: Mining Sales Data to Inform Policy and Customer Communications

Christine Boyle, Valor Water Analytics

This session introduces attendees to a trove of analyses and methods to segment customers based on customer use patterns and develop 'targeted customer lists' so that communications are both direct (to these specific group) and cost efficient (why send out 80,000 messages when the impacted group is only 10,000 customers?). Methods are introduced with examples from five water and wastewater utilities.

12:00-1:00 PM

10 Tips for Effective Stakeholder Outreach and Authentic Communication

Lewis Michaelson, Katz & Associates

In this interactive session, participants will learn how to use public participation to better inform decision-making while also providing more meaningful communication with stakeholders. Case studies and real project examples will be used to demonstrate techniques that can be implemented on your next project!

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Session 16-A Environmental, Health & Safety

8:00-9:30 AM

Dealing with Naturally Occuring Asbestos, Transite Pipe, and Other Soil Contaminants

Hazard Management Services, Inc.

Participants in this session will learn of the need to create or update safety policies dealing with the potential hazards encountered while handling asbestos cement pipe (transite) and while handling soil in general. Various regulations have changed in recent years and many who handle transite are unaware of these new requirements. Awareness of other contaminants in soils has also increased. These potential contaminants include silica, arsenic, lead, hydro-carbons, diesel fuel-exhaust particulates, pesticides, etc.

BREAK 9:30-10:00

Session 16-B Tanks, Reservoirs & Structures Maintenance

10:00-11:00 AM

City of Woodland's Southwest Potable Water Storage Tank and Pump Station: A Collaborative Approach to Meet Aesthetic, Geotechnical, and Operation/Maintenance Considerations

Jeffrey Wanlass, West Yost; co speakers, Ben Serna, ENGEO; Kevin Peacock, DN Tank; Tim Busch City of Woodland

Participants of this session will learn that through a collaborative design approach the project objectives were met while

overcoming difficult soil conditions and gaining public acceptance for the project; including geotechnical mitigation measures and construction of pre-stressed concrete tanks.

11:00-11:30 AM

Case Study: City of Garden Grove's Concrete Reservoirs Condition Assessments

Eric Magee, GHD

Most municipalities are faced with rehabilitation, repair or replacement of aging infrastructure. Participants in this session will learn the approach that the City used to perform condition assessments on all of their concrete storage reservoirs. Inspecting concrete tanks can be complex task especially older reservoirs that have never been inspected before. Attendees will learn about the practical aspects of concrete tank inspection methods and considerations when inspecting aging concrete reservoirs.

11:30 AM -12:30 AM

Cleaning Your Water Tank: Preferred Methods and Benefits

Kevin Barnes and Keith Myers, Utility Services Group

Participants of this session will learn the different methods used to clean potable

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water storage tanks. Discussions on the advantages/disadvantages of each method will be reviewed. They will also be informed about the care of the interior coatings, mixing systems, and cathodic systems that can impact the cleaning methods.

Session 17-A Security & Emergency Planning

8:00-9:00 AM

Show Me the Money – How Utilities Can Better Access Federal Disaster and Mitigation Funding

David Goldbloom Helsner, USEPA; Cheryl Taylor/Gene Irvine, SFPUC

The federal government provides grants prior to disaster and public assistance post Presidentially declared disaster. Most water utilities are eligible to apply for these funds, yet there is not enough awareness of the process and staff have limited experience with the financial aspects of completing applications. The presentation will cover EPA's tool called Federal Funding for Utilities – Water/Wastewater – in National Disasters (Fed FUNDS) and utility staff will discuss their experience in obtaining federal disaster and mitigation funding.

9:00-10:00 AM

City of Palo Alto: A Case Study on Implementing AutoCAD@ Map 3D Enterprise - Part I

Drew Burgasser, CAD Masters, Inc.

Participants in this session will learn about the key elements necessary for the GIS implementation of AutoCAD Map 3D Enterprise for the City of Palo Alto Department of Utilities.

BREAK 9:30-10:00

10:00-10:30 AM

City of Palo Alto: A Case Study on Implementing AutoCAD@ Map 3D Enterprise - Part II

Drew Burgasser, CAD Masters, Inc.

Participants in this session will learn about the key elements necessary for the GIS implementation of AutoCAD Map 3D Enterprise for the City of Palo Alto Department of Utilities.

10:30 AM -12:00 PM

Exploring Technology

Joe Abrams, The Alliance for Community Solutions

Participants of this session will learn more about the variety of technologies used by the water industry and have the chance to request specific information about new technologies in coming months.

Session 18- Recycled Water

8:00-8:30 AM

Further Advancing a Novel Application of the Membrane Bioreactor Technology

Don Zylstra, West Basin Municipal Water District

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Participants in the session will learn about recycled water generation using an innovative application of membrane bioreactor technology to enable sustainable water production for different uses. Using this technology, nitrogen control and complete ammonia removal was successfully achieved for industrial uses. The results from the pilot testing and design considerations will be presented.

8:30-9:00 AM

Broad spectrum performance characterization of direct contact membrane distillation for water reclamation

Edward P. Kolodziej, University of Nevada, Reno

Participants in this session will learn how waste-heat driven membrane processes can be used for water recycling and reclamation in industrial and commercial facilities. This process can be used to product high quality water, or as a pretreatment process.

9:00-10:00 AM

Implementing Recycled Water at the San Francisco International Airport with a Long-Term Goal of 100% Reuse

Todd Reynolds, Kennedy/Jenks Consultants

Participants of this session will learn about the elements involved in planning an expanded recycled water program,

including the design of a treatment facility for producing recycled water.

BREAK 9:30-10:00

10:00-10:30 AM

The Role of Potable Reuse as a Sustainable Water Supply Alternative

Jeff Mosher, National Water Research Institute

Participants in this session will learn about the current status of Indirect Potable Reuse in California and other states, including technical and public acceptance challenges. In addition, the current approach to assessing Direct Potable Reuse in California will be discussed.

10:30-11:00 AM

Pure Water Monterey: Bringing indirect potable reuse to the Monterey Peninsula

Mike McCullough, MRWPCA

Participants in this session will learn about the Pure Water Monterey groundwater replenishment project, including the results from the pilot-scale demonstration testing.

11:00-11:30 AM

Comparison of Alternative Advanced Treatment Trains for Potable Reuse

Pam John, Santa Clara Valley Water District

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Participants of this session will learn about the testplan's activities, hear discussion on the latest science on advanced and innovative treatment technologies, and understand how the various treatment trains fit into potable reuse schemes that will meet California Department of Public Health requirements.

11:30 AM-12:30 PM

Pilot-Scale Evaluation of Treatment Trains for Direct Potable Reuse

Fredrick W Gerringer, Trussell Technologies

Participants of this session will learn about pilot testing of direct potable reuse (DPR) treatment trains. This project compared the performance of DPR treatment trains with and without reverse osmosis and evaluated their compliance with proposed DPR public health criteria for chemicals and pathogens.

12:30-1:00 PM

Critical Control Point assessment to quantify robustness and reliability of multiple treatment barriers of DPR scheme

Troy Walker, Hazen and Sawyer

Participants will learn about the use of the Hazard Analysis and Critical Control Point methodology as a means of demonstrating reliability and robustness of multiple treatment barrier processes for water recycling.

Session 19- Management Development & Leadership

8:00-8:30 AM

Employee Motivation in Difficult Times

Darrin Price, Sun Valley G.I.D.

Participants will learn about what motivates employees, the psychology behind it, and alternatives.

8:30-9:00 AM

Sustaining a Professional Workforce Today- A Consulting Engineering Perspective

John Enloe, Stantec Consulting Services, Inc.

Participants in this session will learn about some of the different challenges faced by the consulting engineering community regarding their aging workforce, and some of the active steps being undertaken to train and develop young engineers of today to become tomorrow's industry leaders.

9:00-9:30 AM

Rocky Mountain Section AWWA/WEA Joint Supervisory Leadership Certification Program

Richard Gerstberger, TAP Resource Development Group, Inc.

This program provides an understanding of how the Rocky Mountain Section of AWWA created an effective and well received supervisory training program. It

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will also review the content of the program along with successes and lessons learned.

BREAK 9:30-10:00

10:00-11:00 AM

Creating a Sustainable Utility Through Leadership and Employee Development

Richard Gerstberger, TAP Resource Development Group, Inc.

To provide an approach to successfully deal with the impact of workforce issues, including employee and leadership development, supervisory training, succession planning, and knowledge retention, that will equip the organization to deal with the challenges ahead—insuring their sustainability.

11:00-11:30 AM

Everyone Wins When We Put Our Veterans Back To Work

Max Sosa, State of Nevada

Participants in this session will learn that MOS means Military Occupational Specialty and that anyone with a US Army 92W MOS has obtained enough training and experience to pass a Water Distribution Level 1 exam. Whereas, someone with a US Navy Utilitiesman MOS working on a ship would be capable of operating an RO water Treatment System and a Wastewater Treatment System. A Veteran with this MOS should have enough training and experience to

pass a Water or Wastewater Treatment Level 1 exam. Every Branch of the Service has different designations and job descriptions for their MOS. There are also numerous financial incentives available to employers and veterans when a veteran is hired.

Session 20- Meters

11:30 AM -12:30 PM

Leak Alerts and Water-Loss Prevention: The Smart Meter Solution

Peter Yolles, WaterSmart Software, William Granger, City of Sacramento Department of Utilities

The U.S. EPA estimates that each year household leaks can waste more than 1 trillion gallons of water in the United States. Recognizing leaks and promptly notifying customers is a complex and resource-intensive process. AMI meters present a more technologically advanced solution to identify potential leaks. However, utilities still face the challenge of successfully communicating leak information to customers in a way that enables them to learn not just about water usage, but also about the leak source and possible fixes. The City of Sacramento Department of Utilities and WaterSmart Software collaborated to leverage AMI data to communicate conservation messages to residents. In addition to informing customers about daily water conservation practices, the program aims to transform hourly meter reads into a simple way to provide timely leak alerts. If the AMI data

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indicates that a leak may be present, the household is immediately notified via email, provided with an intuitive graphical display, and prompted to follow step-by-step instructions to check for the leak. The ongoing leak alert program has been successful from the beginning, largely due to the innovative blend of data transparency, technology, and targeted messaging. Sacramento and WaterSmart developed a closed loop system, so that the City could learn if the irregular water use was actually a leak, or if it was caused by other factors. As customers complete the online leak-check process, the system continually updates to incorporate new information. Presenters will share current results from the leak alert program, including customer feedback, number of stopped leaks, and how duration of leaks changed through this proactive notification. Further, they will discuss how to coordinate such a program with existing internal processes and the impact on utility workload. In addition, WaterSmart and its partners will discuss strategies for using technology to improve customer engagement and conservation programs.

1:30-2:00 PM

Deployment of a Correlated Acoustics Leak Detection Technology

Bernard Dunham, Delta Engineering Sales, LLC

The reduction of "Unaccountable -Non Revenue Water" is a priority for all Water Utility Operations. The use of a Correlated Acoustic Technology will

increase accountability while reducing labor requirements. Basic application parameters will be discussed, with the enhanced value of a correlated solution being defined. Prompt utility "return upon investment" can be realized with the proper deployment of "best serving technologies". In today's conservation environment, early detection of leaks with utmost accountability is required.

2:00-3:00 PM

No Infrastructure Needed - A New Fixed Based Meter Reading System

Michele Harvey, Badger Meter

In the past, fixed based meter reading systems (a.k.a AMI systems – Advanced Metering Infrastructure) haven't been an

option for water districts who didn't own the locations to install the collectors required to support the system. There is now a new AMI system where the meters connect directly to the existing cellular networks eliminating the need to install collection points within the district. The technology also offers customer website and consumer smart phone applications to promote conservation and improved customer service. This presentation presents an overview of the product, utility software, customer website and smart phone applications.

3:00-3:30 BREAK

3:30-4:00 PM

Meter change-out / AMI feasibility study basics

Bernard Dunham, Delta Engineering Sales, LLC

Investment in AMI offers many returns to a Utility, maximized utility operations, heightened customer service, and full support of water resource management and conservation. Prior to investment in AMI, a "business case" for investment must be documented. The basic parameters for the generation of a "Meter Change-out /AMI upgrade" feasibility study will be discussed. Offering guidance for a Utility to determine project viability in preface of investment.

4:00-4:30 PM

Predicting Radio Performance of AMR & AMI Systems

Michele Harvey, Badger Meter

This presentation discusses best practices in AMI equipment placement to minimize the effects of environmental and physical factors that result in poor system performance.

4:30-5:00 PM

How meter lids affect the outcome of the RF signal.

Jeff Smith, DFW Plastics Inc.

I will address the prevalent issues of RF signal loss as it passes through, or around

certain mediums found in the products we use today in the water meter enclosure industry. As an RF signal travels through the air and other mediums, it can move and behave in different manners. RF propagation behaviors include absorption, reflection, scattering, refraction, diffraction, free space path loss, multipath, attenuation, and gain. After speaking about some of the various characteristics of an RF signal, it is important to understand the way an RF signal behaves as it moves away from an antenna. As stated before, electromagnetic waves can move through a perfect vacuum or pass through materials of different mediums. The way in which the RF waves move—known as wave propagation—can vary drastically depending on the materials in the signal's path. Plastic lids will have a much different effect on an RF signal than a steel lid.

What happens to an RF signal between two locations is a direct result of how the signal propagates. When we use the term propagate, try to envision an RF signal broadening or spreading as it travels farther away from the antenna, like sound waves.

I will go through the different types of mediums, and how they can affect the RF signal.