

WATER IN THE WILD WEST

– Innovation and Resiliency

CONFERENCE PROGRAM



CALIFORNIA - NEVADA SECTION, AWWA
ANNUAL FALL CONFERENCE 2017

OCTOBER 23 - 26, 2017 • RENO, NV
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Welcome from the Chair



Heather Collins
2016-2017
CA-NV AWWA
Section Chair

WELCOME to the “Biggest Little City in the World” and THANK YOU for coming to the California-Nevada Section, American Water Works Association's 2017 Fall Conference in Reno, Nevada. “Water in the Wild West—Innovation and Resiliency,” is our conference theme, and AFC17 is a place to learn, dialogue, and collaborate about the industry topics and issues needing attention for ensured resilience and reliability, as we all carry on and provide safe and reliable water for all.

Want to get involved, learn, or get the updates on what's going on in the industry? I encourage you to attend one of the 50 specialty committee meetings on Monday (pg. 9). Network with your CA-NV colleagues and meet new friends at Monday's Membership Welcome Reception. Tuesday-Wednesday-Thursday attend technical presentations, over 150 of them and yes – contact hours are available. Visit the over 90 exhibitors at our 2-day exhibit hall and trade show; ask them questions – these folks know what they're talking about! Tues/Wed-Take a tour to a drinking water or recycled water plant – gather that operational perspective on what it takes to run these facilities!

Tuesday's keynote speakers, David Gutierrez and Paul R. Brown will inspire and inform you on why Innovation and Resiliency are paramount to infrastructure today. The annual business meeting will provide members with the progress and vision of the Section, then stay to see who will receive our Section's awards. Make sure to attend the Exhibitor Meet and Greet and Women's networking events on Tuesday as well.

Preparation and planning will help make the most of your conference experience. First, download the CA-NV AWWA mobile app to navigate and browse the technical program, exhibitor's list, speakers list, information about conference sponsors and much more! (pg. 7). The mobile app is easy to use and allows you to plan your day with reminders, contact/connect with conference attendees and has interactive maps.

There is a wealth of knowledge, connections, and opportunities that awaits you all! Get invigorated; involved, and educated – I want to hear about your conference experience and what innovative idea you have when I see you this week!

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TO REQUEST CONTACT HOURS, please return the completed Contact Hour Application, found in your registration packet when you arrive at Conference. If you paid for contact hours when you registered, leave the payment portion blank. If you are unsure if contact hours have been paid for, you can check with staff at onsite registration. You will receive your contact hour certificate by email within 30 days of conference. REMINDER: Your contact hours are based on the time you spend in each session, so please scan in and out of each session you attend.

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Conference Schedule

Sunday, October 22

Governing Board Meeting 1:30 pm - 5:30pm
Paradise A & B (Atlantis)

Monday, October 23

REGISTRATION 7:00am - 4:30pm
Reno Sparks Convention Center – Registration Lobby
Come pick up your badge or register.

SECTION LEADERS MEETING 8:00am - 9:45am
Grand Ballroom 5/6 (Atlantis)
Section Governing Board members and all committee officers are invited to attend this meeting for Section updates.

COMMITTEE MEETINGS 10:00am - 5:00pm
See page 9 for full listing
Committees bring together a variety of water professionals and their expertise to lead and guide Section programs and tasks. All water professionals are welcome to attend Committee Day.

WELCOME RECEPTION 5:30pm - 7:00pm
Treasures A, B & C (Atlantis)
We would love for you to join us in welcoming all attendees to another great Conference! Come network with other industry professionals and enjoy our reception.

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Tuesday, October 24

REGISTRATION 7:00am - 4:30pm
Reno Sparks Convention Center – Registration Lobby
Come pick up your badge or register.

FIRST TIME ATTENDEE & NEW MEMBER ORIENTATION 7:30am - 8:30am
Reno Sparks Convention Center – A20
An important event for the first-time attendee, new member, young professionals and student members attending their first CA-NV Section, AWWA Conference. As navigating the Annual Conference can be overwhelming, the orientation will familiarize attendees with the Conference and all it has to offer, including the mentor program. The orientation will be presented by members of the Section's Membership Engagement & Development Council. This is a great opportunity to begin networking, meet other attendees and your mentor.

TRUCKEE MEADOWS WATER CHALK BLUFF TREATMENT PLANT TOUR 8:00am - 12:00pm
Buses load at 7:30 am at the East Porte Cochere loading area (Atlantis)
***Additional Fee \$55** – Purchase tickets onsite at the registration desk.
Chalk Bluff is one of Truckee Meadows Water Authority's highly efficient water treatment facilities that can supply water to TMWA's entire service territory. Built to replace three outdated facilities in 1996, Chalk Bluff has the capacity to treat 90 million gallons of water a day. When needed, this capacity can be expanded to treat an additional 30 million gallons per day.

OPENING SESSION 8:30am - 10:00am
Paradise C, D & E (Atlantis)
The Opening Session will feature David Gutierrez, P.E., G.E., a California-registered Civil and Geotechnical Engineer in GEI's Sacramento, California office. During his 37-year career, David has established himself as an expert in water management and dam safety, and has created and led some of the most complex water management programs within the State of California for its Department of Water Resources. David has worked with cities, counties,



public works agencies, water and flood control agencies, attorneys, the California Legislature, United States Congress, State of California's Governor's Office, federal agencies, and other entities on a variety of water resources-related projects. David was formerly Chief of the Division of Safety of Dams and Program Manager for the Groundwater Sustainability Program within the Department of Water Resources. He has worked for the department in several capacities over the past 35 years including Chief of the Division of Safety of Dams (DSOD), Deputy Director for Public Safety, and Deputy Director for Business Operations.

AWARDS CEREMONY 10:15am - 11:15am
Paradise C, D & E (Atlantis)
Join us in recognizing the contributions made by Section members to the water community.

KEYNOTE LUNCHEON 11:30am - 1:30pm
Grand Ballroom (Atlantis)

(Ticket required- you may purchase additional tickets at registration for \$50)

We are honored to have Paul R. Brown, AICP, M.ASCE, President of Paul Redvers Brown Inc. as the Keynote Luncheon speaker. Paul Brown has nearly 40 years experience in strategic and facilities planning, project development, project finance, and program management for public utilities and environmental facilities. His clients include the states of California and Colorado; the Metropolitan Water District of Southern California (MWD); the Santa Clara Valley Water District; the Orange County (CA) Sanitation District; the Orange County Water District; the West Basin Municipal Water District; and the cities of Los Angeles, San Diego, San Francisco, San José, and Seattle. Brown was a founding chair of the International Water Association (IWA) Cities of the Future program steering committee and was named an IWA Fellow.



TECHNICAL SESSIONS 1:30pm - 5:30pm
Reno Sparks Convention Center
For complete schedule please refer to pages 14-17.

Manufacturers & Associates Council Committee Meeting 1:30pm - 2:30pm
Reno Sparks Convention Center – A17

EXHIBIT HALL GRAND OPENING 3:00pm - 4:00pm
Reno Sparks Convention Center – Hall 1A & B
With over 90 exhibit booths, this networking event is a great opportunity to meet vendors from across California and Nevada. Find the newest trends, innovations, technologies, and best practices available in the drinking water profession.

PRIZE DRAWINGS 3:30pm
Section Lounge in Reno Sparks Convention Center – Hall 1A & B
Must be present to win.

WOMEN'S NETWORKING SESSION 4:00pm - 5:30pm
Reno Sparks Convention Center – A3
Developing a Unique Mentorship Program at AWWA, Presented by Theresa Slifko, Metropolitan Water District of Southern California
A great mentor can be extremely beneficial for your career and personal development; however, this relationship can take many different forms. Join us in this workshop as Theresa Slifko shares her experience with different mentor program styles at several organizations. Building on her experience, participants will discuss and explore how to establish a unique mentor program most effective for women in AWWA.

EXHIBIT HALL MEET & GREET 5:30pm - 7:00pm
Reno Sparks Convention Center – Hall 1A & B
Join us in the Exhibit Hall to network with service providers and manufacturers that assist water agencies and professionals with new technologies, products and services.

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Conference Schedule

Wednesday, October 25

REGISTRATION..... 7:00am - 4:30pm

Reno Sparks Convention Center – Registration Lobby

Come pick up your badge or register.

EARLY BIRD TECHNICAL SESSIONS..... 7:30am - 8:30am

Reno Sparks Convention Center

Sessions 11, 12A, 13, 15A, 17A, 18, 19

TRUCKEE MEADOWS WATER

RECLAMATION FACILITY TOUR..... 8:00am - 12:00pm

Bus load at 7:30 am outside of the East

Porte Cochere loading area (Atlantis)

***Additional Fee \$55** – Purchase tickets onsite at the registration desk. Ever wonder where that good, clean water goes when your customers are through with it? Come see the “other end of the pipe” and the processes necessary to make the water safe to return to the environment. TMWRF is the largest wastewater treatment facility in Northern Nevada, treating the majority of the water for the Truckee Meadows. While it is a 50 year old facility, it is meeting some of the tightest discharge limits in the United States through physical, chemical and biological processes.

EXHIBIT HALL BREAKFAST..... 8:30am - 10:00am

Reno Sparks Convention Center – Hall 1A & B

Enjoy a cup of coffee and a pastry and start your day in the Grand Exhibit Hall where you can network with other attendees and vendors from across California and Nevada.

EXHIBIT HALL HOURS..... 8:30am - 4:00pm

Reno Sparks Convention Center – Hall 1A & B

With over 90 exhibit booths, this is a great opportunity to meet vendors from across California and Nevada. Find the newest trends, innovations, technologies, and best practices available in the drinking water profession.

PRIZE DRAWINGS..... 9:15am

Section Lounge in Reno Sparks Convention Center – Hall 1A & B

Must be present to win.

TECH TALKS IN THE EXHIBIT HALL..... 10:00am - 12:00pm

Reno Parks Convention Center – Hall 1A & B

Program begins at 10:00am at the Mueller Company Booth #202

The Manufacturers and Associates Council (MAC) are once again presenting the “Tech Talks” program in the Exhibit Hall. Earn up to 2 contact hours for participating in all four talks. Space is limited to the first 40 participants on a first come first serve basis. Be sure to scan in at the Mueller Company Booth #202.

Tech Talk Titles:

“Automatic Flushing and Monitoring Technology”

“Advanced Leak Detection Technology”

“Electric Motors: Eliminating the Effects of Shaft Currents on Motor Bearings”

“Water Service Pipe Materials: Common Products and Engineering Considerations”

For complete details refer to page 25

TECHNICAL SESSIONS..... 10:00am - 5:00pm

Reno Sparks Convention Center

For complete schedule please refer to pages 17-25.

EXHIBITOR HOSTED LUNCH..... 12:00pm - 1:00pm

Reno Sparks Convention Center – Hall 1A & B

(Ticket required – additional tickets at registration for \$50) Join us for lunch, enter the prize drawing and meet and network with exhibitors.

PRIZE DRAWINGS..... 12:30pm

Section Lounge in Reno Sparks Convention Center – Hall 1A & B

Must be present to win.

ACE18 Local Host Committee Meeting... 1:00pm - 3:00pm

Reno Sparks Convention Center – A17

BREAK AND PRIZE DRAWINGS..... 3:00pm - 4:00pm

Section Lounge in Reno Sparks Convention Center – Hall 1A & B

Must be present to win.

RENO FUN-RAISER, WATER FOR PEOPLE

FUNDRAISER EVENT..... 6:00pm

Renaissance Hotel Bocce Party Salon (Must purchase \$50 ticket)

The Section's Water for People Committee presents Reno Fun-Raiser. Enjoy food, drinks and Bocce! This charity event will raise funds for an exclusive Africa Project to provide clean water and sanitation for those in need. Proceeds and donations will be presented to Water for People in honor of Mr. Chet Auckly - Beloved mentor, friend and clean water advocate for all!

Thursday, October 26

REGISTRATION..... 7:00am - 10:00am

Reno Sparks Convention Center – Registration Lobby

Come pick up your badge or register.

TECHNICAL SESSIONS..... 8:00am - 12:00pm

Reno Sparks Convention Center

For complete schedule please refer to pages 26-28

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CA-NV AWWA

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Committee Meetings

Monday, October 23

Committee	From	To	Location
Advanced Water Treatment Committee	1:00 PM	2:00 PM	EMERALD C (Atlantis)
Asset Management Committee	10:00 AM	11:00 AM	GRAND BALLROOM 2 (Atlantis)
Awards Committee	10:00 AM	11:30 AM	EMERALD B (Atlantis)
Backflow Cross Connection Cert. Committee	10:00 AM	12:00 PM	PARADISE B (Atlantis)
Backflow Program Committee	11:00 AM	12:00 PM	PARADISE A (Atlantis)
Certification Board	3:00 PM	5:00 PM	PARADISE B (Atlantis)
Committee Engineering Corps	1:00 PM	2:00 PM	EMERALD A (Atlantis)
Communications & Customer Relations Committee	10:00 AM	10:30 AM	GRAND BALLROOM 3 (Atlantis)
Competitions Committee	1:00 PM	2:00 PM	PARADISE A (Atlantis)
Desalination & Recycled Water Committee	10:00 AM	11:00 AM	PARADISE C (Atlantis)
Distribution System Water Quality Committee	10:00 AM	11:00 AM	PARADISE E (Atlantis)
Education Committee	3:00 PM	4:00 PM	EMERALD C (Atlantis)
Energy & Sustainability Committee	11:00 AM	12:00 PM	PARADISE C (Atlantis)
Engineering & Construction Committee	11:00 AM	12:00 PM	GRAND BALLROOM 2 (Atlantis)
Engineering Division Meeting	5:00 PM	6:00 PM	GRAND BALLROOM 2 (Atlantis)
Environmental Health & Safety Committee	10:30 AM	11:00 AM	GRAND BALLROOM 3 (Atlantis)
Financial Management Committee	11:00 AM	12:30 PM	GRAND BALLROOM 3 (Atlantis)
Government Affairs Committee	2:00 PM	3:00 PM	EMERALD C (Atlantis)
Leadership Development Committee	1:00 PM	2:00 PM	GRAND BALLROOM 3 (Atlantis)
Materials Performance Committee	1:00 PM	2:00 PM	GRAND BALLROOM 2 (Atlantis)
Membership Engagement & Development Council	4:00 PM	5:00 PM	EMERALD B (Atlantis)
Meter Committee	3:00 PM	4:00 PM	PARADISE A (Atlantis)
New Technology Committee	2:00 PM	3:00 PM	GRAND BALLROOM 3 (Atlantis)
Operators Committee	10:00 AM	11:00 AM	PARADISE A (Atlantis)
Operators Division	4:00 PM	5:00 PM	PARADISE A (Atlantis)
Past Chairs Committee	10:00 AM	11:00 AM	EMERALD C (Atlantis)
Philanthropy Council Meeting	2:00 PM	3:00 PM	EMERALD A (Atlantis)
Pipeline Rehabilitation Committee	2:00 PM	3:00 PM	GRAND BALLROOM 2 (Atlantis)
Research Committee	11:00 AM	12:00 PM	PARADISE E (Atlantis)
Safe Drinking Water Act Committee	1:00 PM	2:00 PM	GRAND BALLROOM 5/6 (Atlantis)
Scholarship Committee	11:00 AM	12:00 PM	EMERALD A (Atlantis)
Security Emergency Planning Committee	3:00 PM	4:00 PM	GRAND BALLROOM 3 (Atlantis)
Smaller Utilities Committee	12:00 PM	12:30 PM	PARADISE A (Atlantis)
Source Water Quality Committee	2:00 PM	3:00 PM	GRAND BALLROOM 5/6 (Atlantis)
Student Chapter Committee	2:00 PM	3:00 PM	EMERALD B (Atlantis)
Systems Control Technology	3:00 PM	4:00 PM	GRAND BALLROOM 2 (Atlantis)
Tanks, Reservoirs, and Structure Committee	4:00 PM	5:00 PM	GRAND BALLROOM 2 (Atlantis)
Technical Programs Committee	6:00 PM	6:30 PM	EMERALD C (Atlantis)
Top Ops Challenge Committee	2:00 PM	3:00 PM	PARADISE A (Atlantis)
Utility Management Division	4:00 PM	5:00 PM	GRAND BALLROOM 3 (Atlantis)
Water For People	10:00 AM	11:00 AM	EMERALD A (Atlantis)
Water Loss Control Committee	11:00 AM	12:00 PM	EMERALD C (Atlantis)
Water Management & Efficiency Committee	1:30 PM	2:30 PM	PARADISE C (Atlantis)
Water Operations Certification Committee	12:00 PM	1:00 PM	PARADISE B (Atlantis)
Water Quality Analysis Committee	4:00 PM	5:00 PM	GRAND BALLROOM 5/6 (Atlantis)
Water Quality Division Meeting	5:00 PM	6:00 PM	GRAND BALLROOM 5/6 (Atlantis)
Water Quality Laboratory Analyst Cert. Committee	1:00 PM	2:00 PM	PARADISE B (Atlantis)
Water Resources Division	3:30 PM	4:30 PM	PARADISE C (Atlantis)
Water Treatment Committee	3:00 PM	4:00 PM	GRAND BALLROOM 5/6 (Atlantis)
Water Use Efficiency Certification Committee	2:00 PM	3:00 PM	PARADISE B (Atlantis)
Water Well Technology Committee	2:30 PM	3:30 PM	PARADISE C (Atlantis)
Women's Networking Committee	3:00 PM	4:00 PM	EMERALD B (Atlantis)
Young Professionals Committee	1:00 PM	2:00 PM	EMERALD B (Atlantis)

Tuesday, October 24

Committee	From	To	Location
Manufacturing & Associates Council (MAC)	1:30 PM	2:30 PM	A17 (Convention Center)

Wednesday, October 25

Committee	From	To	Location
ACE18 Local Host Committee	1:00 PM	3:00 PM	A17 (Convention Center)

Sessions By Committee

All technical sessions take place in the Reno Sparks Convention Center

SESSION#	DIVISION NAME	COMMITTEE PRESENTING	ROOM
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TUESDAY SESSIONS

Session 1	Water Quality	Safe Drinking Water Act	A1
Session 2	Operators	Backflow Programs	A2
Session 3A	Utility Management	Financial Management	A3
Session 3B	Membership Engagement & Development	Women's Networking	A3
Session 4	Water Resources	Recycled Water and Desalination	A4
Session 5	Utility Management	Communications and Customer Relations	A5
Session 6	Utility Management	Security and Emergency Planning	A6
Session 7	Engineering	Tanks, Reservoirs & Structures	A19
Session 8	Engineering	Engineering and Construction	A20

WEDNESDAY SESSIONS

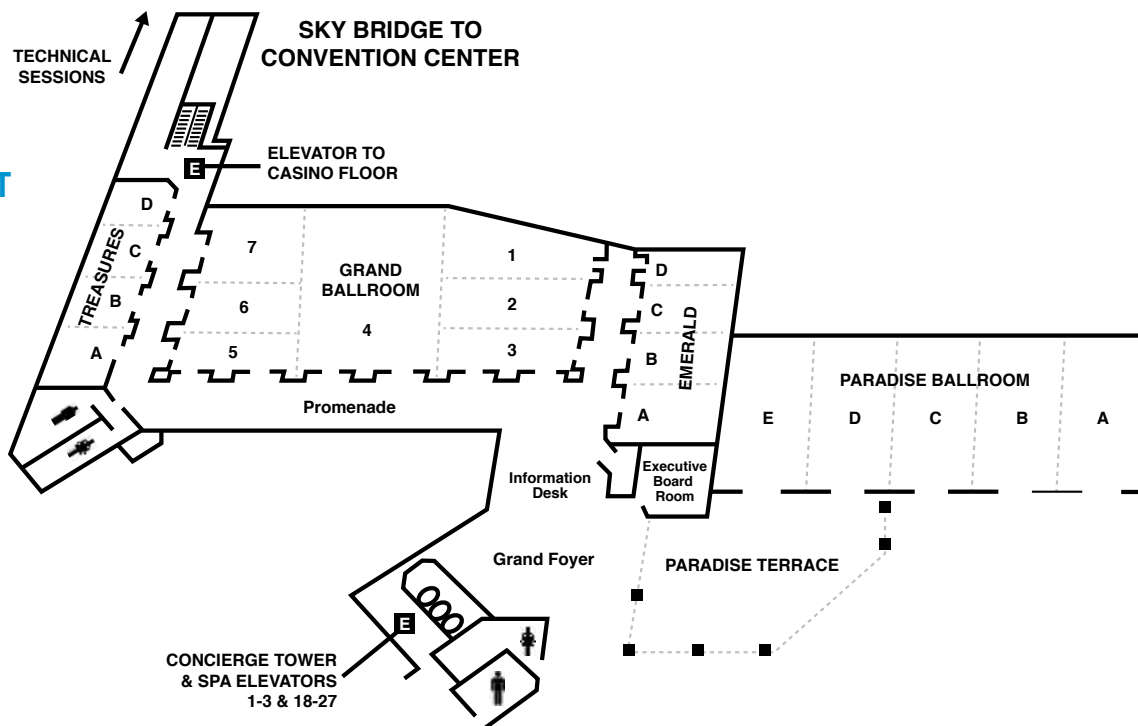
Session 11	Water Quality	Water Treatment	A1
Session 12A	Water Quality	Distribution System Water Quality	A2
Session 12B	Water Quality	Water Quality Analysis	A2
Session 12C	Water Quality	Source Water	A2
Session 12D	Water Resources	Energy & Sustainability	A2
Session 13	Operators	Meters	A3
Session 14	Operators	Operators	A4
Session 15A	Water Resources	Water Management & Efficiency	A5
Session 15B	Water Resources	Recycled Water & Desalination	A5
Session 16A		Government Affairs	A6
Session 16B	Membership Engagement & Development	Young Professionals	A6
Session 17A	Utility Management	Environmental, Health & Safety	A13
Session 17B	Utility Management	Security & Emergency Planning	A13
Session 18	Engineering	Systems Control Technology	A19
Session 19	Engineering	Asset Management	A20

THURSDAY SESSIONS

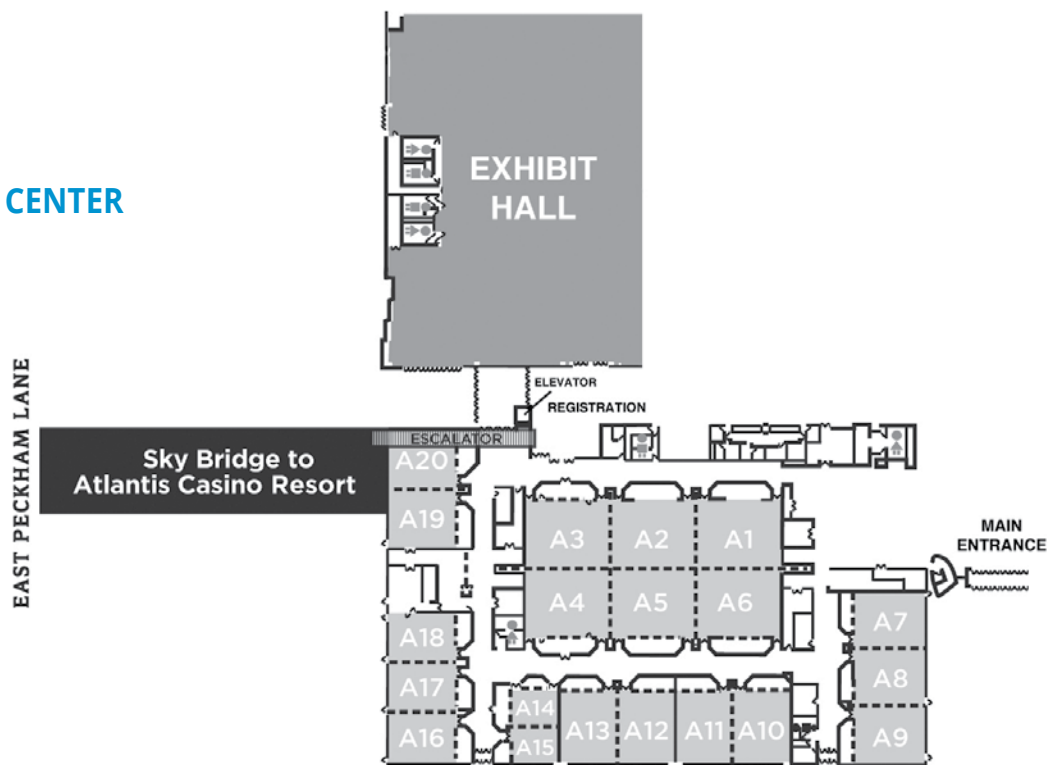
Session 20	Water Resources	Water Well Technology	A1
Session 21A	Water Quality	Research	A2
Session 21B	Operators	Operators	A2
Session 22	Utility Management	Environmental, Health & Safety	A3
Session 23	Engineering	Pipeline Rehabilitation	A4

Conference Maps

ATLANTIS RESORT



RENO SPARKS CONVENTION CENTER



We would like to sincerely thank all of our committees and hardworking volunteers that developed this technical program and help to support our conferences. Such support from experts and industry professionals is greatly appreciated and essential to the advancement of the drinking water community.

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Robert Janowski, City of Napa, Operators Committee

Committee Chair

John Parsons, Contra Costa Water District, Top Ops Challenge Committee

Committee Chair

Jeff Tarantino, Freyer Laureta Inc., Smaller Utilities Committee

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Division Chair

Kevin Berryhill, Provost & Pritchard Consulting Group

Division Vice-Chair

Peter Zhou, Santa Clara Valley Water District

Thank You!

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Committee Chair

Tarrah Henrie, Corona Environmental Consulting, Research Committee

Committee Chair

Rick Zimmer, Eurofins Eaton Analytical, Inc., Safe Drinking Water Act Committee

Committee Chair

David Huey, Contra Costa Water District, Source Water Quality Committee

Committee Chair

Scott Rovanner, City of Benicia, Water Treatment Committee

Committee Chair

Gabriel Aispuro, City of Napa, Water Quality Analysis Committee

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Division Vice-Chair

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Committee Chair

Sunny Wang, Brown and Caldwell, Desalination and Recycled Water Committee

Committee Chair

Lorraine White, GEI Consultants, Inc., Energy & Sustainability Committee

Committee Chair

Kevin Barnes, ITRON, Inc., Water Management & Efficiency Committee

Committee Chair

Cameron Tana, Hydrometrics Water Resources, Water Well Technology Committee

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Committee Chair

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Committee Chair

Stacey Goodpaster, North Marin Water District, Water Quality Lab Analyst Committee

Committee Chair

Thomas Hawes, US Bureau of Reclamation, Water Use Efficiency Committee

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Committee Chair

Jenna Mariano, V&A Consulting Engineers, Inc., Young Professionals Committee

Committee Chair

Leila Munla, Advanced Onsite Systems, Women's Networking Committee

Committee Chair

Tim Williams, Kennedy Jenks Consultants, Student Chapters

Committee Co-Chair

Joe Guistino, Coastside County Water District

Committee Co-Chair

Colter Andersen, Zone 7 Water Agency, Awards Committee

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Phil Holderness, Dellavalle Lab, Community Engineering Corps Committee

Committee Chair

Bruce Macler, Environmental Protection Agency, Scholarships Committee

Committee Chair

Stephanie Hearn, GEI Consultants, Inc., Water for People Committee

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Ken Malone, Mueller Company, Manufacturers & Associates Council (MAC)

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Rosie Thompson, Metropolitan Water District of Southern California, Government Affairs Committee

AD HOC

Committee Chair

Sue Mosburg, Sweetwater Authority, Water Loss Control Committee

Committee Chair

Angela Cheung, Santa Clara Valley Water District, Advanced Water Treatment Committee

Technical Program

Most sessions qualify for Contact Hours. Please be sure to scan in and out of each session.

Tuesday, October 24, 2017

Reno Sparks Convention Center

Session 1 - Safe Drinking Water Act Room: A1

1:30 PM - 2:00 PM
FEDERAL REGULATIONS UPDATE

Rick Zimmer, Eurofins

Participants in this session will be provided an update on federal regulatory activities and priorities.

2:00 PM - 3:00 PM
STATE REGULATIONS UPDATE

*My-Linh Nguyen, Nevada DEP
Darrin Pohlemus, California DDW*

Participants in this session will be provided an update on state regulatory activities and priorities.

4:00 PM - 4:30 PM
**PUBLIC NOTIFICATION FOR UNREGULATED
CONTAMINANT DETECTS**

Tim Miller, California American Water Company

Participants in this session will learn about a case study of water system response to Public Notification for CECs.

4:30 PM - 5:00 PM
NEVADA PREMISE PLUMBING WATER QUALITY

Ross Cooper, Nevada DEP

Participants in this session will learn about a case study of water quality management for premise plumbing in NV.

5:00 PM - 5:30 PM
LEAD IN SCHOOL

Talle Lopez, California Water Services Company

Participants in this session will learn about a case study of water system response to Public Notification for CECs.

Session 2 - Backflow Programs
Room: A2

1:30 PM - 2:00 PM
**RETROFIT BACKFLOW INSTALLATIONS —
I DIDN'T HAVE IT BEFORE, WHY NOW?**

Doa Meade, LWWD

Participants in this session will learn about the challenges and issues water purveyors encounter when a backflow retrofit is required at a consumer's premise.

2:00 PM - 2:30 PM
**RETRO-FIT ISSUES AND CHALLENGES FOR
A DUAL PLUMBED SYSTEM**

Paul Schwartz, USC

Participants in this session will learn about the installation challenges for compliance and retro-fits administrative authorities face during the startup of a dual plumbed system for a consumer.

2:30 PM - 3:00 PM
**PROTECTING THE PUBLIC WATER SYSTEM
FROM AUXILIARY WATER SUPPLIES**

Kenneth Payne, SFPUC

Participants in this session will learn about how a water agency/purveyor has protected the public water system from auxiliary water supplies through a robust cross-connection control program.

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Technical Program

4:00 PM - 4:30 PM

BACKFLOW TESTER/SPECIALIST CERTIFICATION UPDATES

Steven Garner, CA-NV AWWA

Participants in this session will learn about the updates relating to certification for Backflow Testers and Cross Connection Control Specialists

4:30 PM - 5:00 PM

DEVICE HAS FAILED, NOW WHAT?

Henry Chang, USC

Participants in this session will learn about how to evaluate the situation when a backflow device has failed. Each device will be covered in detail as to potential issues that may be encountered.

5:00 PM - 5:30 PM

ABC'S OF TROUBLESHOOTING

Ben Bennett, Backflow Prevention Specialists, Inc.

Participants in this session will learn about the ABC's of troubleshooting backflow devices in the field from the perspective of an experienced tester.

Session 3A - Financial Management

Room: A3

1:30 PM - 2:00 PM

CAREFUL WHAT YOU ASK FOR... JUSTIFYING TIERED RATES IN CALIFORNIA

Mark Hildebrand, Stantec Consulting, Inc.

How a water utility can develop simple and transparent cost-of-service based conservation rates, including key challenges and specific approaches that could be used at utilities across the country.

2:00 PM - 2:30 PM

UTILITY 2.0: HOW BOYNTON BEACH IS TRANSFORMING MANAGEMENT AND OPERATIONS WITH FULL-SCALE DATA INTEGRATION AND VISUALIZATION

Mark Panny, Carollo Engineers

How business intelligence software can assist capital, financial, and operational management in an easy dashboard format.

2:30 PM - 3:00 PM

DESIGNING WATER RATES FOR SUSTAINABLE LIVING IN THE CITY OF LOS ANGELES

George Chen, LADWP

Participants in this session will learn about how the City of Los Angeles redesigned their water rates to despite severe constraints of water sales being drastically reduced by the 20% reduction mandate the need to upgrade the aging water system infrastructure and maintaining the financial stability of the utility. In addition, 30% Los Angeles families were on low income and medically disabled rates. After one year of implementation, the presentation will share operational data and how the rate design encouraged water conservation, maintained financial stability, and protected low-and medically-disabled customers.

Session 3B - Women's Networking

Room: A3

4:00 PM - 5:30 PM

DEVELOPING A UNIQUE MENTORSHIP PROGRAM AT AWWA

Theresa Slifko, MWD

A great mentor can be extremely beneficial for your career and personal development; however, this relationship can take many different forms. Join us in this workshop as Theresa Slifko shares her experience with different mentor program styles at several organizations. Building on her experience, participants will discuss and explore how to establish a unique mentor program most effective for women in AWWA.

Session 4 - Recycled Water and Desalination **Room: A4**

1:30 PM - 2:00 PM

CUSTOM ENGINEERED MICROFILTRATION SYSTEM-UPGRADE OF WEST BASIN'S CARSON REGIONAL WATER RECYCLING PLANT

Nathan Boyle, Hazen and Sawyer

Participants in this session will learn about custom engineered microfiltration design, reviewing some of the challenges with process and mechanical design and procurement approach.

2:00 PM - 2:30 PM

SEA WATER DESALINATION PROJECT WILL TREAT WATER FROM THE RED SEA TO SUPPLY A NEW CITY

Richard Stratton, HDR

Participants in this session will learn about design and procurement of desalination treatment plant along the Red Sea. Design details for the challenging Red Sea water quality conditions and the procurement process will be discussed.

2:30 PM - 3:00 PM

IS MY PURIFIED WATER TOO PURE FOR GROUNDWATER REPLENISHMENT?

Erin Mackey, Brown and Caldwell

Participants in this session will learn the initial geochemical characterization work that is being undertaken to ensure the purified water's post-treatment regime is tailored to meet the specific groundwater aquifer water quality to mitigate against metals release/mobilization.



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Technical Program

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4:00 PM - 4:30 PM

MEMBRANE DISTILLATION AS A TOOL FOR WATER REUSE

Sage Hiibel, University of Nevada, Reno

Participants in this session will learn about the optimization of membrane processes for recycled water reuse.

4:30 PM - 5:00 PM

CITY OF SPARKS' RECLAMATION FACILITY — ONE PLANT, MANY USES

Michael Drinkwater, City of Sparks

Participants in this session will learn about the City of Sparks' reclamation Facility and its many recycled water users.

5:00 PM - 5:30 PM

SUMMIT PUBLIC UTILITY DISTRICT AND SODA SPRINGS RESORT'S PARTNERSHIP TO MAXIMIZE REUSE AND FUN

Tom Skjestad, Donner Summit Public Utility District

Amy Ohran, Soda Springs Resort

Participants in this session will learn about the Summit Public Utility District and Soda Springs Resort's partnership to maximize reuse and fun.

Session 5 - Communications and Customer Relations Room: A5

2:00 PM - 2:30 PM

STREAMLINING WATER CONSERVATION PROGRAM IMPLEMENTATION IN A POST-DROUGHT WORLD

Andy Florendo, Solano County Water Agency

Kat Wuelfing, EKI Environment & Water Inc.

The presentation is about a study conducted by the Solano County Water Agency to identify ways to better target and streamline their single-family residential water conservation programs, given the changing water conservation landscape a post-drought conditions. The world of water conservation is evolving, in large part due to changes in minimum fixture efficiencies and conservation program saturation from years of successful customer participation. Many agencies are finding a growing need to evaluate and redesign their current water conservation programs in a way that responds to these changes and still addresses the needs of their customers and agencies. EKI is working with Solano County Water Agency (SCWA), a wholesale water agency that provides regional water conservation services, to evaluate this next phase of conservation program design.

2:30 PM - 3:00 PM

MESSAGING THE ALPHABET SOUP OF WATER

Darcy Burke, M.B.A., Watermark Associates

How to translate technical speak into consumer friendly messages. Participants will receive specific strategies and tactics to convert technical jargon, water speak and engineering alphabet soup into clear, effective messaging without being lost in translation.

4:00 PM - 4:30 PM

AN EMERGING CURE FOR THE PLAGUE OF STRATEGIC PLANNING

Steven E. Wallis, PhD, Meaningful Evidence, LLC

Participants in this workshop will learn why strategic plans fail to reach their goals while learning new techniques for Strategic Knowledge Mapping (SKM) that will enable participants to reach goals, build trust, improve transparency, and increase flexibility in the face of political and natural climate change. It is generally accepted that we can develop better strategic plans when we have more data and more stakeholder participation. But is that enough? In a word, no. Strategic planning is tedious, a tremendous drain of time and effort, and the results are mostly used to gather dust. Studies increasingly show that our strategic planning processes are not working. Strategic decisions fail about 50% of the time – suggesting that we might be better off flipping a coin.

Technical Program

Session 6 - Security & Emergency Planning and New Technologies Room: A6

2:00 PM - 3:00 PM USING ARTIFICIAL INTELLIGENCE TO EVALUATE INFRASTRUCTURE RESILIENCY AND IMPROVE RESPONSE AND RECOVERY IN NATURAL DISASTERS *Ahmad Wani, One Concern*

Participants in this session will learn state of the art Artificial Intelligence and Machine Learning techniques, how Artificial Intelligence can be used across stakeholders to create a common operating platform to achieve critical situational awareness during natural disaster events, and the capability of Artificial Intelligence to create simulations containing highly accurate predictions of structural damage to water provider infrastructure and building stock from natural disasters for training and resource allocation.

4:00 PM - 4:30 PM REAL-WORLD EMERGENCY BYPASS HOSE DEPLOYMENT - WINTER 2017 STORM RESPONSE BY CONTRA COSTA WATER DISTRICT *Pete Schoemann, CCWD*

CCWD's experience from real-world emergency deployment of 1,200 feet of super aquaduct hose in response to loss of service to over 100 customers from a landslide related to the winter 2017 storms.

4:30 PM - 5:30 PM POWER OUTAGE RESILIENCE: TOOLS, TIPS AND DISCUSSION *Michael Arceneaux, Water Information Sharing and Analysis Center*

Attendees of this session will learn what water and wastewater utilities are doing to improve their resilience to power outages and what knowledge resources are available to support resilience efforts. The session will include an interactive discussion to promote an exchange of ideas and lessons learned.

Session 7 - Tanks, Reservoirs & Structures Room: A19

1:30 PM - 2:30 PM WATER STORAGE TANK 101 *Shailer Nicholas, Utility Services*

This presentation will review basic issues of potable water storage tanks. In addition to basic design issues and review of applicable AWWA standards the necessary components of an effective water storage tank inspection program will be covered. Inspection issues discussed will include: how to select an inspection firm, review the applicable industry standards, frequency of inspection, and list what to inspect. The inspection process should evaluate the safety, sanitary, structural, security and coatings conditions of the storage tank.

2:30 PM - 3:00 PM FLY OVER INSPECTIONS WITH DRONES *Adolfo Segura, Otay Water District*

Attendees will learn the pros and cons of a recent drone inspection on their rural pipelines and tanks.

4:00 PM - 4:30 PM SHAKE IT OUT! GET THE 411 ON THE UPDATED SEISMIC DESIGN IN AWWA D110 *Tom Bloomer, DN Tanks*

Participants in this session will hear the latest information on recent seismic updates on concrete tanks in the D110 standard.

Session 8 - Engineering and Construction Room: A20

1:30 PM - 2:00 PM FULL-SCALE TREATMENT PERFORMANCE AND COST DATA FOR REMOVING PERFLUORINATED COMPOUNDS FROM GROUNDWATER *Pierre Kwan, HDR*

This presentation discusses the design and operational experience for treating a new type of contaminant.

2:00 PM - 2:30 PM THE MASTER PLAN IS OVER - NOW WHAT? *Laura Barraza, EMWD Brenda Estrada, West Yost Associates*

The presentation will summarize the District's actions after completing its Water facilities master plan, share its insights on the various issues that must be addressed as projects move from conceptual planning to implementation, and provide some examples of how to efficiently monitor and prioritize a large complex Capital Improvement Program.

2:30 PM - 3:00 PM HOW TO SQUEEZE MORE CAPACITY OUT OF AN EXISTING WATER PLANT TO KEEP UP WITH DEMANDS *Richard Stratton, HDR Aaron Sullivan, PCWA*

Participants will learn how to cost effectively extract added capacity from existing water treatment plants by improving hydraulics, adding treatment equipment to existing basins, and retrofitting of existing processes.

4:00 PM - 4:30 PM CONSTRUCTION PHASE - LARGE DIAMETER PIPELINE SEISMIC RETROFIT MITIGATES LANDSLIDE HAZARD *Darren Baune, Carollo Engineers*

Participants will learn about the design and construction of a project to seismically retrofit a 60-inch, 66-inch and 72-inch pipeline for 9.4 feet of seismic and creep displacement at a landslide toe.

4:30 PM - 5:00 PM A NEW QUALITY PROGRAM FOR THE WATER INDUSTRY *Michael Thomas, PE., Metropolitan Water District of Southern California*

To understand the difference between "QA/QC" and to start thinking about quality programs in terms of process control, accountability, and improvement.

5:00 PM - 5:30 PM INNOVATIVE RECYCLED WATER CREATES DROUGHT-PROOF IRRIGATION SUPPLY *Ron Papa, PE, Carollo Engineers*

This presentation summarizes the design of a recycled water distribution system and 60 million gallon storage reservoir for the City of Ukiah, California.

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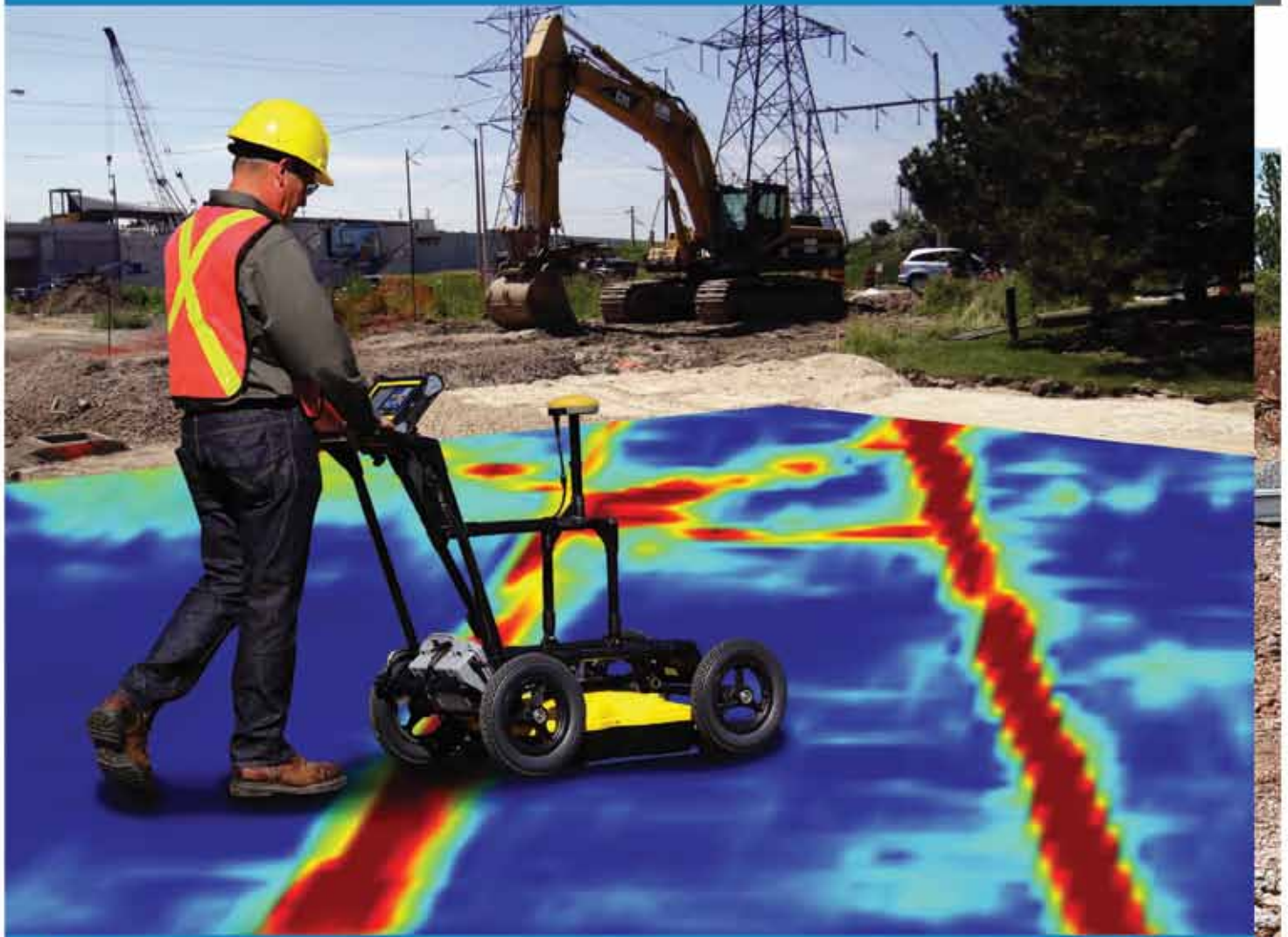
Session 11 - Water Treatment Room: A1

8:00 AM - 8:30 AM IMPROVED CLARIFICATION AND SLUDGE TREATMENT BY UPGRADED POLYMER FEED *Yong Kim, UGSI Solutions, Inc.*

With broad technical review and experimental data, this presentation provides engineers and operators with practical knowledge on the efficient way of polymer mixing and handling to maximize the polymer value in clarification and sludge treatment. Three-month trial at water plant showed that upgraded polymer feed resulted in significant process improvements.



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10:00 AM - 10:30 AM
UPDATES ON CHROME-IX PILOT RESULTS

Nick Brogren, Tonka Water

Attendees will learn about the pilot results of an innovative Chrome(VI) removal technology (Chrome-IX™) and what it means for the future of Chrome(VI) removal projects in California.

10:30 AM - 11:00 AM
LOW COST CHROMIUM REMOVAL USING THE WRT SELECTIVE METALS REDUCTION (SMR) PROCESS – CASE STUDY PILOT TESTING RESULTS

James Arnold, P.E., WRT LLC

Attendees will learn of a commercially available hexavalent chromium removal technology recently developed by WRT. The WRT selective metals reduction process through on-site pilot testing has shown very efficient removal of chromium from drinking water well sources with overall low cost of treatment. The process generates relatively small amounts of water treatment residuals.

11:00 AM - 11:30 AM
EXPLORING THE BOUNDARIES OF THE CR(VI) RCF REMOVAL PROCESS

Tarrah Henrie, Corona Environmental Consulting

Attendees will learn about ongoing bench- and pilot-scale testing of reduction/coagulation/filtration with stannous chloride. The presentation will also highlight the resulting cost implications of full-scale implementation of reduction/coagulation/filtration with stannous as a Cr(VI) treatment technology.

11:30 AM - 12:00 PM
DATA FROM ONLINE CHROMIUM-6 ANALYZER HELPS DRIVE EFFECTIVE CHROMIUM TREATMENT AND BLENDING SCHEMES

Tom Williams, Aqua Metrology Systems, Ltd.

To consistently deliver water with less than 10 ppb chromium-6, a utility must be able to accurately and reliably measure influent and effluent contaminant levels. Laboratory analysis is unable to provide data in real-time. A new online analyzer produces accurate and reliable results in 30 minutes down to 1 ppb.

1:30 PM - 2:00 PM
BALANCING DBP FORMATION BY USING MULTIPLE OXIDANTS

Peter Von Bucher, Carollo Engineering

Attendees will learn about the challenges and benefits of managing DBP formation through the use of multiple oxidants, including chlorine dioxide, ozone, and chlorine.

2:00 PM - 2:30 PM
TREATMENT ALTERNATIVES CONSIDERED FOR TREATING LAKE TAHOE WATER WITHIN A TIGHT FOOTPRINT

Tim Williams & Deborah Russell, Kennedy/Jenks Consultants

Attendees learn about the multiple technology alternatives considered when designing the new 1.5 MGD West Lake Tahoe Regional Water Treatment Plant given the challenges of treating a raw water with very low turbidity and low temperatures. A treatment train was selected which met regulatory requirements with a small footprint, minimal waste stream, and visually pleasing aesthetics.

2:30 PM - 3:00 PM
REAL TIME CORROSION RATE TESTING TO DISCERN LEAD AND COPPER PIPE CORROSION REDUCTION

Bob Ryder, Kennedy/Jenks Consultants

Lee Schegg, Rural Community Assistance Corporation

Periodic exceedance of Lead and Copper Rule action limits have occurred at the Big Valley Rancheria on Clear Lake, California. The EPA funded a corrosion study to determine the best method to lessen the corrosivity of a well water supply that has a pH of 6.6, an iron concentration of 8 mg/L and a silica concentration of 90 mg/L and a use of about 50,000 gpd. The water is treated for iron, taste and odor, and hardness reduction by a combination of greensand, GAC and zeolite softening pressure contactors, followed by a phosphate addition for corrosion control.

4:00 PM - 4:30 PM
A NEW APPROACH TO BIOLOGICAL REMEDIATION FOR DRINKING WATER

Cathy Swanson, Evoqua Water Technologies
Peter Hall, MWH Water Treatment Inc.

Attendees learn about a new biological reduction treatment system being considered for reducing nitrates in drinking water; (Evoqua Biological Nitrate Reduction System with the Hall Reactor). Data from full scale non potable system data will be presented along with data collected from pilot testing conducted at the San Antonio Water Company. Anticipated benefits include small footprint, elimination of odors, small waste stream (<1%) and high efficiency.

4:30 PM - 5:00 PM
HOW I LEARNED TO STOP WORRYING AND GET RID OF REGULATIONS

Patrick Cory Boyd, City of San Diego

Participants in this section will learn that there are safer alternatives to the typically used chemicals in the treatment process and that there are always different methods to make your plant safer for the employees as well as the public.

Session 12 A - Distribution System Water Quality
Room: A2

8:00 AM - 8:30 AM
APPLICATIONS AND BENEFITS OF AN ELECTRONIC WATER QUALITY DATA MANAGEMENT SYSTEM - A UTILITY'S PERSPECTIVE AND EXPERIENCES

Kate Martin, Golden State Water Company

Participants in this session will learn about a utility's experiences in applying an electronic water quality data management system to manage water quality compliance and system operations. Participants will also learn about the challenges and benefits of implementing an electronic water quality data management system.

10:00 AM - 11:00 AM
CORROSION PROTECTION SYSTEMS FOR DUCTILE IRON PIPE

John Johnson, McWane Ductile

This one hour session is a comprehensive training overview on maximizing the service life of ductile iron pipe in corrosive environments for municipal water and sewer applications. This course will review the typical causes of internal and external corrosion in underground applications as well as AWWA approved preventive solutions. Attendees will also learn the state of the art corrosion protection options available depending upon the severity of the environment encountered as well as recommended installation techniques.

Session 12B - Water Quality Analysis
Room: A2

11:30 AM - 12:00 PM
FACTORS INFLUENCING CHLORATE FORMATION AT SWEETWATER AUTHORITY

Laura Homsey, Sweetwater Authority

Participants will learn how water quality laboratory staff at Sweetwater Authority executed a study to examine chlorate formation from sodium hypochlorite feed stock degradation as a function of age of stock, stock concentration, and temperature. In addition, the factors influencing the formation of chlorate from chlorine dioxide disinfection and hypochlorite feed stock degradation will be compared and contrasted.

Technical Program

Session 12 C - Source Water Quality Room: A2

1:30 PM - 2:00 PM

CHARACTERIZING SOURCE WATER ORGANICS AND PRETREATMENT EFFICACY TO MITIGATE ULTRAFILTRATION MEMBRANE FOULING

Amanda Scott & Dondra Biller, GE Analytical Instruments

By analyzing organic size fractions from water samples with high, medium, and low fouling sources, more intelligent treatment decisions can be made through connecting water quality and membrane performance. The results of this study can be used to improve pilot testing and optimize pretreatment design to ensure efficient membrane operation.

Session 12 D - Energy & Sustainability Room: A2

2:00 PM - 2:30 PM

CALIFORNIA'S SB 1425 WATER-ENERGY NEXUS REGISTRY

Chelsea Hasenauer, The Climate Registry

Participants in this session will learn about California's SB 1425 Water-Energy Nexus Registry.

2:30 PM - 3:00 PM

IMPLEMENTATION OF PROGRESSIVE ENERGY EFFICIENCY PROJECTS WITH LOCAL ELECTRICAL UTILITY AND CALIFORNIA ENERGY COMMISSION GRANT FUNDING

Michael Maestas, Cucamonga Valley Water District

Participants will learn about the approach taken by a water utility to increase energy efficiency and SCADA capability utilizing energy efficiency grants and services offered through the California Energy Commission and So Cal Edison.

4:00 PM - 5:00 PM

IMPROVING WATER SYSTEM SUSTAINABILITY THROUGH ENERGY MANAGEMENT

Robert B. Sowby, Hansen, Allen & Luce

Participants in this session will learn tools, methods, and best practices for optimizing a water system for energy efficiency while maintaining water quality and level of service.

Session 13 - Meters Room: A3

7:30 AM - 8:30 AM

NEW ELECTRONIC BILLING METER STANDARDS- SHOCKING UTILITIES & CUSTOMERS!

Kenneth Molli, Veolia North America

The impacts that new electronic meters will have on utility water loss management operations and their customers.

10:00 AM - 11:00 AM

WATER LOSS CONTROL - CRITICALITY OF LARGE MASTER/ PRODUCTION/WHOLESALE METER TESTING & CALIBRATION

Michael Simpson, M.E. Simpson Co., Inc.

The accuracy of your Large Master/Production/Wholesale Water Meter is the critical key in your Water Loss Control, Non-Revenue Water program's success. Attendees will learn the criticality of testing programs and the most effective, efficient, proper testing and calibration techniques used to validate large water meter accuracy.



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Technical Program

Most sessions qualify for Contact Hours. Please be sure to scan in and out of each session.

11:00 AM - 11:30 AM CITY OF SACRAMENTO - METER TESTING & METER REPLACEMENT PROGRAM

Jon Conover, City of Sacramento

Participants in this session will learn about City of Sacramento's Meter Replacement Program and upgraded Re-circulating / Gravimetric Test Benches (test meters 5/8" - 16").

11:30 AM - 12:00 PM FINDING THE HOLES: SOUTH TAHOE PUD WATER LOSS PILOT STUDY

Stephen Caswell, South Tahoe Public Utility District

Participants will learn how a partially metered water utility has started to tackle the issue of water loss with limited data and resources.

1:30 PM - 2:30 PM ADVANCING FIXED NETWORKS

Kevin Barnes, Itron

Participants will learn that technology continues to advance and Advanced Metering Infrastructure systems are opening up for much further system expansion.

2:30 PM - 3:00 PM MANAGING CONSTRUCTION METERS - A CASE STUDY

Dan Baker & Paul LaFalce, Helix Water District

The framework for updating or developing their own construction meter management program.

4:00 PM - 4:30 PM SO YOU CAN GET A READ BUT WHAT'S NEXT? ONE AGENCIES TALE OF AMI FROM FEASIBILITY STUDY TO THE FIRST BILLING AND IT'S NOT WHAT YOU EXPECTED.

Linda Yager, Placer County Water Agency

Best practices when considering, planning, installing, and billing from an Advanced Metering Infrastructure system. Take away clear lessons learned from an agency that installed cellular endpoints in the most challenging part of their service area.

4:30 PM - 5:00 PM BENICIA - A HISTORIC CALIFORNIA CITY EXPERIENCE IMPLEMENTING AMI

Christian Di Renzo, City of Benicia

Participants in this session will learn how to select a smart water meter manufacturer and project management team as well as the issues that are likely to arise as a city migrates to Advanced Metering Infrastructure. Options for securing financing will also be discussed.

Session 14 - Operators Room: A4

11:00 AM - 12:00 PM CHEMICAL FEED SYSTEMS AND SOLVING MY CHEMICAL FEED PROBLEMS.

Rich Hopkins, Hopkins Technical Products, Inc.

Participants in this session will learn how to identify problems associated with chemical dosing equipment. Including: mathematical calculations, installation and design criteria, pump sizing for optimal dosing, applications and methods of controlling the outputs of speed and stroke.

1:30 PM - 3:00 PM OPERATOR ROUNDTABLE

*Colter Andersen, Zone 7 Water Agency
Dan Armendariz, California Water Service
Steve Twitchell, Santa Clara Valley Water District*

Attendees will learn about treatment techniques and processes, troubleshooting operations and equipment, Computerized Maintenance Management System, the selection of materials and supplies. The topics are open to attendees.

Technical Program

4:00 PM - 4:30 PM

JAR TESTING FOR PLANT OPERATIONS

Larry Lyford, Helix Water District

Participants in this session will learn how Helix Water staff prepare and perform Jar Tests using the math for stock solutions to conduct advanced shear testing.

4:30 PM - 5:00 PM

ZETA POTENTIAL, WHAT IT IS AND HOW TO USE IT FOR PLANT OPTIMIZATION

Larry Lyford, Helix Water District

Participants in this session will learn the basics of Zeta Potential and how it is used and measured to achieve optimum particle charge for enhanced filter performance.

Session 15 A - Water Management and Efficiency Room: A5

7:30 AM - 8:00 AM

AMI LEAK NOTIFICATIONS: A LESSON IN CUSTOMER SERVICE

Greg Bundesen, Sacramento Suburban Water District

Participants in this session will learn about how in an attempt to comply with its 32% water use reduction standard, the Sacramento Suburban Water District used its AMI system to create a Leak Notification Program to inform customers about possible leaks in their homes. This presentation will outline both the challenges and the successes of the Program.

8:00 AM - 8:30 AM

AN IOU'S APPROACH TO CUSTOMER SERVICE, WATER RATES & WATER USE EFFICIENCY DURING A HISTORIC DROUGHT

Robert Day & Sharon Whaley, San Jose Water Company

Participants in this session will learn how a drought can significantly impact both your customers and your water company's operations. Allocations, drought surcharges and increased customer demands for quality service will be discussed.

10:00 AM - 10:30 AM

TAKING THE TEMPERATURE ON DROUGHT RESPONSE EFFECTIVENESS

Kat Wuelfing, EKI Environment & Water, Inc.

Andree Johnson, Bay Area Water Supply & Conservation Agency

Participants in this session will learn about the relative effectiveness of drought response actions taken by BAWSCA and its diverse 26 urban retail member agencies. This talk will include a discussion of how to prioritize, prepare for, and coordinate efforts to respond to future droughts at both a regional and agency-level.

10:30 AM - 11:00 AM

STREAMLINING WATER CONSERVATION PROGRAM IMPLEMENTATION IN A POST-DROUGHT WORLD

Andy Florendo, Solano County Water Agency

Kat Wuelfing, EKI Environment & Water, Inc.

Participants in this session will learn about a study conducted by the Solano County Water Agency to identify ways to better target and streamline their single-family residential water conservation programs, given the changing water conservation landscape in post-drought conditions.

11:00 AM - 11:30 AM

METROPOLITAN'S EFFORTS TO ENCOURAGE LOCAL RESOURCES DEVELOPMENT

Ray Mokhtari, Metropolitan Water District of Southern California

Participants in this session will learn about the Metropolitan Water District of Southern California's financial incentive programs, non-incentive programs, and policy principles to encourage local resources development. Currently, Metropolitan provides financial incentives up to \$340/AF to local agencies for the development of recycled water, groundwater recovery, and seawater desalination projects.

Session 15 B - Recycled Water and Desalination Room: A5

1:30 PM - 2:00 PM

LESSONS LEARNED FROM DESIGN, CONSTRUCTION AND TESTING OF TEST SLANT WELL TO OBTAIN SOURCE WATER SUPPLY FOR DESALINATION IN MARINA, CA

Brian Villalobos, Geoscience

Participants will learn about lessons from the design, construction and testing of a test slant well used to obtain source water for the Monterey Peninsula Water Supply Project (MPWSP) desalination project.

2:00 PM - 2:30 PM

ACHIEVING OCEAN PLAN COMPLIANCE WITH CHALLENGING DISCHARGE BLENDS: DESALINATION BRINE, WASTEWATER EFFLUENT, AND POTABLE REUSE BRINE

Brie Webber, Trussell Technologies

Participants in this session will learn how to assess compliance with water quality objectives set forth in the California Ocean Plan for proposed projects with challenging discharge blends. Specifically, this presentation will cover analysis methods and results for a proposed brine discharge composed of desalination brine, wastewater effluent and potable reuse brine.

2:30 PM - 3:00 PM

ASSESSMENT OF GREENHOUSE GAS RELEASE FROM SUBSURFACE DESALINATION INTAKES FOR THE MONTEREY PENINSULA WATER SUPPLY PROJECT

Anya Kaufmann, Trussell Technologies

Participants in this session will learn a method for estimating carbon dioxide releases from subsurface and open ocean intakes to a desalination plant. The estimated carbon dioxide release from a study of the Monterey Peninsula Water Supply Project will be presented.

Session 16 A - Government Affairs Room: A6

1:30 PM - 2:30 PM

HOW CALIFORNIA IS RESPONDING TO CLIMATE CHANGE

Jelena Hartman, PhD, State Water Resource Control Board

Andrew Schwarz, Department of Water Resources

Under the over-arching umbrella of "climate change," the water community has been quick to respond to impacts of warmer weather and reduced availability of water resources during extended drier periods to minimize impact to reliable water supply that is essential to public health and safety, as well as supporting the state's growing population and vibrant economy. This panel is intended to provide some insight as to how California state agencies envision the state will respond to climate change. Andrew Schwarz, with the Department of Water Resources, and Dr. Jelena Hartman, with the State Water Resources Control Board, will walk through their respective agencies' policies and programs, as well as how those policies and programs are implemented.

Session 16 B - Young Professionals Room: A6

2:30 PM - 3:00 PM

SCHOLARSHIPS, COMPETITIONS AND OTHER STUDENT RECOGNITION OPPORTUNITIES

Bruce Macler, US EPA

The CA-NV Section offers \$21,000 annually in scholarships for those interested in a career in drinking water. These support undergraduate, graduate and operator education. The Section also supports students in other ways, including a research poster competition that will send the winner to the AWWA annual conference, and Academic Achievement Awards for high-quality undergraduate and graduate research. Winners not only get money, but also recognition by the industry.

Session 17 A - Environmental, Health & Safety Room: A13

7:30 AM - 8:30 AM

PUMP WATER AT YOUR FINANCIAL RISK

Steven Hoch, MORRIS, POLICH & PURDY, LLC

Pumping water from a polluted source can create liability for the pumper, as well as for those that treat the water for usage. Under Comprehensive Environmental Response, Compensation & Liability Act (aka Superfund) you can be liable as a polluter. We will discuss these issues and discuss changes that are needed.

10:00 AM - 10:30 AM

COST RECOVERY OPTIONS FOR EMERGING CONTAMINANTS-SHIFTING TREATMENT COSTS FROM RATEPAYERS TO POLLUTERS

Bill Kelly, SL Environmental Law Group, PC

Under the theory of "products liability" manufacturers of chemicals responsible for contamination are held accountable for the associated treatment costs. By including a legal review of cost recovery options as part of their systematic approach to evaluate remediation efforts water utilities may be able to lessen their financial burden.

10:30 AM - 11:30 AM

THE THREE CRITICAL PIECES OF THE HAZARDOUS WASTE PUZZLE

Adam Burton, Belshire Environmental

Participants will learn the three critical pieces of the Resource Conservation & Recovery Act hazardous waste regulations that are essential for those who generate, store, ship, dispose or otherwise manage hazardous waste at their facilities.

Session 17 B - Security and Emergency Planning Room: A13

1:30 PM - 5:00 PM

CALWARN AND NVWARN -- THE NEXT STEPS

Ray Riordan, CalWarn Chair

A partnership among the American Water Works Association, the US Environmental Protection Agency (EPA) and ten water sector professional organizations, sponsored the development of the Water/Wastewater Agency Response Network (WARN) program. Since 2006, fifty statewide WARN programs have been created across the nation to support the concepts of mutual aid and assistance among the water sector before, during and after a disaster. The growth of such a grass roots effort of "utility helping utility" is unprecedented. Partnership between neighboring WARN programs like California and Nevada have proven successful in disasters across the nation. This four-hour program is an effort to support the ongoing partnership between utilities that are members of the CalWARN or NVWARN program. During a survey of the 50 WARN programs, ongoing collaboration, training and engagement is critical to foster the ability of sharing resources within and between states.

Session 18 - Systems Control Technology Room: A19

7:30 AM - 8:30 AM

MITIGATING A LEGACY OZONE CONTROL SYSTEM

Henry Palechek, Helix Water

Participants of this session will learn about ozone control systems and the advantages of ozone in water treatment. The presentation will also cover the issues of startup, optimization and maintenance of ozone systems. Participants will also learn about planning and mitigation strategies. They will also learn how a water utility has addressed the issues of technology changes over time in terms of instrumentation and the SCADA system.

10:00 AM - 11:00 AM

THE CHANGING SCADA LANDSCAPE - ARCHITECTING SYSTEMS FOR THE FUTURE

Kent Melville, Inductive Automation

The SCADA landscape is changing, with old technologies consolidating and new technologies emerging. This session will cover four topics: leveraging databases in SCADA systems, using a wide architecture for multi-site deployments, software integration to other business systems and streamlined data access by using Internet of Things and Message Queue Telemetry Transport technologies.

11:00 AM - 12:00 PM

NOW IS THE TIME TO ACT! PANEL DISCUSSION

Kent Melville, Inductive Automation

Yitzhak Gilon & Ulises Arzate Ramirez, San Jose Water Company

This session will provide a panel of experts prepared to discuss design and maintenance of control systems.

1:30 PM - 2:30 PM

PLANNING FOR THE REPLACEMENT OF YOUR OBSOLETE PLC SYSTEM

Michael Erwin, TJC and Associates, Inc.

This presentation will be looking at when and why upgrades to your PLCs are necessary. Hardware and software evolution and the costs to maintain these systems may determine when it would be advantageous for an upgrade. We will be discussing different alternatives and how to avoid pitfalls, which programs will need to be re-written and which will need to be converted.

2:30 PM - 3:00 PM

BIG DATA EXTRACTION, IT SHOULDN'T BE A PAIN

Jeff Martin, Carollo

Our public utilities are faced with mounting pressure from operations to executive management to capture more and more data from the plant floor, lab information systems, GIS, etc. and make it accessible to and presentable in a user-friendly format to the utility staff.

4:00 PM - 5:00 PM

PREVENTION OF DISCOLORED WATER EVENTS IN THE DISTRIBUTION SYSTEM BY INSTALLATION OF ONLINE TURBIDIMETERS GROUNDWATER PUMPING FACILITIES.

Yitzhak Gilon & Ulises Arzate Ramirez, San Jose Water Company

This presentation will describe the method SJWC used to test candidate devices, the criteria employed for evaluation of each device and final results of the evaluation. Discussion will be included to demonstrate the relative and cumulative benefit of using such device and distill lessons learned from these efforts related to choosing the correct technology to accomplish our goal of protecting the customers and distribution system from unacceptable water quality.

Session 19 - Asset Management Room: A20

7:30 AM - 8:30 AM

WANT TO IMPROVE YOUR MAIN REPLACEMENT SCHEDULING? USE RISK AND LIFE-CYCLE COST!

Peter Martin, Innovzye

A risk-based analytical economic model for optimal scheduling of pipe replacement based on a life-cycle cost analysis considering acceptable level of failure risk and total cost of ownership. It integrates GIS, network modeling, asset integrity modeling, and financial analysis. Example applications from two large California agencies are presented and discussed.

10:00 AM - 11:00 AM

CAPITAL INVESTMENTS WITHOUT CAPITAL

Ryan Gunstream, Honeywell Energy Services

Participants in this session will learn how to leverage financing options to complete capital improvements.

Technical Program

11:00 AM - 12:00 PM

WATER WELL ASSET MANAGEMENT PROGRAMS: A NEW SUSTAINABLE APPROACH TO MAINTAINING WELL AND EQUIPMENT PERFORMANCE

Keith Jones

This presentation will review the components of an effective water well condition assessment, list the pro's and con's of the most common well rehabilitation technologies and discuss the components of an effective well asset management program.

1:30 PM - 2:00 PM

CAMROSA WATER DISTRICT, CA A COMPREHENSIVE VALVE AND FIRE HYDRANT ASSESSMENT & LEAK DETECTION PROGRAM

Roy Martinez, Wachs Water Services

Attendees will learn how to initiate and evaluate an Asset Management program that reduces the consequences of failure and improves system reliability.

2:00 PM - 2:30 PM

CITY OF CORONA, CA, VALVE & FIRE HYDRANT ASSESSMENT AND REPAIR PROGRAM

Roy Martinez, Wachs Water Services

Attendees will learn how to initiate and evaluate an Asset Management program that reduces the consequences of failure and improves system reliability.

2:30 PM - 3:00 PM

UTILITY 2.0: HOW BOYNTON BEACH IS TRANSFORMING MANAGEMENT AND OPERATIONS WITH FULL-SCALE DATA INTEGRATION AND VISUALIZATION

Mark Panny, Carollo Engineers, Inc

Attendees will learn how business intelligence software can assist capital, financial, and operational management in an easy dashboard format.

**Tech Talks in Exhibit Hall
Manufacturers & Associates Council**

Room: Hall 1A & 1B

10:00 AM - 12:00 PM

AUTOMATIC FLUSHING AND MONITORING TECHNOLOGY

Virgil Diaz, Mueller Company, Booth #202

Attendees learn about advanced process management control systems being used to maintain and optimize water quality in distribution systems. These systems gather distribution data on pressures, disinfectant levels, pH levels, temperatures, flows and turbidity and send notifications when conditions exceed a utility's optimal performance range. Benefits of these systems include improving response times, reducing customer complaints, and providing real time data to water quality teams.

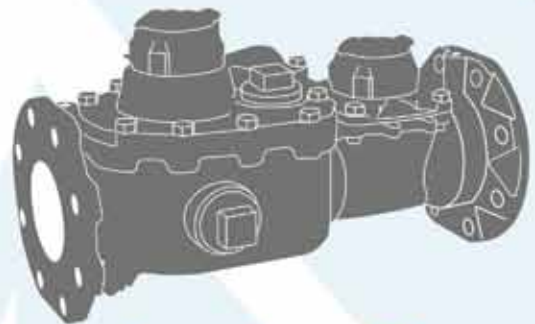
ADVANCED LEAK DETECTION TECHNOLOGY

Corey Keefer, Echologics, Booth #101

The overview of this presentation is to educate how the use of advanced technology to detect leaks presents an excellent opportunity not only conserve water but also improve customer service, as automated leak detection results in quicker response times. This relates to water by showing technologies that help reduce water loss while eliminating property damage and service interruptions before a catastrophic main break occurs. These features will help make informed data-driven decisions about how to best manage their water infrastructure.

You Don't Want To Miss This!

Water Loss Control: Criticality of Large Master/Production/ Wholesale Meter Testing & Calibration



Session 13

Date: Wednesday, Oct. 25th

Time: 10:00 AM - 11:00 AM

**Speaker: Michael Simpson,
CEO**

**Questions?
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Technical Program

Most sessions qualify for Contact Hours. Please be sure to scan in and out of each session.

ELECTRIC MOTORS ELIMINATING THE EFFECTS OF SHAFT CURRENTS ON MOTOR BEARINGS

Matt Schwach and Jim Hudspeth, Reed Electric and Field Service, Booth #333

Reed Electric and Field service would like to discuss three different types of technology (Helwig Carbon Brushes, Aegis shaft grounding ring, Cool Blue inductive absorbers) that are used to eliminate the effects of shaft currents on motor bearings. We will describe what produces shaft currents. How the currents can damage bearings and reduce the installed life of motors. We will use a small motor and a digital multimeter to show shaft currents and how the different types of technology reduces or gives an alternate path for shaft currents.

WATER SERVICE PIPE MATERIALS: COMMON PRODUCTS AND ENGINEERING CONSIDERATIONS

Stew Harvey, GSM, Booth #209

This presentation will cover the three main service line pipe materials being installed today; Copper, HDPE and PEX-A. All three materials have their believers who wouldn't specify anything else, but all products have engineering and installation/operational issues which should be considered. This contact session will solicit insight from attendees and address the benefits and challenges for each of the materials.

Thursday, October 26, 2017

Reno Sparks Convention Center

Session 20 - Water Well Technology Room: A1

8:00 AM - 8:30 AM

DEVELOPMENT OF AN ASR PROGRAM IN THE CITY OF WOODLAND, CA: PERSPECTIVES ON PLANNING, FUNDING AND IMPLEMENTATION

Kenneth Loy, West Yost Associates

Participants in this session will learn more about how Aquifer Storage & Recovery can assist in meeting their water supply and sustainability goals; factors to consider when determining whether ASR is feasible; funding approaches; and implementation activities, including permitting, well construction, and integration with existing water sources and delivery infrastructure.

8:30 AM - 9:00 AM

MANAGING AND OPERATING AQUIFER STORAGE AND RECOVERY (ASR) WELLS- AN ARIZONA CASE STUDY- LESSON LEARNED

Gary M. Gin, R.G., Leonard Rice Engineers

Participants in this session will learn that ASR wells are manageable, not as labor-intensive, and reliable systems.

9:00 AM - 9:30 AM

CONSTRAINTS AND CONSIDERATIONS FOR THE INJECTION OF HIGH PURITY WATER INTO ALLUVIAL AQUIFERS

Kent O'Brien, PG, CEG, Hazen and Sawyer

Participants in this session will learn how recharging depleted aquifers using treated wastewater can be an important tool for managing water supply. Participants will learn testing methods to determine the suitability of a source water for injection and the importance of controlling the chemical stability of injected water to avoid well casing corrosion and aquifer plugging.

Technical Program

10:00 AM - 11:00 AM

NEVADA WELL DRILLING REGULATIONS

Jake Echeverria, Nevada Division of Water Resources

Participants in this session will learn about the Nevada well drilling regulations, as well as, demonstration of the Nevada Division of Water Resources website, as it relates to well drilling.

11:00 AM - 11:30 AM

WATER QUALITY ISSUES FROM WELLS SCREENED OVER MULTIPLE AQUIFERS

Larry Ernst, Wood Rodgers, Inc.

Participants in this session will learn about water quality issues from wells screened over multiple aquifers.

11:30 AM - 12:00 PM

WELL CONSTRUCTION AND OPERATION IN THE ERA OF CALIFORNIA'S SUSTAINABLE GROUNDWATER MANAGEMENT ACT

Robert J. Collar, Golden State Water Company

Participants in this session will learn how California's Sustainable Groundwater Management Act may influence construction and operation of water-supply wells. While the act is in the early stages of implementation, provisions within the water code may influence how wells are constructed and operated.

Session 21 A - Research & Water Treatment Room: A2

8:00 AM - 8:30 AM

SELENIUM REMOVAL IN GROUNDWATER AND INDUSTRIAL DISCHARGE WASTEWATER

Lisa Farnen, Crystal Clear Technologies

Participants in this session will learn selenium removal from groundwater and industrial discharge waters with a complex matrix (high TDS) wastewater, such as refineries or power plants, can reach low ppb levels in water containing sulfates with no or minimal pre-treatment in a short contact time.

8:30 AM - 9:00 AM

SINGLE PASS RESIN FOR PFC REMOVAL

Cathy Swanson, Evoqua Water Technologies

Kirk Medina, Stratmoor Hills Water & Sanitation District

Evoqua joins forces with Stratmoor Hills Water & Sanitation Districts to tell the story of a new economical way to treat Perfluoroalkyl Substances (also known as PFAS or PFCs) with single pass perchlorate selective resin. Lab results, pilot testing, and full scale treatment have been performed with Dow PSR2 Plus.

Session 21 B - Operator Room: A2

10:30 AM - 11:00 AM

THE HISTORY OF TURBIDITY MEASUREMENT AND CALIBRATION

Kevin Menning, Hach

The different types of turbidimeter technologies and proper calibration and verification procedures will be described in the presentation.

11:00 AM - 11:30 AM

TTHM REDUCTION STRATEGIES

Stuart Cole, City of Vallejo

Attendees will learn what one water system did to reduce the formation of and minimize the impacts of THM's in their water.

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Technical Program

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Session 22 - Environmental, Health & Safety Room: A3

8:30 AM - 9:30 AM **STORMWATER TREATMENT WITH CLEAN GREEN SUSTAINABLE TECHNOLOGY**

Lisa Farnen, Crystal Clear Technologies

Meeting stormwater discharge standards for low ppb removal levels of TSS, O&G, metals and bacteria can be readily and economically achieved using fully certified clean green sustainable technology. The Pacific NW set the standards nationally for stormwater discharge compliance and now this technology can readily be commercialized.

10:00 AM - 11:00 AM **A MULTIFACETED APPROACH TO COMPLYING WITH CALIFORNIA'S GENERAL NPDES PERMIT FOR DRINKING WATER DISCHARGES**

Casey Claborn, San Jose Water Company

Participants in this session will learn how San Jose Water Company developed both administrative tools and technical improvements to ensure compliance with California's General NPDES permit for Drinking Water Discharges

11:00 AM - 12:00 PM **COMPLYING WITH THE STATEWIDE NPDES PERMIT FOR DRINKING WATER DISCHARGES - LESSONS LEARNED IN 2016**

Neil McQueen, McQueen Environmental Consulting

Participants will learn about the challenges experienced and lessons learned in 2016 by a utility doing its best to comply with the Statewide NPDES Permit for Drinking Water System Discharges.

Session 23 - Pipeline Rehabilitation Room: A4

8:00 AM - 8:30 AM **24" DIAMETER SLIPLINING: LESSONS LEARNED**

Todd Eising, City of Folsom

Cindy Preuss, HydroScience Engineers, Inc.

The participants will hear from the City, design, and construction management team regarding the design and construction lessons learned related to sliplining and rehabilitation of an existing raw water 30", 42" and 48" diameter mortar lined and coated welded steel pipe.

8:30 AM - 9:00 AM **HOW TO REALIZE A COST-EFFECTIVE REPAIR SOLUTION USING CARBON FIBER REINFORCED POLYMERS ON PRESSURE PIPES**

Scott F. Arnold, PE, Fyfe Co. LLC

Participants in this session will learn about the design and installation requirements for the use of carbon reinforced polymers as a stand-alone or composite structural repair for pressure pipes. This includes a breakdown of current design standards, construction techniques, and quality control procedures. An emphasis will be placed on identifying the specific project parameters that make an advanced composite solution the most cost-effective choice.

9:00 AM - 9:30 AM **HOW BIG DATA AND MACHINE LEARNING WILL SOLVE AMERICA'S \$1 TRILLION WATER PROBLEM**

Lars Stenstedt, Fracta, Inc.

Water main replacement is a \$1 trillion problem, with no effective method to prioritize replacement decisions. Fracta changes that. Its proprietary solution integrates decades of research with sophisticated big data and artificial intelligence software to accurately assess pipeline conditions, identify patterns, predict problems and offer pipe replacement recommendations.

10:30 AM - 11:00 AM **LAKE TAHOE STEEL WATER MAIN REPLACEMENT VIA PIPE BURSTING**

Mike LeFrancois, Incline Village Genreal Improvement District

Participants will learn about water main distribution included pipe bursting (splitting) existing 6- and 8-inch steel water mains and replacing with new 8-inch Fusible C900 PVC pipe

11:00 AM - 11:30 AM **CIPP OF CAST IRON MAINS IN LOS ANGELES**

Alvin Bautista, Los Angeles Department of Water and Power

Participants will learn about LADWP's pilot project where they used CIPP to renew cast iron distribution mains.

11:30 AM - 12:00 PM **EXISTING REGULATIONS RELATED TO PIPE BURSTING ASBESTOS CEMENT PIPE**

Edward Amble, PE, LEED AP, AM Trenchless

Learn about existing regulations that govern and risks associated with asbestos cement pipe handling. Gain a better understanding of long term performance and condition assessment of asbestos cement pipe. Learn about how to rehabilitate asbestos cement pipe through pipe bursting.



In loving memory of Chet Auckly

A mentor, water industry leader, public health icon, and friend. California Water Service immensely benefited from his leadership as Director of Water Quality during his tenure with the company and will forever be thankful for his contribution. Through Chet's leadership and commitment, our Water Quality Department gained recognition as one of the leaders in the water industry. His legacy lives on through the many lives he touched.



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2017 Fall Awards

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Southern California

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Drew McIntyre
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Utility Management Division
Katie Porter
Water Resources Division
Kevin Berryhill
Water Quality Division
Steve Twitchell
Operators Division

Section Chair Awards

Jack Bebee
Fallbrook PUD
Tom Bloomer
DN Tanks
Brian Bowcock
Phil Brun
City of Napa-Public Works
Department
Angela Cheung
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Andrew DeGraca
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Commission
Bruce Macler
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Jenna Mariano
V & A Consulting Engineers, Inc.
Rosie Thompson
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Southern California
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Sun Valley General Improvement
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Sun Valley General Improvement
District

George A. Elliott Award

Tammie Myers
California Water Service
Michael Gualtieri
La Habra Heights County Water
District

Walter O. Weight Membership Award

Larry Lyford
Helix Water District

Larry C. Larson Safety Award

California Water Service
Yorba Linda Water District

Academic Achievement Award

Larry Gao, UCLA

Academic Scholar- ship Recipients

Graduate Scholarships

Sonali Abraham, UCLA
Alex Gong, CSU Fresno

Undergraduate Scholarships

Linh Kim, CSU Fullerton
David Lim, UC Davis
Katrina Mendoza, Cal Poly Pomona
Madeline Wiegel, Loyola
Marymount University

One AWWA Operator Scholarship

Luis Estrada, Jr.

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Tetra Tech, Inc.

100 Year Service to the Water Industry

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In loving memory of Linda Contreras



A mentor, colleague and friend. CA-NV AWWA will forever be thankful for Linda's leadership and contribution as Director of Events & Marketing. Our conferences will not be the same without Linda. She will be missed dearly.





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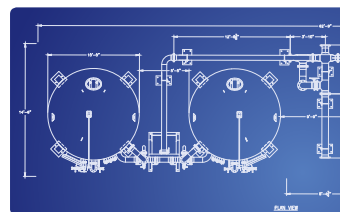
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Our filtration systems are American-made and manufactured in Redding, CA. Our design team leads the industry in creating both standard and customized systems.

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Pressure Rating (psi)	Model Number	Flow Maximum (gpm/vessel)	Total Volume (ft ³ /vessel)
125	PF 12-520	1100	1005
125	PF 10-820	750	884
125	PF 8-710	500	488
75	SF 8-710	500	488
75	SF 6-605	250	222
75	SF 4-602	100	90
75	SF 4-301	50	48



Design



Fabrication



Installation



Implementation

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The PF line of pressure vessels are ASME code stamped. All systems consist of dual vessels with associated internals, piping, valves and gauges for operation in parallel or series. Welding is certified to ASME B31.1 and B31.3 standards.

CONTACT

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CERTIFICATIONS

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