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With California’s adoption of a 5 ppt MCL for TCP, California utilities will be hard pressed to secure funding and achieve compliance.

Many California utilities are pursuing affirmative litigation against the manufacturers of the products that have contaminated their water supplies. As a leader in affirmative drinking water contamination litigation, SL Environmental Law Group has a record of successfully partnering with utilities to recoup costs associated with removing TCP from their drinking water.

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Attorney Advertising. Alexander Leff, of SL Environmental Law Group, is responsible for this ad.
Welcome from the Chair

WELCOME Section Friends to our Annual Spring Conference! Thank you for being a part of the American Water Works Association California-Nevada Section’s conference. Conferences are a great way to learn about what’s new and hot in the water industry, catch up with old friends, make new ones, and have fun doing it! I look forward to catching up with you in the halls between technical sessions, in the Exhibit Hall, or at one of the many social events happening throughout the week.

The Spring Conference’s theme is CONFLUENCE 2019: Where Policy, Operations and Management Converge. This represents the vast diversity of our membership, including regulators, policymakers, scientists, engineers, communications and public affairs professionals, accountants, and of course operators. The Section is a one-stop shop when it comes to water, and the Spring Conference illustrates this perfectly.

The week is packed with opportunities for learning, networking, and just plain fun. Highlights include our Opening Session Keynote speaker, Wade Crowfoot the newly appointed California Secretary for Natural Resources. Additionally we have Keynote Luncheon speaker, Ellen Hanak, Director of the PPIC Water Policy Center, who will speak with us about natural resource management in California. Another highlight is the “Back to the Basics” session, designed to give smaller utilities ideas on how to address a multitude of water quality challenges, though it is full of good information for utilities of all sizes. This session will be recorded so that small systems unable to attend can still benefit from the content.

The Section celebrates operators at the Spring Conference, and our competitions highlight this. The Top Op’s, Pipe Tapping, Hydrant Hysteria, Meter Madness and Hot Flare competitions display the challenge of being an operator. Though you do not have to be an operator to enter! After watching the competitions, you just may be inspired to compete in Spring 2020.

When not in technical sessions, don’t forget to visit our Exhibit Hall. With 120 exhibitors, you are sure to hear about at least one new product or technology to help you with your work. The Exhibit Hall is also a great place meet with vendors who you already know and network with colleagues. With a reception on Tuesday evening, breakfast and lunch served on Wednesday, and prize drawings throughout the conference, the Exhibit Hall is the place to be.

When the work day ends, you can have some fun at the Membership Mixer on Monday evening, and you can’t miss the Water For People event on Tuesday evening. This is always a conference favorite - with live music, dancing, and refreshments, you will have lots of fun while raising money for an amazing cause.

There is so much more at the Spring Conference, too. With committee meetings, technical tours, a Women’s Leadership event, and a student poster competition, there is never a dull moment. Thanks again for attending, and have a great time!

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Conference Schedule

Sunday, March 24
Governing Board Meeting
12:00 PM – 4:30PM
Gardenia Room – Sheraton Grand Hotel

Monday, March 25
REGISTRATION 7:00AM – 4:30PM
East Lobby in Sacramento Convention Center

SECTION LEADERS MEETING
8:00AM – 9:45AM
Room 312
Section Governing Board Members and all Committee Officers are invited to attend this meeting for Section updates. Sponsored by Murraysmith.

COMMITTEE MEETINGS
10:00AM – 6:30PM
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 Meetings.

MEMBERSHIP WELCOME RECEPTION
5:30PM – 7:00PM
Gardens Market – Sheraton Grand Hotel
Attendees may pick up their badge or register on-site.

TOP OPS CHALLENGE
7:00AM – 11:00AM
Room 314
The Top-Op’s challenge is in a fun, fast-paced game show format. Questions are based on water treatment and distribution knowledge.

HYDRANT HYSTERIA DEMO
7:00AM – 11:00AM
Outside of Exhibit Hall A
Hydrant Hysteria is a fast-paced competition where two-member teams assemble a specified hydrant as quickly as they can.

Tuesday, March 26
REGISTRATION
7:00AM – 4:00PM
East Lobby in Sacramento Convention Center

OPENING SESSION
8:30AM – 11:15AM
Room 315
The Opening Session will feature Wade Crowfoot, California Secretary for Natural Resources. Wade Crowfoot was appointed California Secretary for Natural Resources by Governor Newsom on January 11, 2019. Crowfoot brings more than 20 years of public policy and environmental experience to the office, with expertise in water, climate and sustainability issues. He most recently served as Chief Executive Officer of the Water Foundation and led its transition into an independent organization early in 2017. Prior to joining the foundation, he served in Governor Jerry Brown’s Administration as deputy cabinet secretary and senior advisor to the Governor, leading the administration’s drought response efforts. He previously served as West Coast regional director for the Environmental Defense Fund and a Senior Environmental Advisor to then-San Francisco Mayor Gavin Newsom.

The Opening Session will feature a panel consisting of Todd Gartner, Director, Natural Infrastructure Initiative at the World Resources Institute and Willie Whittlesey, Project Manager, Lower Yuba River Management Team at Yuba Water Agency. In the presentation titled Water-Fire-Money, Todd Gartner and Willie Whittlesey will discuss the partners, investors, mechanics and benefits of the first pilot, key elements of the Forest Resilience Bond mechanism and ways other utilities across CA can explore fighting fire with finance in their watersheds.

VOLUNTEER RECOGNITION LUNCH & TOP-OP’S FINALE
11:30AM – 1:30PM
Rooms: 202/203/204
(Ticket required—you may purchase additional tickets at registration for $50)
The Volunteer Recognition lunch will feature Ellen Hanak, Director of the Water Policy Center at the Public Policy Institute of California. Ellen Hanak is director of the PPIC Water Policy Center and a senior fellow at the Public Policy Institute and Willie Whittlesey, Project Manager, Lower Yuba River Management Team at Yuba Water Agency. In the presentation titled Water-Fire-Money, Todd Gartner and Willie Whittlesey will discuss the partners, investors, mechanics and benefits of the first pilot, key elements of the Forest Resilience Bond mechanism and ways other utilities across CA can explore fighting fire with finance in their watersheds.

An important event for the first-time attendee, new member, young professional and student member attending their first CA-NV AWWA conference. As navigating the conference can be overwhelming, the orientation will familiarize attendees with the conference and all it has to offer. The orientation will be presented by various members of the Section’s Membership Committee. This is a great opportunity to begin networking and meeting other attendees.

TECHNICAL TOUR - Water Reliability
8:00AM – 12:00PM
Buses load at 7:30 AM outside of J Street
*Additional Fee $55—You can purchase tickets onsite at the registration desk. Join this tour and see the Sacramento City surface water intake and treatment plant. The group will travel a short distance to the SRWTP intake pier to see the intake facility at the Sacramento River. From there, the tour heads to the SRWTP facility. Originally built in 1921, this plant has grown in size and now covers 23 acres and can processes 160 MGD of surface water. The plant will be in the maintenance mode which means that equipment that is normally submerged during operation will be exposed. There will be a discussion about the 100% chlorine storage facility and safety protections. Wear comfortable walking shoes.

FIRST TIME ATTENDEE ORIENTATION
7:30AM – 8:30AM
Room 304/305
An important event for the first-time attendee, new member, young professional and student member attending their first CA-NV AWWA conference.

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 Membership Welcome Reception. Attendees will receive one drink ticket and light appetizers will be served. Sponsored by MeterSYS.

MEMBERSHIP WELCOME RECEPTION
5:30PM – 7:00PM
Glades Market – Sheraton Grand Hotel
Attendees may pick up their badge or register on-site.

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The opening session is sponsored by PumpMan.

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The opening session is sponsored by PumpMan.
Policy Institute of California, where she holds the Ellen Hanak Chair in Water Policy. Under her leadership, the center has become a critical source of information and guidance for natural resource management in California. She has authored dozens of reports, articles and books on water policy, including Managing California’s Water. Her research is frequently profiled in the national media and she participates in briefings, conferences and interviews throughout the nation and around the world. Her other areas of expertise include climate change and infrastructure finance. Previously, she served as Research Director at PPIC. Before joining PPIC, she held positions with the French agricultural research system, the President's Council of Economic Advisers and the World Bank. She holds a PhD in Economics from the University of Maryland.

Volunteer Recognition Lunch sponsored by West Yost Associates

COMPETITIONS ............... 1:00PM - 5:00PM
Inside the Exhibit Hall
Don't miss out on the Meter Madness Competition. Hot Flare and Pipe Tapping will take place on Wednesday.

TECHNICAL SESSIONS ............ 1:30PM-5:30PM
For complete schedule please refer to pages 16-20.

MANUFACTURERS & ASSOCIATES
COUNCIL COMMITTEE MEETING ..... 1:30PM - 2:30PM
Room 303

EXHIBIT HALL GRAND OPENING ..... 3:00PM - 4:00PM
Sacramento Convention Center Exhibit Hall A
With over 115 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.

EXHIBIT HALL HOURS .............. 3:00PM - 7:00PM
Sacramento Convention Center Exhibit Hall A

WOMEN'S LEADERSHIP COMMITTEE PRESENTS: MAD HOT HYSTERIA ......... 4:00PM - 6:00PM
Exhibit Hall A
Come get your hands dirty in a non-competitive environment! Learn the secrets of pipe tapping, hydrant hysteria, and meter madness from the masters themselves in this hands-on workshop.

M.E. SIMPSON, CO., INC.
MEET & GREET RECEPTION ........ 5:30PM - 7:00PM
Exhibit Hall A
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.

M.E. SIMPSON, CO., Inc.

YOUNG PROFESSIONALS
MEETUP (MIXER) ............... 6:30PM – 7:30PM
Mix Downtown: 1525 L Street, Sacramento

WATER FOR PEOPLE SOCIAL ....... 7:30PM – 11:00PM
Mix Downtown: 1525 L Street, Sacramento
Ticket required to attend—$35 if purchased in advance at registration or $40 at the door. Students ½ price with student ID. Ticket includes drinks, appetizers and dessert. Wear your favorite band T-shirt to enjoy a night with games, silent auctions, networking and watch Joe Guistino & Band play live!

Wednesday, March 27

REGISTRATION ................. 7:00AM – 4:00PM
East Lobby in Sacramento Convention Center
Attendees may pick up their badge or register on-site.

TECHNICAL SESSIONS ........... 7:30PM-5:30PM
For complete schedule please refer to pages 20-29.

TECHNICAL TOUR—
Emergency Preparedness ........ 8:00AM – 12:00PM
Buses load at 7:30 AM outside of J Street
*Must have purchased ticket. No on-site registration available for this tour.
This tour will visit the Sacramento Office of Emergency Services center. SacOES coordinates the overall response to large scale incidents and disasters. Discussions will have an emphasis on utilities.

COMPETITIONS ............... 8:00AM – 3:00PM
Exhibit Hall A
Don't miss out on the Pipe Tapping and Hot Flare competitions!

EXHIBIT HALL HOURS .............. 8:30AM – 4:00PM
Exhibit Hall A
With over 115 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.

EXHIBIT HALL
CONTINENTAL BREAKFAST .......... 8:30AM – 10:00AM
Exhibit Hall A
With over 115 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.

COMPETITION LUNCH ............ 12:00PM – 1:30PM
Exhibit Hall A
*Ticket required—you may purchase additional tickets at registration for $50.
Join us for a boxed lunch in the exhibit hall and cheer on the competition teams. This is also a great opportunity to meet and network with exhibitors.

Thursday, March 28

REGISTRATION ................. 7:00AM – 11:30AM
Sheraton Grand Hotel by Glides Market
Attendees may pick up their badge or register on-site.

TECHNICAL PROGRAM ........... 7:30AM – 11:30AM
Located in the Sheraton Grand Hotel, 2nd and 3rd floors
Refer to pages 29-33 for complete details.

Join the conversation! Visit us on
The NO-DES flushing method replaces conventional flushing programs and eliminates customer complaints by cleaning distribution lines quickly and efficiently with high tech monitoring equipment. The mobile flushing unit has minimal water discharge, increases chlorine residuals and removes sedimentation, bio-film and other particulates down to 1 micron. Contact info@no-des.com for more information, a demonstration, pricing, and contract services.

Visit www.no-des.com to see what applications the unit can be used for beyond flushing.

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www.facebook.com/stophydrantflushing
Committee Meetings

**Monday, March 25, 2019**

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<td>EH&amp;S BMP Special Meeting</td>
<td>4:00 PM</td>
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<tr>
<td>Technical Programs Committee</td>
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**Tuesday, March 26, 2019**

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<th>DIVISION</th>
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<tr>
<td>Mfg. Associates Council - MAC</td>
<td>1:30 PM</td>
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<tr>
<td>Young Professionals Committee</td>
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### Sessions By Committee/Conference Maps

#### Tuesday Sessions

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<th>Water Treatment</th>
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<td>Session 2</td>
<td>Water Quality</td>
<td>Safe Drinking Water Act</td>
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<td>Session 3A</td>
<td>Engineering</td>
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<td>Session 3B</td>
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<td>Engineering</td>
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<td>Water Resources</td>
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<td>Utility Management</td>
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<td>Session 10</td>
<td>Utility Management</td>
<td>Security &amp; Emergency Planning</td>
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#### Wednesday Sessions

| Session 11A | Water Quality | Water Treatment & Smaller Utilities | 306 |
| Session 11B | Water Quality | Water Treatment & Financial Management & Smaller Utilities | 306 |
| Session 12A | Water Quality | Research | 307 |
| Session 12B | Water Quality | Water Treatment & Operators | 307 |
| Session 12C | Water Quality | Research & Safe Drinking Water Act | 307 |
| Session 12D | Water Quality | Research & Energy and Sustainability | 307 |
| Session 13A | Water Quality | Distribution System Water Quality | 308 |
| Session 13B | Water Loss Control | Water Loss Control | 308 |
| Session 14 | Engineering | Systems Controls | 309 |
| Session 15A | Engineering | Tanks Reservoirs Structures | 310 |
| Session 15B | Utility Management | New Technology | 310 |
| Session 15C | Engineering | Asset Management | 311 |
| Session 16A | Utility Management | Security & Emergency Planning | 311 |
| Session 16B | Water Resources | Water Well Technology | 312 |
| Session 17A | Water Resources | Recycled/Desalination | 312 |
| Session 17B | Water Resources | Water Treatment & Smaller Utilities | 306 |
| Session 18A | Utility Management | New Technology | 313 |
| Session 18B | Utility Management | Leadership Development | 313 |
| Session 19 | Operators | Meter | 314 |
| Session 20 | Operator | Operator | 315 |

#### Thursday Sessions

| Session 21 | Water Quality | Water Treatment | Tofanelli |
| Session 22 | Water Quality | Source Water Quality | Bataglieri |
| Session 23 | Water Quality | Water Quality Analysis | Beavis |
| Session 24 | Engineering | Engineering & Construction | Bondi |
| Session 25 | Water Resources | Water Management & Efficiency | Carr |
| Session 26 | Operator | Operator | Compagno |
| Session 27A | Operator | Smaller Utility | Hedricks, Kamilos & Baker |
| Session 27B | Utility Management | Security & Emergency Planning | Hedricks, Kamilos & Baker |

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### Sacramento Convention Center

**Third Floor**

![Map of Sacramento Convention Center Third Floor](image-url)
California and Nevada’s Trusted Water AMI Services Company

MeterSYS

Metering as a Service ® Provider
AMI Project Management
Feasibility Analysis
Metering Process Improvement
AMI Solution Selection
Software Integration Services

Dedicated to the evaluation, selection, and implementation of advanced metering systems and the sustainable operation of AMI technologies.

Raleigh, North Carolina          www.MeterSYS.com          Sacramento, California
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<tr>
<td>3:00 PM</td>
<td>Exhibit Hall</td>
<td>Ice Pigging - Cleaning Mains with Ice</td>
<td>Pirating Energy Efficiency Programs and Processes in Water</td>
<td>Corrosion and its Control for Ductile Iron Pipelines</td>
<td>Clifford Chan, EBMUD</td>
<td>Dewatering Facility Placement and Equipment Selection</td>
<td>Michael Hether &amp; Bill Ahs, City of Napa</td>
<td>Grand Opening</td>
<td>Alternatives to Conventional and UDF Hydrant Flushing</td>
<td>CalWATER Fire, Earthquake and Regulation: It’s Not Just a Website. Anytime...But a Tool to Meet Your Needs!</td>
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<tr>
<td>4:00 PM to 4:30 PM</td>
<td>Evaluating Risks to the Water Supply</td>
<td>Federal Perspective on Risk Assessment and Management</td>
<td>Ice Pigging - Cleaning Mains with Ice</td>
<td>Corrosion and its Control for Ductile Iron Pipelines</td>
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<td>Jim Wallbrick, San Jose Water Company</td>
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<tr>
<td>4:30 PM to 5:00 PM</td>
<td>Joe Gustino &amp; Sean Donovan, Coastside County Water District</td>
<td>Recycled Water Cross-connection Test Procedures</td>
<td>Pipeline Rehabilitation vs Replacement, a Panel Discussion Focusing on Installation Methods, Emerging Technologies &amp; Lessons Learned</td>
<td>Corrosion and its Control for Ductile Iron Pipelines</td>
<td>Clifford Chan, EBMUD</td>
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<td>Session 15A Tanks Reservoirs &amp; Structures</td>
<td>Session 16A Asset Management &amp; Pipeline Rehabilitation</td>
<td>Session 17A Water Well Technology</td>
<td>Session 18A New Technology</td>
<td>Session 19A Meter &amp; Asset Management</td>
<td>Session 20 Operator</td>
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<tr>
<td>Back to the Basics: Challenges &amp; Solutions for Small Systems/Groundwater Treatment - Question &amp; Answer Panel Discussion Engine Leung, Division of Drinking Water</td>
<td>Tracer Studies: the Good, the Bad and the Ugly</td>
<td>Active Control of THM Levels in Drinking Water Distribution Systems</td>
<td>System Wide Storage Tank Replacement in Remote California</td>
<td>Apply EPANET Framework to Optimize Your O&amp;M - Case Studies</td>
<td>Development of a GIS-Based Methodology for Identifying &amp; Ranking Prospective Sites for Public Wells within a Large Urbanized Area</td>
<td>Ken McMillan, Environmental Biologist, MWD</td>
<td>Colter Anderson, Zone 7 Water Company</td>
<td>Factors Affecting Meter Accuracy</td>
<td>Guy Schott, CA Water Resources Control Board</td>
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<tr>
<td>7:30 AM - 8:00 AM</td>
<td>8:00 AM - 9:30 AM</td>
<td>9:30 AM - 11:00 AM</td>
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<td>6:00 PM - 7:30 PM</td>
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## March 27

### Session 11A - Water Treatment & Smaller Utilities
- **Low Tech THM Removal**
  - Ethan Brookes, Paix Water Technologies
- **Microplastics: Overview & California Legislation**
  - Jessica Goerger, California Association of Sanitation Agencies
- **Customer Meter Testing: Matching a Testing Program to Your Goals**
  - Kris Williams, Water Systems Optimization
- **Implementation of Automation Projects Using a SCADA Master Plan**
  - Jeffrey A. Morris, Carollo Engineers
- **Economic Analysis of Water Quality Management Alternatives for Palo Alto’s Foothills Emergency Storage System**
  - Mark O’Donnell, Sions Pochtala, HP Consultants
- **Wildfire Destruction in 2018: Lessons Learned from Paradise Irrigation District**
  - Kevin Phillips, Paradise Irrigation District
- **Maximizing Groundwater Use in the Central & West Coast Basins through Recycled Water from Hyperion**
  - Chris Rees, LADWP

### Session 12C - Research & Safe Drinking Water Act
- **Fostering Community Driven Solutions: Policy Tools & Implementation Strategies for the Human Right to Water in California**
  - Heather Lukas & Laurel Kreutner, Community Water Center
- **Microplastics: Exposure and Health Effects**
  - Anne-Marie Czok, ORD - Office of Science and Policy
- **Two Years & Counting: A Review of the Water Loss Audit Reports in California**
  - Todd Thompson, Department of Water Resources
- **SCADA Panel Discussion**
  - Dave Summerfield, Medora Corp.
  - Solara53
  - Andrew Lytle, County of Orange
- **Addressing Potable Reuse Operator Certification Needs: The AWWA Certification Program – A Joint Effort Between CA-NV AWWA & CPEA**
  - Eric Stucky, Brown and Caldwell

### Session 13B - Water Loss Control
- **Water Treatment & Financial Management & Smaller Utilities**
  - Economic Feasibility, Affordability & MCL Setting
  - Robert Bauchy, Coronado Environmental Consulting & Jennie Darby, UC Davis
- **Nitrate Treatment Affordability in California: Three Case Studies**
  - Tarrak Henrie, Coronado Environmental Consulting & Jennie Darby, UC Davis
- **Nitrate Treatment: It’s Never Easy**
  - Craig Gormon, Coronado Environmental Consulting & Jennie Darby, UC Davis
- **Local Climate Change in Pasadena, CA**
  - David Kimbrough, Pasadena Water & Power

### Session 14 - Systems Control
- **Research & Energy & Sustainability Planning Considerations in the Face of Change**
  - Julie Christian-Smith, Water Resources
- **The Process of Performing and Validating an AWWA Water Audit**
  - Rick Belaye, MC Engineering, Inc.
- **The Future of Automation in the Water Industry**
  - Paul Sagues, JDI, Inc.
- **Evolution of GIS - The Journey from Map Books to Tough Books**
  - Michael J. Hitton, P.E., City of Hesperia
- **Evaluating the Integration of Purified Water into Existing Distribution Systems**
  - Laura Wilkowski, U.S. Environmental Protection Agency
- **Power Resilience and Black Sky Planning for Water Utilities**
  - Andy Rojas, Southern California Edison

### Session 15A - Tanks, Reservoirs & Structures
- **Understanding Non-Revenue Water Loss with Powerful Analytics**
  - Jonn Rogers, FSM
- **MODBUS: Capturing Real-Time Production Meter Reads with Your PLC**
  - Hannah Dunlap, Doug Cather & Greg Buxton, Sacramento Suburban Water District
- **Right Keys, No Keys... No Problem (New Lock & Key Control Technology)**
  - Jon Walcheck, San Jose Water
- **BAYWATER - The Opportunities & Challenges of Collaborative Approaches to Candidate Development & Outreach in the Water & Wastewater Industry**
  - Steven Currin, BAYWATER
- **Ozone/Decarbonation Application at Potrero WTP**
  - David O’Connor, Carollo Engineers

### Session 16B - Recycled/Desalination Committee
- **Wildfire Destruction in 2018: Lessons Learned from Paradise Irrigation District**
  - Kevin Phillips, Paradise Irrigation District
- **Maximizing Groundwater Use in the Central & West Coast Basins through Recycled Water from Hyperion**
  - Chris Rees, LADWP

### Session 19 - Leadership Development
- **Addressing Potable Reuse Operator Certification Needs: The AWWA Certification Program – A Joint Effort Between CA-NV AWWA & CPEA**
  - Eric Stucky, Brown and Caldwell

### Session 20 - Operator
- **AMI Customer Service Panel**
  - Michel Harvey, Meter Committee
- **AMI Compatible Meter**
  - Gary Kahanowich, Amec Foster Wheeler
- **Water Treatment & Financial Management & Smaller Utilities**
  - Economic Feasibility, Affordability & MCL Setting
  - Robert Bauchy, Coronado Environmental Consulting & Jennie Darby, UC Davis
- **Nitrate Treatment Affordability in California: Three Case Studies**
  - Tarrak Henrie, Coronado Environmental Consulting & Jennie Darby, UC Davis
- **Nitrate Treatment: It’s Never Easy**
  - Craig Gormon, Coronado Environmental Consulting & Jennie Darby, UC Davis
- **Local Climate Change in Pasadena, CA**
  - David Kimbrough, Pasadena Water & Power

### Operators Round Table
- Calter Anderson, Zone 7 Water Agency
- Chris Russo, City of West Sacramento
- Stewart Colby, City of Vallejo
- John Strout, CA State Water Resources Control Board

### Got Meter & AMR Transmitter Scrap? Trash or Treasure? What is it Telling You?
- Kenneth Mill, Veolia North America

### Effective Leadership Development for LADWP's Water Distribution Division
- Breon Corley, Los Angeles Department of Water & Power

### Lessons Learned in Sacramento on DMA Implementation
- Ronnie Henson, City of Sacramento Department of Utilities

### Keep it Out! Operator Tools and Resources for Watershed Spills
- Elissa Callahan, Amy Kayal & Kyle Chuang, City of Sacramento, Department of Utilities

### Expert Panel on Developing Effective Succession Planning Strategies
- Hitler Buchen, SPPC
- Andrew Linard, LADWP
- David Clark, MWD
### Thursday

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<td>Batagliere</td>
<td>Beavis</td>
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<td>Hedricks, Kamilo &amp; Baker</td>
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#### 7:30 AM - 8:00 AM

**What's Up With PFAS?**
- Introduction to the Challenges & Solutions for Perfluorinated Compounds
  - Steve Mungari, Suez Water Technologies and Solutions
- Analytical Instruments
  - Erik Hackett, Brown and Caldwell

#### 8:00 AM - 8:30 AM

**Maximizing Resource Efficiency Via Controlled Raw Water Withdrawal**
- Kelly McCurry, Inmon Watercare

**History & Evolution of Turbidity Measurement**
- Randy Turner, MWH Analytical USA

**How Can Hydraulic Models Solve Operational & Design Challenges in Water Distribution Systems?**
- Amy Rezog & Nathaniel Howland, West Yost Associates

**California’s New Water Efficiency Laws: Keep Calm & Comply (with our help)**
- Tia Leberer & Mary Ann Dickson, California Water Efficiency Partnership

**Particle Analyzers: Size Calibration & Count Verification**
- Rudy Plaza-Ponce, Ianis Consulting Company

#### 8:30 AM - 9:00 AM

**Determination of the Effectiveness of Granular Activated Carbon for the Removal of PFAS Precursor Compounds**
- Adam Redding, Calgon Carbon Corporation

**Water Planning for the Capital City - The Fastest Growing Big City in California**
- Chris Cleveland, Carolla Engineering & Bent Tovey, City of Sacramento, Department of Utilities

**Fastest Ever Aquifer Storage & Recovery Project - City of Woodland ARS Project**
- Michael Ducker, Carolla Engineers

**The Challenges of Staying Local - How Small Water Systems Maintain Control & Increase Reliability**
- Jamie Nuchan, CA State Water Resources Control Board

#### 9:00 AM - 9:30 AM

**Resin Treatment Technology for PFAS - How It Worked in Southern Colorado**
- Stephanie Schweick, JDS-Hydro Consultants, Inc.

**Are We Ready for Cyanotoxins? Evaluating Reservoir & Treatment Plant Options to Manage Cyanotoxins & Related Water Quality Challenges**
- Margaret Harris, Morgan Environmental Consulting

**Particle Counters: Size Calibration & Count Verification**
- Rudy Plaza-Ponce, Ianis Water Consultants

**Fastest Ever Aquifer Storage & Recovery Project - City of Woodland ARS Project**
- Michael Ducker, Carolla Engineers

**Perseverance Pays Off: Building a New Community Water System in California**
- Lora Echevarria-Mato, SRT Consultants & Chad Plantenberg, Redwood Glen

#### 10:00 AM - 10:30 AM

**Wildfire Impacts on Water Quality & Treatment**
- Amanda Hahn, Washington State University

**Are We Ready for Cyanotoxins? Evaluating Reservoir & Treatment Plant Options to Manage Cyanotoxins & Related Water Quality Challenges**
- Margaret Harris, Morgan Environmental Consulting

**Slow Progress With Quicksilver: Methylenecyclonitrile Reduction in Reservoirs Contaminated by Large-Scale Mercury Mining**
- Mark Serko, Santa Clara Valley Water

**Stopping “Hammer Time” - A Unique Hydraulic Model Calibration Story to Evaluate Hydraulic Transient Events**
- Bobby Veni, West Yost Associates & Justin Waples, Central San

**Water Management & Efficiency Looking to the Past to Guide the Future: Strategic Planning for Water Use Efficiency**
- Nate Shriver, K2 Environmental & Water & Gus Meza, West Basin Municipal Water District

**Benefits of Water Tank Mixing**
- Don Richert, Red Valve

#### 10:30 AM - 11:00 AM

**Multicontaminant Removal - Simultaneous Removal of Nitrate & Arsenic**
- Chris Cleveland, Carolla Engineers

**Aquifer Storage & Recovery (ASR) in Sonoma County, California**
- Rodney Freivogel, Chris Vesselle & Trevor Kent, U.S. Consultants, Inc.

**An Integrated Approach Toward Groundwater Banking in the Southern Central Valley, California**
- Mehlidar Gansertizade, GSI Consultants, Inc.

**We’re in the Money: Scaling Up Investments in Distributed Water Innovations**
- Cynthia Kuhler, WaterNow Alliance

#### 11:00 AM - 11:30 AM

**Water Treatment & Research**
- Total System Optimization
- Miguel Arias-Paiz, Bureau of Reclamation

**Responding to an Extreme Water Quality Event - Challenges & Lessons Learned in Clear Lake**
- Bryan Risio & Keith Ahrens, Golden State Water Company

**Sample Integrity - A Guide to Sample Bottles, Preservation, Hold Times & Collections**
- Andrew Smith & Lipan Greenwood, Western Environmental Testing Laboratory

**Start With the End in Mind - Designing Ductile Iron Pipe for Seismic Survivability**
- Dan Hrubas, US Pipe

**What Keeps You Up at Night?**
- Karen Kingsbury, Metis Water District

**Self-Service Solutions - Improving Satisfaction & Saving Staff Time with AIM Data**
- Jeff Lipson, WaterSmart

#### 11:30 AM - 12:00 PM

**Optimizing Polymer Efficiency for Improved Solids Separation**
- Yong Kim, GSI Solutions, Inc.

**Characterizing Groundwater Quality for SGMA Planning**
- Stephanie Hearn, GSI Consultants, Inc.

**Keeping You Up at Night?**
- Karan Kingsbury, Metis Water District

**Self-Service Solutions - Improving Satisfaction & Saving Staff Time with AIM Data**
- Jeff Lipson, WaterSmart
Tuesday, March 26, 2019

**Session 1 - Water Treatment**

**Room: 306**

1:30 PM - 2:00 PM  
**A TALE OF TWO WTPS: GAC VS PAC FOR DBP REDUCTION**  
Alex Page, Kennedy/Jenks Consultants

Attendees in this session will learn about the operational differences, advantages and disadvantages of GAC and PAC from full scale operational data and Operator interviews. Two plants treating the same source water and operated by the same staff use different treatment approaches to reduce disinfection byproducts (DBPs): one uses roughing filters, Granular Activated Carbon (GAC), and membranes, and the other uses Powered Activated Carbon (PAC), ballasted clarification and media filtration.

2:00 PM - 2:30 PM  
**HEAVY HITTERS: COMPARING WHERE DBPs WERE KNOCKED DOWN IN TWO OZONE/BAF PILOT TRAINS**  
Drew Hart, Carollo Engineering

Participants will learn about DBP formation and reduction pathways evaluated using two parallel pilot treatment trains, one with pre-ozone, one with post-ozone. This work was completed to evaluate process improvement options for two of the City of Nashville’s 80 mgd WTPs.

2:30 PM - 3:00 PM  
**IMPROVING SAN PABLO RESERVOIR WATER QUALITY WITH HYPOLIMNETIC OXYGENATION SYSTEM TO REDUCE T&O AND DBPs**  
Ali Sheikhholeslami & Deborah Russell, East Bay Municipal Utility District

The participants of this presentation will learn about the water quality study that led East Bay Municipal Utility District to select the HOS, the system’s layout, design criteria, design challenges, and HOS’s performance monitoring plan.

4:00 PM - 5:00 PM  
**DENNISTON WTP - A RAGS TO RICHES STORY**  
Joe Gustina & Sean Donovan, Coastside County Water District

Participants in this session will learn how Coastside County Water District overcame short CT, high THMs and unreliable productivity by making some innovative changes to Denniston WTP and the distribution system.

5:00 PM - 5:30 PM  
**INNOVATIVE APPROACH TO LEAD AND COPPER RULE (LCR) CUSTOMER SITE ASSESSMENTS AND COMMUNICATION**  
Talle Lopez, Cal Water

Participants in this session will learn about how to implement a data-driven customer-facing approach to Lead and Copper rule monitoring intended to be scalable and applicable to other Districts and water utilities. The presentation will share the results and lessons learned from the pilot program that utilities can utilize to enhance their LCR sampling programs.

**Session 2 - Safe Drinking Water Act**

**Room: 307**

1:30 PM - 2:15 PM  
**STATE AND FEDERAL REGULATORY UPDATE**  
Darrin Polhemus, CA Division of Drinking Water

Participants in this session will hear the latest updates from state and federal regulators.

2:15 PM - 3:00 PM  
**STATE AND FEDERAL REGULATORY UPDATE**  
My-Linh Nguyen, State of Nevada

Participants in this session will hear the latest updates from state and federal regulators (Nevada focused).

4:00 PM - 4:30 PM  
**EVALUATING RISKS TO THE WATER SUPPLY**  
Evan Jacobs, California American Water

Attendees in this session will hear from a water utility about their process for assessing water supply/quality risks in the distribution system and how they address evolving issues such as microplastics and PFOS/PFOA. The identification and management of risks is fundamental to ensuring a safe and reliable drinking water supply.

4:30 PM - 5:00 PM  
**FEDERAL PERSPECTIVE ON RISK ASSESSMENT AND MANAGEMENT**  
Bruce Mcaler, USEPA

In this session, participants will hear about the United States Environmental Protection Agency’s approach to risk assessment and management and the implications for California and Nevada water agencies.

5:00 PM - 5:30 PM  
**COMMUNICATING RISKS TO YOUR CUSTOMERS**  
Susan Teefy, East Bay Municipal Utility District (EBMUD)

As the public becomes more aware of potential hazards in our society, the more important it is to effectively communicate to your customers about those risks. This is especially the case when it is related to public health and the water supply. In this session, participants will learn strategies for connecting with customers and explaining the how, what, why, when and where they may be affected, both in an emergency situation and an ongoing basis.

**Session 3A - Materials Performance**

**Room: 309**

1:30 PM - 2:30 PM  
**POLY-WHAT? DESIGNING WITH THERMOPLASTICS**  
Alex Gambino, Asahi/America, Inc.

Participants in this session will learn about thermoplastic options. Starting with foundational knowledge, the attendee will learn the basic differences of thermoplastics and installation methods. This presentation is geared toward maintenance personnel or in-house engineering staff.

2:30 PM - 3:00 PM  
**AWWA D102-INSIDE COATING SYSTEM 3: BETTER CORROSION PROTECTION OF WELDED STEEL TANKS**  
Paul Trautmann, Sherwin Williams

Participants in this session will learn about 100% volume solids coatings for welded steel potable water storage tanks including installation and total expected service life.

**Session 3B - Backflow Programs**

**Room: 309**

4:00 PM - 4:30 PM  
**CROSS CONNECTION TESTING IN SAN FRANCISCO**  
Jim Blue, SFPUC Water Quality Division

Participants in this session will learn about Cross Connection testing in San Francisco; methods and procedures for performing cross connection shut-down tests in dual plumbed buildings in San Francisco.

4:30 PM - 5:30 PM  
**RECYCLED WATER CROSS-CONNECTION TEST PROCEDURES**  
Ben Bennett, Backflow Prevention Specialists, Inc

Participants in this session will discuss various methods and procedures for performing recycled water cross-connection testing and the positive and negative aspects of each method.

**Session 4 - Pipeline Rehabilitation**

**Room: 308**

1:30 PM - 2:00 PM  
**PIPE BURSTING WATER MAINS - TRENCHLESS REPLACEMENT AND REHABILITATION**  
George Mallakis, TT Technologies, Inc. - “Trenchless Solutions”

Participants in this session will learn about pipe bursting of water mains, trenchless replacement and process & case studies.
Extend the life of your water distribution system using real-time data

Our smarter hydrant not only provides life-saving fire protection but monitors pressure and detects leaks in the water distribution system, 24 hours a day, 7 days a week. Jones® wet barrel fire hydrants can be equipped with a Hydro-Guard® pressure monitoring sensor installed in the dome top and an EchoShore® distribution leak detection (DX) node as the nozzle cap. Utilities are now able to use existing hydrant assets as a hub for communication and technology deployment.

For more information, contact your Jones Distributor, Sales Representative or Customer Service Center at 800-523-8618.

Stop by our booth at CA-NV AWWA Spring Conference!
2:00 PM - 2:30 PM
ERQUAKE RESISTANT DUCTILE IRON PIPE (ERDIP)
AS A COUNTERMEASURE AGAINST TSUNAMIS
Naoto Itabashi, Kubota Corporation
Participants in this session will learn about another aspect of Earthquake Resistant Ductile Iron Pipe (ERDIP) that was developed in Japan back in 1974. ERDIP is not only highly effective against large earthquakes, but it is also effective against tsunamis.

2:30 PM - 3:00 PM
CORROSION AND ITS CONTROL FOR DUCTILE IRON PIPELINES
Josh Blount, Ductile Iron Pipe Research Association
Participants in this session will learn the criteria to identify corrosive soil environments and how to protect ductile iron pipe from corrosion in these environments with polyethylene and V-Bio Enhanced Polyethylene Encasement.

4:00 PM - 4:30 PM
ICE PIGGING - CLEANING MAINS WITH ICE
Paul Treloar, SUEZ Advanced Solutions
Participants in this session will learn the science behind Ice Pigging – how ice has been proven to clean more effectively than water and more easily than traditional pigging.

4:30 PM - 5:30 PM
PIPELINE REHABILITATION VS REPLACEMENT, A PANEL DISCUSSION FOCUSING ON INSTALLATION METHODS, EMERGING TECHNOLOGIES, AND LESSONS LEARNED
David Katzev, East Bay Municipal Utility District, George Mallakis, TT Technologies, Katie Miller, San Francisco Public Utilities Commission, Laura Johnson, East Bay Municipal Utility District and Michael Cadei, West Valley Construction
Participants will hear and learn from several pipeline design and construction experts on the advantages, challenges, and opportunities of pipeline rehabilitation and replacement technologies, suitable conditions for different approaches, and lessons learned. Participants will also have the opportunities to discuss their questions and concerns about rehab vs. replacement.

Session 5 - Energy and Sustainability
Room: 311
1:30 PM - 3:00 PM
PANEL DISCUSSION: A NEW NORMAL: THE CONFLUENCE OF NEW ELECTRIC UTILITY REQUIREMENTS AND WATER AGENCY IMPACTS
Patrick Welch, California Municipal Utilities Association, Adam Smith, Southern California Edison and Clifford Chan, East Bay Municipal Utility District
Electric utilities are facing a multitude of new goals and requirements to develop renewable energy projects, enhance energy efficiency and even de-energize power lines in time of increased fire danger, all of which can impact water agency operations. This panel will explore the new mandates and how water agencies can optimize their systems to address them.

4:00 PM - 5:00 PM
LEVERAGING ENERGY EFFICIENCY PROGRAMS AND PROCESSES IN WATER SOURCING AND DISTRIBUTION SYSTEMS TO ACHIEVE OPTIMIZED OPERATIONAL PERFORMANCE
Eric Bornstein, The Energy Coalition and Brian Collins, United Water Conservation District
Participants in this session will learn about energy efficiency opportunities utilizing two-way SCADA controls and automated water quality monitoring. United Water Conservation District worked with a third party implementer to create an innovative pump sequencing approach that achieved an estimated annual energy savings of over 1.85 million kWh.

5:00 PM - 5:30 PM
WATER/ENERGY BANK “PROOF-OF-CONCEPT” (EPC-16-029)
Mark Beuhler, Antelope Valley Water Storage
Participants in this session will learn about the potential to shift the operation of State Water Project water delivery, from summer high energy-demand periods into spring/fall lower energy-demand periods. If the imported water delivers can be shifted seasonally, it enables a reduction in the state’s peak hour electric load.
Technical Program

Session 6 - Water Well Technology & Water Management and Efficiency
Room: 312

1:30 PM - 2:30 PM
STATE UPDATE ON SGMA IMPLEMENTATION
Steven Springhorn, CA Department of Water Resources & Samuel Boland-Brien, CA State Water Resources Control Board
Participants in this session will learn about DWR’s boundary modifications, basin prioritization, evaluations of alternative submittals, best management practices, and financial assistance programs for the Sustainable Groundwater Management Act (SGMA). Participants will also receive an update from SWRCB on its implementation of SGMA.

2:30 PM - 3:00 PM
DWR CLIMATE CHANGE GUIDANCE AND MODELING TOOLS FOR SGMA
Tyler Hatch, CA Department of Water Resources
Participants in this session will learn about DWR’s guidance for evaluating future climate in Groundwater Sustainability Plans (GSPs) and available modeling tools provided by DWR available for use in GSPs.

3:00 PM - 4:00 PM
OPERATOR CERTIFICATION PROGRAM UPDATES FOR DRINKING WATER
Alice Webber & David Maurer, State Water Resources Control Board
Participants in this session will learn about important program changes and updates regarding Drinking Water Distribution and Treatment Certification.

4:00 PM - 5:00 PM
STREAMFLOW DEPLETION REQUIREMENTS IN CALIFORNIA’S SUSTAINABLE GROUNDWATER MANAGEMENT ACT: A PROPOSED APPROACH FOR COMPLIANCE
Sarah Fakhreddine, Environmental Defense Fund
Participants in this session will learn about how to meet streamflow depletion requirements in California’s Sustainable Groundwater Management Act (SGMA). Under SGMA, local agencies are tasked with managing groundwater in a manner that prevents depletions of interconnected surface water. Participants will learn about a proposed approach and tools for meeting the streamflow depletion requirements.

5:00 PM - 6:00 PM
GUIDANCE AND TOOLS FOR MAPPING GROUNDWATER DEPENDENT ECOSYSTEMS FOR SGMA
Melissa Rohde, The Nature Conservancy
Participants in this session will learn about mapping groundwater dependent ecosystems (GDEs) for SGMA. This includes understanding the role of groundwater in supporting ecosystems and how to map and monitor these areas.

6:00 PM - 7:00 PM
THE GROUNDWATER MANAGER’S DILEMMA: HOW TO COMPLY WITH NEW CALIFORNIA LAW WITHOUT CHANGING WATER RIGHTS
Andrew Ayres, Environmental Defense Fund
Participants in this session will learn about the challenges of complying with new California laws regarding groundwater rights and where to find additional resources and support for meeting compliance requirements.

Session 7 - Operator
Room: 313

1:30 PM - 2:30 PM
PROGRAM UPDATES FOR DRINKING WATER OPERATOR CERTIFICATION
Alice Webber & David Maurer, State Water Resources Control Board
Participants in this session will learn about important program changes and updates regarding Drinking Water Distribution and Treatment Certification.

2:30 PM - 3:00 PM
DEWATERING FACILITY PLACEMENT AND EQUIPMENT SELECTION
Michael Hether & Bill Ash, City of Napa
Participants in this session will learn about the approach and challenges faced by the City of Napa’s Water Division in selecting the appropriate technology and on-site location for a new dewatering facility at the EIB Jamieson Canyon Water Treatment Plant.

3:00 PM - 4:00 PM
ALTERNATIVES TO CONVENTIONAL AND UDF HYDRANT FLUSHING
Jeff Favia, ValveTek Utility Services, Inc.
Participants in this session will learn about alternative solutions available to the industry for flushing water main pipelines without discharging water to waste.

Session 8 - Communications and Customer Relations & New Technology Committee
Room: 310

1:30 PM - 2:00 PM
ENGAGING CUSTOMERS ON LEAKS: BEYOND CUSTOMER ENGAGEMENT PORTALS
Maryana Pichul, Valor Water
Participants in this session will learn about the efficacy of current customer leak solutions, utility customer behaviors and preferences, and how utilities can change their approach to leak management to more effectively resolve leaks and improve customer satisfaction.

2:00 PM - 3:00 PM
TEA TIME WITH THE RAFTELIS LADIES - CAN CIVILITY BE RETURNED TO THE WATER RATES DISCUSSION?
Sally Van Etten, Melissa Elliot & Andrea Boheling, Rafelis
Participants in this session will learn how other local agencies have tried different approaches to communicating and enlisting community acceptance and support of water rate increases. What has and has not worked and why and what are some suggestions for better communication with rate payers?

Session 8 - Leadership Development Committee & Young Professional Committee
Room: 310

4:00 PM - 5:00 PM
FLASH MENTORING SESSION
Multiple Mentors from various agencies
Participants in the Flash Mentoring Session will have an opportunity to learn and seek guidance from several highly experienced water industry professionals during this interactive mentoring session aimed at helping Young Professionals become more valuable employees and find greater success in their careers.

Session 9 - Environmental, Health & Safety
Room: 315

1:30 PM - 2:00 PM
HEALTH & ENVIRONMENTAL IMPACTS CAUSED BY CATASTROPHIC EVENTS: THE SIDE-EFFECTS OF WILDFIRES
Pearl J. Pereira & Michelle Rosales, Forensic Analytical Consulting Services, Inc.
Participants in this session will learn proactive ways to attempt to reduce impact during a fire event, what to do during a fire event to reduce impact, and what to do after a fire event to reduce impact.
Technical Program
A maximum of 26.5 contact hours available for conference.

Wednesday, March 27, 2019

Session 11A - Water Treatment & Smaller Utilities
Room: 306

7:30 AM - 8:00 AM
BACK TO THE BASICS: CHALLENGES AND SOLUTIONS FOR SMALL SYSTEMS/GROUNDWATER TREATMENT—INTRODUCTION
Eugene Leung, Division of Drinking Water
This presentation will provide an overview of public water systems that rely solely on groundwater sources, water system sizes, population served and water quality challenges faced by these systems.

8:00 AM - 8:30 AM
BACK TO THE BASICS: CHALLENGES AND SOLUTIONS FOR SMALL SYSTEMS/GROUNDWATER TREATMENT—ARSENIC
Lisa Miller, Golden State Water Company and Issam Najm, Water Quality & Treatment Solutions, Inc.
Participants in this session will learn the challenges and solutions for treating Arsenic in small systems/groundwater.

10:00 AM - 10:30 AM
BACK TO THE BASICS: CHALLENGES AND SOLUTIONS FOR SMALL SYSTEMS/GROUNDWATER TREATMENT - 1,2,3-TCP
Talle Lopez, Cal Water
Participants in this session will learn the challenges and solutions for treating 1,2,3-TCP in small systems/groundwater.

10:30 AM - 11:00 AM
BACK TO THE BASICS: CHALLENGES AND SOLUTIONS FOR SMALL SYSTEMS/GROUNDWATER TREATMENT—CHROME 6
Issam Najm, Water Quality & Treatment Solutions, Inc.
Participants in this session will learn about the challenges and solutions for treating Chrome 6 in small systems/groundwater.

11:00 AM - 11:30 AM
BACK TO THE BASICS: CHALLENGES AND SOLUTIONS FOR SMALL SYSTEMS/GROUNDWATER TREATMENT—MULTICONTAMINANTS/DBPs AND ORGANICS
Kevin Berryhill, Provost & Pritchard
Participants in this session will learn about the challenges and solutions for treating organics and DBPs in small systems/groundwater.

11:30 AM - 12:00 PM
BACK TO THE BASICS: CHALLENGES AND SOLUTIONS FOR SMALL SYSTEMS/GROUNDWATER TREATMENT - QUESTIONS & ANSWER PANEL DISCUSSION
Eugene Leung, Division of Drinking Water
Question and answer panel discussion on the challenges and solutions for small systems/groundwater treatment.

1:30 PM - 2:00 PM
LOW TECH TTHM REMOVAL
Ethan Brooke, Pax Water Technologies
Participants in this session will learn how to remove THMs after they form using low-tech solutions.

2:00 PM - 2:30 PM
DESIGNING AND IMPLEMENTING SUSTAINABLE WATER TREATMENT SOLUTIONS WITH SMALL, LOW-INCOME COMMUNITIES IN THE US: FIELD TRIAL OF ELECTROCHEMICAL ARSENIC REMEDIATION (ECAR) ON A FARM IN ALLENSWORTH, CA
Sara Glade, UC Berkeley
Participants in this session will learn about water quality and capacity issues facing small, low-income communities in the US, the design process of a field trial of a novel arsenic treatment technology, ElectroChemical Arsenic Remediation (ECAR), in Allenworth, CA, and results from field trial implementation and/or project updates we have by the presentation date.
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To foster community-driven solutions, the Community Water Center acts as a catalyst for community-driven water solutions through organizing, education, and advocacy in California’s San Joaquin Valley and Central Coast. Participants in this session will learn about current policy tools and implementation approaches that are a result of more than 12 years working alongside impacted communities.

Session 11B - Water Treatment and Financial Management & Smaller Utilities
Room: 306

4:00 PM - 4:30 PM
ECONOMIC FEASIBILITY, AFFORDABILITY & MCL SETTING
Robert Raucher, Corona Environmental Consulting & Jeannie Darby, UC Davis
This session will clarify what the CA SDWA requires in MCL setting with respect to economic feasibility, and how the May 2017 Court ruling on the Cr(6) MCL signifies how the SWQCB reconsiders its approach economic feasibility analyses. Participants in this session will be able to define “affordability” in the context of MCL setting, and how to address the issue.

4:30 PM - 5:00 PM
NITRATE TREATMENT AFFORDABILITY IN CALIFORNIA; THREE CASE STUDIES
Tarrah Henrie, Corona Environmental Consulting & Jeannie Darby, UC Davis
Participants in this session will learn about water affordability in small systems with nitrate contamination.

5:00 PM - 5:30 PM
NITRATE TREATMENT: IT’S NEVER EASY
Craig Gorman, Corona Environmental Consulting & Jeannie Darby, UC Davis
Participants in this session will learn the challenges and solutions that water utilities may encounter when their supplies are impacted by nitrate. The presentation will address capital and operational considerations that can have significant impacts.

Session 12A - Research
Room: 307

7:30 AM - 8:00 AM
CASE STUDY IN NON-REGULATED BACTERIAL TESTING
Sue Murphy & Justin M. Hopkins, Solano Irrigation District and Dr. Rick Blodgett, Water Environmental Testing Laboratory
Participants in this study will learn the benefits from evaluating the ENTIRE bacterial environment affecting their systems, when to go beyond regulated coliform and e. coli testing and new information about the contribution of non-regulated bacteria to existing challenges.

8:00 AM - 8:30 AM
EXTRACTION OF DISINFECTION BYPRODUCTS IN POTABLE REUSE AND CONVENTIONAL DRINKING WATERS FOR BIOASSAYS
Stephanie Lau, Stanford University
Participants in this session will learn about our novel approach to capturing and concentrating disinfection byproducts in real waters and the relative toxicities of different disinfection byproducts.

Session 12B - Water Treatment & Operators
Room: 307

10:00 AM - 11:00 AM
TRACER STUDIES & DELIVERED DOSE (CT)—DRINKING WATER
Guy Schott, Department of Drinking Water
Participants in this session will learn about tracer studies and methods for determining the disinfection exposure time (t10) for pathogen inactivation and how to use those results to calculate the pathogen delivered dose for CT compliance.
Technical Program

11:00 AM - 11:30 AM  
CIRCULAR RACEWAY CONTACTORS CAN IMPROVE DISINFECTION CREDIT AND REDUCE COST  
Whitney Sandelin, West Yost Associates  
Participants in this session will learn how a circular disinfection “raceway” contactor can be integrated into a tank design to provide a higher T10 to hydraulic detention time ratio than serpentine baffled contactors typically achieve, thereby resulting in a more efficient disinfection contactor configuration.

11:30 AM - 12:00 PM  
TRACER STUDIES: THE GOOD, THE BAD, AND THE UGLY.  
Craig Thompson, West Yost Associates  
Participants in this session will learn about issues that should be considered when planning and conducting a tracer study, and how a tracer test can accurately simulate or fail to determine a contactor’s T10 to HDT ratio.

Session 12C - Research & Safe Drinking Water Act  
Room: 307

1:30 PM - 2:00 PM  
MICROPLASTICS: OVERVIEW & CALIFORNIA LEGISLATION  
Jessica Gauger, California Association of Sanitation Agencies  
Participants in this session will learn an overview and details of the legislative process that took place to develop two senate bills (SBs 1422 and 1263) to establish a statewide microplastics strategy and to regulate microplastics in drinking water.

2:00 PM - 2:30 PM  
OCCURRENCE AND REMOVAL OF MICRO-PLASTICS DURING DRINKING WATER TREATMENT ON THE GREAT LAKES  
Robert C. Andrews, University of Toronto, St. George  
Recent news reports have indicated that municipally treated drinking water may contain microplastics. These materials have been observed in untreated water supplies around the world, including North America, however their removal during drinking water treatment has not been reported. As health risks associated with the consumption of plastics are currently unknown, it is important to quantify their occurrence and the impact of drinking water treatment processes.

2:30 PM - 3:00 PM  
MICROPLASTICS: EXPOSURE AND HEALTH EFFECTS  
Anna-Marie Cook, ORD - Office of Science and Policy  
Participants in this session will learn how humans are exposed to microplastics and the effects on health. This research summary will also identify a framework for understanding, describing, and communicating microplastics health effects that would be useful for drinking water agencies, the public, and regulators.

Session 12D - Research & Energy and Sustainability  
Room: 307

4:00 PM - 4:30 PM  
PLANNING CONSIDERATIONS IN THE FACE OF CHANGE  
Juliet Christian-Smith, Water Foundation  
Climate change is increasingly affecting water agency operations, from water supply concerns to water quality challenges. Participants in this session will learn about the importance of planning activities and programs in light of the “new normal.”

4:30 PM - 5:00 PM  
CALIFORNIA’S FOURTH CLIMATE CHANGE ASSESSMENT  
John Andrew, CA Department of Water Resources  
California’s Climate Change Assessments contribute to the scientific foundation for understanding climate-related vulnerability at the local scale and informing resilience actions, while also directly informing State policies, plans, programs, and guidance, to promote effective and integrated action to safeguard California from climate change. Participants will learn about the state’s most recent effort and how the assessment can inform short and long-term actions by their water agency.

5:00 PM - 5:30 PM  
LOCAL CLIMATE CHANGE IN PASADENA, CA  
David Kimbrough, Pasadena Water & Power  
Participants in this session will learn how local climate change impact a surface water source for a California public water system.

Session 13A - Distribution System Water Quality  
Room: 308

7:30 AM - 8:30 AM  
LEAD TESTING IN CALIFORNIA SCHOOL  
David Kimbrough, Pasadena Water & Power  
Participants in this session will learn about the latest results from lead testing in schools, lead and copper rule, lead service line inventory reporting, and childhood blood lead testing.

10:00 AM - 10:30 AM  
CHLORAMINE DISINFECTANT RESIDUAL OPTIMIZATION AND MANAGEMENT IN DISTRIBUTION NETWORKS  
Andy Seidel, UGSi Solutions  
Participants in this session will learn how Chloramination is a successful disinfectant strategy in potable water systems and provides benefits such as a lower potential for disinfection byproduct formation (THMs) and improved disinfectant persistence in distribution systems. We will discuss case studies that demonstrate the importance of maintaining chemical equilibrium between ammonia, chlorine and chloramines.

10:30 AM - 11:00 AM  
HYDRAULIC MODELING AND UNIDIRECTIONAL FLUSHING (UDF): A CASE STUDY IN BURLINGAME, CA DEMONSTRATES HOW UDF MODELING TOOLS CAN HELP REDUCE FLUSHING VOLUMES AND SIMPLIFY FLUSHING OPERATIONS  
Weizhi Cheng, SRT Consultants  
Participants in this session will learn how effective planning for a unidirectional flushing program can be achieved by combining hydraulic modeling analysis with operational strategies. The end results are significant savings in flushing water volumes and simplified operations.

11:00 AM - 11:30 AM  
THE DEVIL IS IN THE DETAILS—DEVELOPMENT AND ROLLOUT OF AN INTERACTIVE WATER QUALITY DATA PORTAL  
Rory Hartkemeyer, City of Sacramento & Muir Adams, SymSoft Solutions, LLC  
Participants in this session will learn the challenges encountered during the design and implementation of the data portal and the strategies that were developed to overcome them. The presentation will also include a hands-on opportunity for participants to explore the data portal. It will highlight the challenges encountered during the design and rollout of the project, the implementation strategies that were developed, and will highlight some of the benefits realized. It will also discuss the lessons learned in managing complex datasets and the online data-viewing system developed to present water quality data in an understandable and useful format.

11:30 AM - 12:00 PM  
ACTIVE CONTROL OF THM LEVELS IN DRINKING WATER DISTRIBUTION SYSTEMS  
Ethan Brooke, UGSi Solutions  
This presentation will highlight the approaches taken by multiple utilities within the section to mitigate their THM levels. One example covered will be the work undertaken by the San Jose Water Company in 2014. SJWC installed a large-scale THM reduction system in a 12 MG reservoir. The combination of an energy-optimized aeration system design with active feedback control based on real-time measurements allowed San Jose Water to maximize energy efficiency for their THM removal system. By modulating aeration as a function of THM concentration, and optimizing power usage, the utility will potentially save about $100K annually in energy while still achieving rigorous compliance goals.
Session 13B - Water Loss Control
Room: 308
1:30 PM - 2:00 PM
CUSTOMER METER TESTING: MATCHING A TESTING PROGRAM TO YOUR GOALS
Kris Williams, Water Systems Optimization
Participants in this session will learn about the goals that can guide customer meter testing programs and the testing programs that can meet those goals. This session will also discuss the challenges or shortcomings of customer meter testing so that you can embark on customer meter testing fully informed.

2:00 PM - 2:30 PM
CALIFORNIA ENERGY COMMISSION FUNDED CASE STUDY IN LEAKAGE REDUCTION TECHNOLOGIES – ACOUSTIC MONITORING, SATELLITE IMAGERY, AND SMART PRVS
Tori Yokoyama, Hazen & Sawyer
Participants in this session will learn from a California Energy Commission research project implemented in California American Water systems about the deployment and evaluation of three (3) leakage control technologies: acoustic monitoring by Echologics, satellite imagery leak detection by Utilis, and flow-sensitive PRVs by Stream Control.

2:30 PM - 3:00 PM
TWO YEARS AND COUNTING: A REVIEW OF THE WATER LOSS AUDIT REPORTS IN CALIFORNIA
Todd Thompson, Department of Water Resources
Participants in this session will learn further about the use of Water Loss Audits as a tool for bettering water management practices related to audit methodology.

4:00 PM - 5:00 PM
THE PROCESS OF PERFORMING AND VALIDATING AN AWWA WATER AUDIT
Rick Relyea, MC Engineering, Inc.
Participants in this session will learn the data collection process, the process of filling out the water audit, and the validation process as required by SB555.

5:00 PM - 5:30 PM
UNDERSTANDING NON-REVENUE WATER LOSS WITH POWERFUL ANALYTICS
Jonas Rugys, ESRI
Participants in this session will learn about new analytical tools and methods to better understand water loss, discover patterns and trends in historical data, and make better decisions when it comes to water main repair and replacement.

Session 14 - Systems Controls
Room: 309
7:30 AM - 8:30 AM
GETTING THE MOST OUT OF YOUR SCADA SYSTEM
Henry Palechek, Helix Water District
Participants in this session will learn how to optimize their SCADA system to get the most out of it. The talk will be looking at continuous SCADA improvements, SCADA screen optimization, operator training, and knowledge transfer to technical staff to make your SCADA system more useful and long lasting for water utilities.

10:00 AM - 11:00 AM
SCADA IN THE NEW WORLD: THE CHANGING LANDSCAPE OF IIoT AND MOBILITY
Travis Cox, Inductive Automation
Participants in this session will learn about necessary steps and best practices for navigating the changing landscape of IoToT and Mobility. This session will discuss practical tools you can leverage today.

11:00 AM - 12:00 PM
“What’s in a Name?”
Michael J. Erwin, TJC and Associates, Inc
Participants in this session will learn how device tag names, software variable names, and tagging schemes can impact a treatment and distribution system.

1:30 PM - 2:30 PM
IMPLEMENTATION OF AUTOMATION PROJECTS USING A SCADA MASTER PLAN
Jeffrey A. Martin, Carollo Engineers
Participants in this session will learn about SCADA Master Planning and how to mitigate inconsistencies in automation design and utilization.

2:30 PM - 3:00 PM
SCADA PANEL DISCUSSION
Henry Palechek, Helix Water District
Participants in this session will share lessons learned and problem solving related to today's SCADA industry.

4:00 PM - 5:00 PM
THE FUTURE OF AUTOMATION IN THE WATER INDUSTRY
Paul Sagues, XIO, Inc.
Participants in this session will learn how to tackle the challenges facing the industry today with modern control solutions. Discuss considerations when choosing or upgrading a control system, technological advancements in the industry, and methods of ensuring security (cyber & physical).

5:00 PM - 5:30 PM
MODBUS: CAPTURING REAL TIME PRODUCTION METER READS WITH YOUR PLC
Hannah Dunrud, Doug Cater & Greg Bundesen, Sacramento Suburban Water District
Participants in this session will learn the benefits of by-passing pulse reads from a production meter and reading straight from the meter head with a PLC.

Session 15A - Tanks Reservoirs & Structures
Room: 310
7:30 AM - 8:30 AM
WATER STORAGE TANK COATING SYSTEMS: REVISIONS TO THE AWWA D102
Tony Hobbs, Tnerc
Participants in this session will learn what updates and changes have been made to the AWWA D102 standards.

10:00 AM - 10:30 AM
WHAT OWNERS AND ENGINEERS SHOULD KNOW TO ELIMINATE CORROSION INSIDE STEEL TANKS
Mark Moore, Paso Robles Tank
Participants in this session will learn various options available to them to lower corrosion opportunities and make their coatings last much longer.

10:30 AM - 11:00 AM
HOW TO ADDRESS INFRASTRUCTURE REPLACEMENT QUICKER IN 2019
Frank Gill, Holman Capital
Participants in this session will learn about financing options and how to evaluate how to justify the cost for implementing solutions.

11:00 AM - 11:30 AM
CONSERVING WATER BY MAKING DATA ACTIONABLE
Dave Twichell and Paul Hauffen, Sedaru
Participants in this session will learn how data that is already available to them can be used to better manage the way they run their system for increased optimization.
Technical Program

11:30 AM - 12:00 PM
SYSTEM WIDE STORAGE TANK REPLACEMENT IN REMOTE CALIFORNIA
T. Scott Kelly, PE, LACO Associates
Participants in this session will learn about the project, hydraulic considerations made and timing of the tank replacement to continue service to Shelter Cove, as well as the challenges of completing the project in such a remote part of the state, the condition of the original redwood construction tanks, and funding challenges and constraints.

1:30 PM - 2:00 PM
ECONOMIC ANALYSIS OF WATER QUALITY MANAGEMENT ALTERNATIVES FOR PALO ALTO’S FOOTHILLS EMERGENCY STORAGE SYSTEM
Mark Quady & Nina Mao, SRT Consultants
Participants in this session will learn the pros and cons of various water tank mixers and chlorine residual control systems; how economic analysis can help to inform decision-making.

2:00 PM - 3:00 PM
A SYSTEMS APPROACH FOR IMPROVING WATER QUALITY
Dave Summerfield, Medora Corp.-SolarBee
By utilizing the latest advances in potable water tank mixing, Trihalomethane (THM) removal and residual monitoring and boosting, an operator can have improved water quality at less cost today than what was previously attainable.

Session 15B - New Technology
Room: 310

4:00 PM - 5:00 PM
EVOLUTION OF GIS – THE JOURNEY FROM MAP BOOKS TO TOUGH BOOKS
Michael J. Hether, P.E., City of Napa
Participants in this session will have the opportunity to share and learn from the City’s experience. Learning outcomes will include, but not be limited to the following:
• How development of the Water Division’s computerized maintenance management system helped/hurt the development of the City’s GIS;
• Considerations to determining how best to get started with development of GIS and how best to manage expectations;
• Better understanding of how long the transition takes to manage expectations.

5:00 PM - 5:30 PM
RIGHT KEYS, NO KEYS...NO PROBLEM (NEW LOCK AND KEY CONTROL TECHNOLOGY)
Jim Wollbrinck, San Jose Water
Participants in this session will learn about new technologies that San Jose Water has found and tested, that improved the efficiency of station access management and, key management & security.

Session 16A - Asset Management & Pipeline Rehabilitation
Room: 311

7:30 AM - 8:00 AM
WATER NETWORK FAILURE PREDICTION: APPLYING STATISTICS AND MACHINE LEARNING TO OPEN DATA AND CONTINUOUS DATA ACQUISITION
Sergio Coelho, Baseform
Participants in this session will learn how to use software to perform real time failure prediction analysis on entire water or wastewater networks using the utility's own data and have this capability available real-time as new data is continually acquired.
Session 16A - Asset Management
Room: 311

8:00 AM - 8:30 AM
SELECTING THE RIGHT CMMS - CASE STUDIES
Kathleen Zynda, Bob Munro & Hector Ruiz, GHD
Participants in this session will learn the steps towards identifying and procuring a new CMMS that can meet the diverse business needs of their agency such as staff, budget, and most importantly their assets.

Session 16A - Asset Management & Meter
Room: 311

10:00 AM - 10:30 AM
AN INNOVATIVE OPTIMIZATION MODEL FOR REPAIR/REPLACING OF WATER METERS
Patrick Ji, City of Sacramento
Like all mechanical devices, water meters always degrade in accuracy over time, resulting in an increasing amount of lost revenue. Unlike the conventional approaches to determine the time of replacing meters, this presentation provides information on an optimization model to calculate the optimal replacement age based on four main factors.

Session 16A - Asset Management & New Technology Committee
Room: 311

10:30 AM - 11:00 AM
DETECTING POTABLE WATER LEAKS USING REMOTE SATELLITE SENSING
Gadi Kovarsky, Utilis
This session will provide details on the Utilis satellite radar technology and how the data collected can be analyzed to accurately and cost effectively detect leaks. Value proposition and performance metrics of multiple case studies will be discussed.

Session 16A - Asset Management
Room: 311

11:00 AM - 11:30 AM
20-YEAR ANNIVERSARY OF TUCSON WATER’S PIPELINE PROTECTION PROGRAM (PPP)
Britt Klein, Wachs Water Services & Paul Acosta, Tucson Water
Participants in this session will learn how one water utility recovered from a critical water pipeline catastrophic failure.

11:30 AM - 12:00 PM
APPLY EPA’S AM FRAMEWORK TO OPTIMIZE YOUR O&M - CASE STUDIES
Gage Muckleroy, Mert Muftugil & Hector Ruiz, GHD
Participants in this session will learn from recent case studies on how application of the EPA’s AM Framework puts to the test the principles/practices of asset management. The right approach to managing assets is critical when you want to optimize O&M work, provide adequate staffing, and make the right decisions.

Session 16B - Security and Emergency Planning
Room: 311

1:30 PM - 3:00 PM
WILDFIRE DESTRUCTION IN 2018: LESSONS LEARNED FROM PARADISE IRRIGATION DISTRICT
Kevin Phillips, Paradise Irrigation District
In November 2018, the Camp Fire ignited and became the deadliest and most destructive wildfire in California history. Participants in this session will learn about the effects of the Camp Fire on local utilities from the Paradise Irrigation District.
### Technical Program

**Session 17A - Water Well Technology**  
**Room: 312**

#### 7:30 AM - 8:00 AM
**WELL SCREEN PERFORMANCE AND EFFICIENCY OPTIMIZATION**  
Kevin McGillicuddy, Roscoe Moss Company  
The evolution of manufactured ground water production well screens combined with improvements in gravel envelope design and well development techniques has led to higher expectations in well performance. Laboratory and field comparison studies have provided valuable results that reveal the primary factors that influence the efficiency of the screen and the completed well structure. The presentation will provide a brief summary of the comparative studies and their findings.

#### 8:00 AM - 8:30 AM
**RISD: A NEW WELL REHABILITATION APPROACH**  
Tom Morris, West Yost Associates  
Participants in this session will learn how injection development methods adopted for the ASR industry have been successfully applied to potable production wells to restore and improve well performance.

#### 10:00 AM - 10:30 AM
**HOW GROUNDWATER MODELS CAN HELP PLAN FUTURE WELL PROJECTS TO MEET WATER NEEDS: A CASE STUDY IN USING GROUNDWATER MODELING TO HELP DESIGN AND LOCATE WELLS**  
Logan Wicks, GEOSCIENCE  
Groundwater modeling allows managers to identify potential project locations and detect key areas where additional information may be required. Field investigations can then be planned to maximize hydrogeologic understanding and minimize data costs. Follow-up investigations designed for model refinement enhance the ability of groundwater models to simulate local project effects.

#### 10:30 AM - 11:00 AM
**GRAVEL PACK DESIGN TO MAXIMIZE WELL CAPACITY AND MINIMIZE SAND PRODUCTION**  
Lawrence (Larry) Ernst, Wood Rodgers, Inc.  
Participants in this session will learn how to compare gravel pack design alternatives and installation methods. The goal of this talk is to illustrate how to improve well efficiency and reduce sand production.

#### 11:00 AM - 11:30 AM
**WATER WELL APPLICATIONS FOR DOUBLE SPLINE LOCK FITTINGS**  
Charles Hoherd, Roscoe Moss Company  
Attendees in this session will learn about different end fittings used for water well casing and pump column. Specifically, this talk will introduce the Double Spline Lock fitting as another option for well designers and contractors to consider when constructing a well. Examples of successful installations in both municipal and mining water well projects will be highlighted.

#### 11:30 AM - 12:00 PM
**DEVELOPMENT OF A GIS-BASED METHODOLOGY FOR IDENTIFYING AND RANKING PROSPECTIVE SITES FOR PUBLIC SUPPLY WELLS WITHIN A LARGE URBANIZED AREA**  
Ken Loy, West Yost Associates & James Arenz, Sacramento Suburban Water District  
Participants in this session will learn about the application of industry-standard GIS-based techniques that facilitate the site screening process to identify the most viable public supply well sites for further evaluation.

### Session 17B - Recycled/Desalination Committee
**Room: 312**

#### 1:30 PM - 2:00 PM
**OZONE/BIOFILTRATION APPLICATION IN POTABLE REUSE**  
Giridhar Upadhyaya, Carollo Engineers  
This presentation will discuss optimization of O3/BAF system used in potable water reuse. To help assess the system performance and rapidly identify performance anomalies, a performance tracking tool (i.e., Proformance) was used, which allowed timely identifying and addressing performance issue(s), and re-establishing system performance. The presentation will also discuss the key features of the tool.

#### 2:00 PM - 2:30 PM
**MAXIMIZING GROUNDWATER USE IN THE CENTRAL AND WEST COAST BASINS THROUGH RECYCLED WATER FROM HYPERION**  
Chris Repp, Los Angeles Department of Water and Power  
Participants in this session will learn: The efforts currently underway by the City of Los Angeles to maximize reuse of recycled water and create a sustainable local water supply. These efforts include a Nitrification-Denitrification Membrane Bioreactor Pilot Study for advanced treatment, groundwater recharge/extraction studies, and forming regional partnerships to leverage infrastructure and capital resources.

#### 2:30 PM - 3:00 PM
**ADDRESSING POTABLE REUSE OPERATOR CERTIFICATION NEEDS - THE AWTO CERTIFICATION PROGRAM - A JOINT EFFORT BETWEEN CA-NV AWWA AND CWEA**  
Erin Mackey, Brown and Caldwell  
CA-NV Section AWWA and CWEA have developed a program to address the absence of significant testing on advanced water treatment topics in the existing Operator Certification Program for water and wastewater operators. This presentation will give an overview of the program development, the exams being offered, training and preparation needs, and program next steps.

#### 4:00 PM - 4:30 PM
**EVALUATING THE INTEGRATION OF PURIFIED WATER INTO EXISTING DISTRIBUTION SYSTEMS**  
Anya Kaufmann, Trussell Technologies, Inc.  
The East County Advanced Water Purification Program will augment Lake Jennings, a drinking water reservoir, with purified water to create a new source of local sustainable water supply. Helix Water District is performing an integration study to determine the effects of this new source water on their existing distribution system.

#### 4:30 PM - 5:30 PM
**TRACER STUDIES & DELIVERED DOSE (CT) – DISINFECTED TERTIARY RECYCLED WATER**  
Guy Schott, CA Water Resources Control Board - Division of Drinking Water  
Participants in this session will learn about tracer studies for determining the modal contact time for disinfected tertiary recycled waters and to use those results to calculate the pathogen delivered dose for CT compliance.

### Session 18A – New Technology
**Room: 313**

#### 7:30 AM - 8:30 AM
**CYBER SECURITY GUIDANCE TOOL**  
Daniel Graves & Andrew Ohr, West Yost Associates  
The AWWA Process Control System Security Guidance for the Water Sector (Cybersecurity Guidance Tool) provides utility owners in the water sector with intentional acts such as a cyber attack have the potential to cause long-duration, widespread power outages. This presentation will provide information on ways water utilities can sustain operations without grid power using generators or distributed energy resources such as wind turbines and solar panels.
Session 18B - Leadership Development Committee
Room: 313

10:00 AM - 10:30 AM
SAN DIEGO COUNTY WATER AUTHORITY’S APPROACH TO ATTRACTING NEW TALENT
Teresa Penunuri, San Diego County Water Authority
Participants in this session will learn about the SDCWA efforts to use their innovation and education programs to attract and hire new staff. This includes using social media, industry and community events to showcase innovative technologies and programs, and the diverse staff implementing them, to attract talent in a competitive technology and biotech community.

10:30 AM - 11:00 AM
ZONE 7’S EFFORTS TO RETAIN STAFF IN OPERATIONS
Colter Anderson, Zone 7 Water Company
The Operator’s job market in California is very aggressive. As a water utility manager you not only have to think about wages and shift differentials, but also commutes, the cost of living and the fact that the majority of the operator staff is on the verge of retirement. Zone 7 has worked very hard to enhance their success rate at recruiting operators and keeping them from going elsewhere. In this half hour presentation you will learn some of the pitfalls and successful strategies for keeping your workforce at an appropriate level so that service to the public can be maintained and thus the public’s trust with the product that we are delivering: clean drinking water.

11:00 AM - 12:00 PM
EXPERT PANEL FOCUSED ON ENHANCING WATER INDUSTRY RECRUITMENT AND RETENTION
Teresa Penunuri, San Diego County Water Authority, Colter Anderson, Zone 7 Water Company & Steven Currie, East Bay Municipal Utility Water District
Participants will be able to ask the expert panel specific questions about outreach and marketing strategies in order to develop effective recruitment and retention programs for their own agencies.

1:30 PM - 2:00 PM
BAYWORK—THE OPPORTUNITIES AND CHALLENGES OF COLLABORATIVE APPROACHES TO CANDIDATE DEVELOPMENT AND OUTREACH IN THE WATER AND WASTEWATER INDUSTRY
Steven Currie, East Bay Municipal Utility District
In this session, participants will learn about the successes and challenges that San Francisco Bay Area water and wastewater utilities have encountered in their efforts over the past decade to coordinate regional approaches to candidate development and outreach.

2:00 PM - 2:30 PM
SUCCESSION PLANNING IN OPERATIONS
Elinor Buchen, San Francisco Public Utilities Commission
Participants in this session will learn about the challenges and opportunities in shifting operations-focused workgroups to longer-term succession planning and knowledge transfer. The presentation will cover the risk management-based, workgroup-focused approach to succession planning that the Water Enterprise at SFPUC has been piloting.

2:30 PM - 3:00 PM
EFFECTIVE LEADERSHIP DEVELOPMENT FOR LADWP’S WATER DISTRIBUTION DIVISION
Breonia Lindsey, Los Angeles Department of Water and Power
Participants in this session will learn how the LADWP structures and runs an effective management and leadership development program for its large and diverse water distribution workforce. The multiple avenues the Water Distribution Division uses for transitioning the training and development of construction, operations, and maintenance personnel from technical, hands-on work to supervision and management will be highlighted.

3:00 PM - 3:30 PM
PREPARING FOR 2025: MWD’S SUCCESSION

Technical Program
A maximum of 26.5 contact hours available for conference.

Session 19 - Meter & Asset Management
Room: 314

10:00 AM - 10:30 AM
AN INNOVATIVE OPTIMIZATION MODEL FOR REPAIR/REPLACING OF WATER METERS
Patrick Ji, City of Sacramento
Like all mechanical devices, water meters always degrade in accuracy over time, resulting in an increasing amount of lost revenue. Unlike the conventional approaches to determine the time of replacing meters, this presentation provides information on an optimization model to calculate the optimal replacement age based on main four factors.

10:30 AM - 11:00 AM
C715-18 TEST BENCH COMPATIBILITY TO SUPPORT ULTRASONIC & ELECTROMAGNETIC METER TESTING
Mike Mastic, Mars Company
Electronic meters measure much lower flow than mechanical meters. Testing this low flow, requires updates to your test benches. Presenters will learn why this is the case and what updates are needed.

11:00 AM - 11:30 AM
HOW TO USE PORTABLE METER TESTERS
Kyle Jividen, Sacramento Suburban
Participants in this presentation will learn the importance of large meter testing and hands-on, how to use a portable large meter tester.

11:30 AM - 12:00 PM
FACTORS AFFECTING METER ACCURACY
Dan Baker, Helix Water District
Participants in this presentation will learn what factors affect meter accuracy in order to make smart meter choices and to help determine meter testing program parameters.

PLAN FOR ENGINEERING
David Clark, Metropolitan Water District of Southern California
Participants in this session will learn about specific succession planning strategies that can guide organizations undergoing large amounts of employee turnover. The presentation will cover engineering services’ current orientation programs that help bring new employees up to speed quickly and current workforce development programs aimed at increasing the depth of technical and managerial skill sets to meet future needs. The presentation will also cover lessons learned from Metropolitan’s 2012 Succession Plan.
Technical Program

1:30 PM - 2:00 PM
AMI CUSTOMER SERVICE PANEL
Michele Harvey, Meter Committee
Panel of utilities who have deployed fixed network meter reading systems with customer portals and smart phone applications. Your opportunity to ask how the technology has been implemented, changed management practices as well as lessons learned.

2:00 PM - 2:30 PM
GOT METER & AMR TRANSMITTER SCRAP? TRASH OR TREASURE? WHAT IS IT TELLING YOU?
Kenneth Malli, Veolia North America
Participants in this session will learn the value of periodically checking meter and AMR/AMI scrap pile.

2:30 PM - 3:00 PM
AMI COMPATIBLE METER PIT LIDS
Gary Khanjian, Armocast
Participants in this session will learn which types of meter pit lids provide the best radio frequency propagation and why, sizes and load ratings available for retrofits in various applications/conditions; and features that should be considered when choosing an AMI compatible meter pit lid.

Session 19 - Meter & New Technology Committee
Room: 314

4:00 PM - 4:30 PM
LEARNING IN SACRAMENTO ON DMA IMPLEMENTATION
Julie Friedman, City of Sacramento Department of Utilities
Sacramento designed and implemented pilot District Metered Areas (DMAs) to evaluate its Water Loss Control program. Learn about tools that support real-time data-viewing and reporting, providing greater transparency, improved resource allocation and aide in identifying areas for improvement.

Session 19 - Meter
Room: 314

4:30 PM - 5:30 PM
AMI PANEL - EVERYTHING THAT YOU EVER WANTED TO ASK A UTILITY ABOUT ADVANCED METERING INFRASTRUCTURE
Todd Artrip, Sacramento Suburban Water District
Panel of utilities who have deployed fixed network meter reading systems. Your opportunity to ask questions regarding how the technology has been implemented, changed management practices as well as lessons learned.

Session 20 - Operator & New Technology Committee
Room: 315

7:30 AM - 8:30 AM
JAR TESTING MADE EASY
Guy Schott, CA Water Resources Control Board
Participants in this session will learn about practical jar testing procedures in obtaining meaningful results.

10:00 AM - 11:00 AM
OPTIMIZING POLYMER EFFICIENCY FOR IMPROVED SOLIDS SEPARATION
Yong Kim, UGSI Solutions, Inc.
Despite the wide-spread use of polymers in water and wastewater treatment and their high recurring expense, there are very limited technical resources readily available to the many interested engineers and operators. With many equipment options available to operators, it makes sense to start with the basics of polymer chemistry. This discussion will review the basics of polymer chemistry, goals of activation, the development of polymer mixing equipment and equipment configuration basics.

11:00 AM - 11:30 AM
FORGOTTEN ASSETS – A CITY’S LOOK AT AIR-RELEASE VALVES ON THE DISTRIBUTION SYSTEM
Dave Boisa & Megan Thomas, City of Sacramento, Dept. of Utilities
Participants in this session will learn perspectives of air-release valve installations within a flood way, resizing undersized facilities, finding hidden assets, actual cost of maintaining non-standard locations, working with customers on visual impacts, things to consider during design, common misunderstandings of air-release valves, creating a maintenance program, and things to look for when maintaining devices.

1:30 PM - 3:00 PM
OPERATORS ROUND TABLE
Colter Andersen, Zone 7 Water Agency, Chris Kania, City of West Sacramento, Stewart Cole, City of Vallejo & John Strutz, CA State Water Resources Control Board
Water treatment professionals share experience with each others successes and failures. Come with your industry problems and solutions.

4:00 PM - 5:00 PM
KEEP IT OUT! OPERATOR TOOLS AND RESOURCES FOR WATERSHED SPILLS
Elissa Callman, Amy Kral & Elyse Cheung-Sutton, City of Sacramento, Department of Utilities
Since watershed spills/discharges have the potential to impact source water quality and water treatment plant operations, notification is the first line of defense. This presentation will provide information on a local water utilities voluntary notification program, as well as information and resources developed to support water treatment plant operations planning and response to address the risk from watershed spills.

Thursday, March 28, 2019
ALL THURSDAY SESSIONS ARE LOCATED INSIDE THE SHERATON HOTEL

Session 21 - Water Treatment
Room: Tofanelli

8:00 AM - 8:30 AM
WHAT’S UP WITH PFAS? INTRODUCTION TO THE CHALLENGES AND SOLUTIONS FOR PERFLUORINATED COMPOUNDS
Erin Mackey, Brown and Caldwell
Participants in this session will learn about new developments in PFAS and PFDA toxicological evaluations and subsequent current and potential future regulatory activities with respect to perfluorinated compound treatment requirements.

8:30 AM - 9:00 AM
DETERMINATION OF THE EFFECTIVENESS OF GRANULAR ACTIVATED CARBON FOR THE REMOVAL OF PFAS PRECURSOR COMPOUNDS
Adam Redding, Calgon Carbon Corporation
Participants in this session will learn about the effectiveness of activated carbon for removing PFAS precursor compounds.

9:00 AM - 9:30 AM
RESIN TREATMENT TECHNOLOGY FOR PFAS—HOW IT WORKED IN SOUTHERN COLORADO
Stephanie Schwenke, JDS-Hydro Consultants, Inc
PFAS is an emerging contaminant affecting many water districts. This presentation will show ion exchange can be a viable treatment method for the removal of PFAS.
10:00 AM - 10:30 AM  
**WILDFIRE IMPACTS ON WATER QUALITY & TREATMENT**  
Amanda Hohner, Washington State University  
The audience will learn about changes in source water quality that might occur following a wildfire, and the consequences for treatment process performance. Results from several Water Research Foundation projects will be discussed, including recommendations and guidance for utilities to plan and prepare for a wildfire.

10:30 AM - 11:00 AM  
**MULTICONTAMINANT REMOVAL—SIMULTANEOUS REMOVAL OF NITRATE AND ARSENIC**  
Chris Cleaveland, Carollo Engineers  
Participants in this session will learn about simultaneous removal of nitrate and arsenic in a biological system that combines biological and physical-chemical contaminant removal mechanisms.

Session 21 - Water Treatment & Research  
Room: Tofanelli

11:00 AM - 11:30 AM  
**BIOLOGICAL SELENIUM REMOVAL: TOTAL SYSTEM OPTIMIZATION**  
Miguel Arias-Porc, Bureau of Reclamation  
The San Luis Demonstration Plant was constructed in 2014 to determine the best 'in-valley' solution to agricultural drainage management, implementing biological treatment for selenium removal. The selenium removal process biologically reduces oxidized selenium into insoluble elemental selenium under anaerobic conditions. The first stage of AMMet removes oxygen and nitrate, and selenium reduction occurs primarily in the second stage where excess nutrient can lead to formation of hydrogen sulfide. An external carbon source is added due to lack of an electron donor in the feed water and optimal nutrient dosaging was based on nitrate and dissolved oxygen concentrations.

11:30 AM - 12:00 PM  
**OPTIMIZING POLYMER EFFICIENCY FOR IMPROVED SOLIDS SEPARATION**  
Yong Kim, UGSI Solutions, Inc.  
Participants in this session will learn about factors such as charge site exposure, uncoiling of polymer molecules, application of mixing energy and the effects of dilution water as they influence proper polymer activation.

Session 22 - Source Water Quality  
Room: Bataglieri

7:30 AM - 8:00 AM  
**MONITORING TOOLS TO HELP SAVE TIME & MONEY WHILE MANAGING CHANGING WATER SOURCES**  
Steve Mungari, Suez Water Technologies and Solutions Analytical Instruments  
Participants will learn how drinking water systems and water treatment plants all face unique water quality challenges that affect treatment decisions, operational costs, and regulation compliance. In addition, water quality can change seasonally, with storms, with industrial effluents, and with location. For example, two plants nearby one another both sourcing from the same river could have different water quality challenges. Two water systems were analyzed in this study for their management of two separate plants with different source waters and how they use monitoring tools to stay in regulation compliance for disinfection byproducts (DBPs) rules and optimize treatment processes to save costs.

8:00 AM - 8:30 AM  
**MAXIMIZING RESOURCE EFFICIENCY VIA CONTROLLED RAW WATER WITHDRAWAL**  
Winn Short, Ixom Watercare  
Water quality parameters vary widely throughout a reservoir, but most have limited options, if any, when it comes to choosing the point of withdrawal. This presentation explores our solution to that problem: allowing water treatment plants to identify and select that ideal albeit dynamic layer of better source water in real time. The presentation also details an ongoing full-scale trial at a Georgia surface water treatment facility, which is evaluating the importance of understanding reservoir depth profile data set and demonstrating the value proposition associated with applying whole profile raw water selection capabilities.
11:30 AM - 12:00 PM
CHARACTERIZING GROUNDWATER QUALITY FOR SGMA PLANNING
Stephanie Hearn, GEI Consultants, Inc
This presentation will give insight towards using publicly available data to characterize groundwater and the approach used in the Kern and Kaweah Subbasins. Specific water quality trends will be presented to demonstrate the correlation between constituent concentrations and water levels, to show how water levels directly influence changing trends. Trending differences will be discussed with context to well construction, depth of the groundwater basin and aquifer materials (hydrogeology). Following the groundwater characterization, we’ll discuss how the Groundwater Sustainability Agencies (GSAs) used this data to establish minimum thresholds for degraded water quality; how the contaminants were identified; data that was most valuable in characterizing water quality; and trends that correlate to water levels.

Session 23 - Water Quality Analysis
Room: Beavis

8:00 AM - 9:00 AM
HISTORY AND EVOLUTION OF TURBIDITY MEASUREMENT
Randy Turner, SWAN Analytical USA
Turbidity is a principal physical characteristic of water and is an expression of the optical property that causes light to be scattered and absorbed by particles and molecules rather than transmitted in straight lines through a water sample. It is caused by suspended matter or impurities that interfere with the clarity of the water. Participants in this session will learn the history and evolution of turbidity measurement.

9:00 AM - 9:30 AM
PARTICLE COUNTERS: SIZE CALIBRATION & COUNT VERIFICATION
Rudy Plaza-Plante, Isarog Water Consultants
Participants in this session will learn about several sources of errors in the ELISA analysis and how to prepare independent standard solutions. The analysis of Total Microcystin by ELISA is very challenging as there are times that the calibration step fails even if the Lab Analyst is very careful in following the SOP.

10:00 AM - 11:00 AM
SLOW PROGRESS WITH QUICKSILVER: METHYLMERCURY REDUCTION IN RESERVOIRS CONTAMINATED BY LARGE-SCALE MERCURY MINING
Mark Seelos, Santa Clara Valley Water District
Participants in this session will learn about the mercury transformations occurring in aquatic ecosystems that regulate the metal’s toxicity and bioavailability. Mark will then detail results of the Santa Clara Valley Water District’s 10-year studies aimed to reduce methylmercury concentrations in mining-contaminated reservoirs and fish.

11:00 AM - 11:30 AM
SAMPLE INTEGRITY - A GUIDE TO SAMPLE BOTTLES, PRESERVATIVES, HOLD TIMES AND COLLECTIONS
Andy Smith & Logan Greenwood, Western Environmental Testing Laboratory
During the presentation attendees will learn: What does a preservative do? Why do I need specific bottles? What happens if I don’t preserve my sample? We’ll discuss hold times, what they mean, why they matter and what happens if analysis is performed passed the EPA prescribed hold time. Finally, we’ll examine sample collection and help attendees set themselves up for success by following the correct collections protocols and using the correct containers.
Session 24 - Engineering & Construction
Room: Bondi

8:00 AM - 8:30 AM
HOW CAN HYDRAULIC MODELS SOLVE OPERATIONAL AND DESIGN CHALLENGES IN WATER DISTRIBUTION SYSTEMS?
Amy Kwong & Nathaniel Homan, West Yost Associates
Participants in this session will learn of several case studies where a water distribution system hydraulic model was successfully used to address various operational and design challenges.

8:30 AM - 9:00 AM
CANAL REPLACEMENT PROJECT—INNOVATE APPROACHES TO UNIQUE CHALLENGES
Colin Dudley, Brown and Caldwell
Participants in this session will learn about the challenges and innovative design approaches applied to the Canal Replacement Project to install a 10-foot diameter concrete pipe with the presence of high salinity groundwater and multiple creek/drainage crossings, the use of soil cement to reduce imported bedding and other design approaches will also be described.

9:00 AM - 9:30 AM
FASTEST EVER AQUIFER STORAGE AND RECOVERY PROJECT - CITY OF WOODLAND ASR PROJECT
Michael Ducker, Carollo Ed Wisniewski City of Woodland
Participants in this session will learn about a creative water supply approach that can provide a solution to many common challenges utilities in California and Nevada are currently dealing with.

10:00 AM - 10:30 AM
STOPPING “HAMMER TIME” – A UNIQUE HYDRAULIC MODEL CALIBRATION STORY TO EVALUATE HYDRAULIC TRANSIENT EVENTS
Bobby Vera, West Yost and Justin Waples, Central San
Participants in this session will learn about a detailed and operationally focused hydraulic model calibration and data collection effort to refine model use for operations and transient evaluations.

10:30 AM - 11:00 AM
AN INTEGRATED APPROACH TOWARD GROUNDWATER BANKING IN THE SOUTHERN CENTRAL VALLEY, CALIFORNIA
Mehdi Gasemizade, GEI
Participants in this session will learn how regional Ag-MAR projects can influence stream flows and surface diversions using an integrated - management model.

11:00 AM - 11:30 AM
START WITH THE END IN MIND - DESIGNING DUCTILE IRON PIPE FOR SEISMIC SURVIVABILITY
Dan Brauch, US Pipe
Participants in this session will learn what design parameters should be considered when designing for seismic pipelines.

11:30 AM - 12:00 PM
WHAT KEEPS YOU UP AT NIGHT?
Karah Kingsbury, Helix Water District
Participants in this session will learn a strategic approach to evaluating risk from inaccessible piping networks within your distribution system.
Technical Program

Session 25 - Asset Management and Water Management & Efficiency
Room: Carr
8:00 AM - 9:30 AM
CALIFORNIA'S NEW WATER EFFICIENCY LAWS: KEEP CALM AND COMPLY (WITH OUR HELP!)
Tia Lebherz & Mary Ann Dickinson, California Water Efficiency Partnership
James Nachbaur, CA State Water Resources Control Board
Greg Bundesen, Sacramento Suburban Water District
TBD, CA Department of Water Resources
Participants in this session will learn what California's new water efficiency laws will mean for water providers along with the latest updates on the new regulations straight from the source. Participants will also explore tools and resources available to help them implement these new regulations and comply.

Session 25 - Water Management & Efficiency
Room: Carr
10:00 AM - 10:30 AM
LOOKING TO THE PAST TO GUIDE THE FUTURE: STRATEGIC PLANNING FOR WATER USE EFFICIENCY
Kat Wuelfing, EKI Environment & Water
Gus Meza, West Basin Municipal Water District
Participants in this session will learn how West Basin, a southern California wholesale water agency, is approaching strategic planning to transition its Water Use Efficiency program into the Making Water Conservation a California Way of Life era.

10:30 AM - 11:00 AM
WE'RE IN THE MONEY: SCALING UP INVESTMENTS IN DISTRIBUTED WATER INNOVATIONS
Cynthia Koehler, WaterNow Alliance
Participants in this session will learn how water efficiency tech, reuse systems, green infrastructure, and other “distributed infrastructure” are helping cities across the West address water supply, quality and stormwater management challenges. Attendees will gain understanding of an innovative new opportunity for financing distributed systems at scale in their own communities.

11:00 AM - 12:00 PM
SELF-SERVICE SOLUTIONS – IMPROVING SATISFACTION AND SAVING STAFF TIME WITH AMI DATA
Jeff Lipton, WaterSmart
The attendees in this session will be informed on how they can get their customers to engage with the utility for a working relationship in understanding their water bills.

Session 26 - Operator
Room: Compagno
8:00 AM - 8:30 AM
PARTICLE ANALYZERS: SIZE CALIBRATION AND COUNT VERIFICATION
Rudy Plaza-Pante, Isarog Consulting Company
Participants in this session will learn how to properly calibrate portable and on-line particle size analyzers using NIST traceable standard solutions.

8:30 AM - 9:30 AM
AERATION VERSUS TOC REDUCTION FOR DBP COMPLIANCE: WHAT IS THE RIGHT TOOL FOR YOUR MUNICIPAL WATER TREATMENT PLANT?
Ellen Gaby Buhr, Ixom Watercare, Inc.
Participants in this session will learn when exceeding on DBP's, when aeration is to be considered and when DOC reduction tools are required instead.

10:00 AM - 11:00 AM
BENEFITS OF WATER TANK MIXING
Dan Richards, Red Valve
Water tanks are in place on any water system for pressure, fire flow and storage. Unfortunately, normal system operation for filling/draining will stratify throughout the year from temperature differences, regardless of style or volume. Participants in this session will learn why every water tank should implement a tank mixing system to improve water quality and avoid temperature stratification.

Session 27A - Smaller Utility
Room: Hedricks, Kamilos & Baker
8:00 AM - 8:30 AM
O&M MANUAL UPDATES: HOW TO BETTER OPTIMIZE OPERATIONS & MAINTENANCE EFFICIENCY AND CONSISTENCY
Kristen Whatley, West Yost Associates
This presentation will review recommended O&M content updates and evaluations and the benefits that may be realized by completing them.

8:30 AM - 9:00 AM
THE CHALLENGE OF STAYING LOCAL - HOW SMALL WATER SYSTEMS MAINTAIN CONTROL AND INCREASE RELIABILITY
Jamie Lefkowitz & Lisa Pezzino, SRT Consultants
Participants in this session will learn key insights that can be applied to small water systems across California and Nevada, where water managers are continuously faced with increasingly unsustainable political, social, and environmental conditions.

9:00 AM - 9:30 AM
PERSEVERANCE PAYS OFF: BUILDING A NEW COMMUNITY WATER SYSTEM IN CALIFORNIA
Lara Egbeolo-Martial, SRT Consultants & Chad Plontenberg, Redwood Glen
Participants in this session will learn about the journey of a camp facility to plan, design, permit, construct, and commission a new surface water source and treatment system, and its process to become a new community water system primarily relying on surface water - a rare occurrence in California.

10:00 AM - 10:30 AM
INNOVATIVE DESIGN AND OPERATIONS TO PROVIDE COST-EFFECTIVE TREATMENT OF IRON, MANGANESE, AND TDS FOR A SMALL COMMUNITY PRODUCTION WELL
Nelson Schlater, EKI Environment & Water and Jeffrey Tarantino, Freyer & Laureta, Inc.
Participants will learn about challenges experienced by smaller communities providing drinking water, namely bringing older wells back on line as production wells; design and construction in residential areas with small footprints; innovative approaches like piloting to reduce footprint and overall costs; and smaller project decision making.

Session 27B - Security and Emergency Planning
Room: Hedricks, Kamilos & Baker
10:00 AM - 11:00 AM
ENSURING DRINKING WATER RESILIENCY: REDDING'S RESPONSE TO THE 2018 CARR FIRE
Conrad Tona, City of Redding
Planning and preparing for wildfires and their impact includes identifying resources needed to continue treatment plant operations during the emergencies, as well as the ability to maintain water quality during, immediately after and for several years into the future following a fire that damages a water shed. Attendees will learn about the City of Redding's recent and on-going actions during and after the Carr Fire and how City staff is working with both the Division of Drinking Water and its neighboring water systems to ensure that both the City's and its neighboring water systems' customers have access to safe, potable water.
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.

Thank You!
Thank You!

Committee Chair
Katie Porter, Brown & Caldwell,
Safe Drinking Water Act Committee

Committee Chair
Robert Clark, North Marin Water District,
Source Water Quality Committee

Committee Chair
Adam Feffer, San Jose Water Company,
Water Treatment Committee

Committee Chair
Daniella Bonham, City of Vallejo Public Works Water Division,
Water Quality Analysis Committee

WATER RESOURCES DIVISION
Division Chair
Gordon Williams, East Bay Municipal Utility District

Division Vice-Chair
Nathan Boyle, Hazen & Sawyer

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
Russell Kyle, Wood Rodgers, Inc.,
Water Well Technology Committee

CERTIFICATION
Director
Yan Zhang, Long Beach Water Department

Committee Chair
Ben Bennett, Backflow Prevention Specialists, Inc.,
Backflow Tester/Cross Connection Specialist Committee

Committee Chair
Tai Tseng, Long Beach Water Department,
Water Operator Certification Committee

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

Committee Chair
William Granger, City of Sacramento,
Water Use Efficiency Committee

Committee Chair
Toby Roy, San Diego County Water Authority,
Advanced Water Treatment Committee

MEMBERSHIP ENGAGEMENT & DEVELOPMENT COUNCIL
Council Chair
Daniel Armendariz Jr., California Water Service

Committee Chair
Alyssa "Sunshine" Smith, Jacobs,
Young Professionals Committee

Committee Chair
Leila Munla, Advanced Onsite Systems,
Women's Leadership Committee

Committee Chair
Tim Williams, Kennedy Jenks Consultants,
Student Chapters

Committee Co-Chair
Joe Guistino
Awards Committee

Committee Co-Chair
Colter Andersen, Zone 7 Water Agency,
Awards Committee

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Council Chair
Stephanie Hearn, GEI Consultants, Inc.

Committee Chair
Phil Holderness, Dellavalle Lab,
Community Engineering Corps Committee

Committee Chair
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Scholarships Committee

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

GOVERNMENT AFFAIRS COMMITTEE
Committee Chair
Andy Belanger, Las Vegas Valley Water,
Government Affairs Committee

AD HOC
Committee Chair
Sue Mosburg, Sweetwater Authority,
Water Loss Control Committee

Committee Chair
David Hokanson, Trussell Technologies, Inc.
Section Technology Review Committee
Local Arrangements Committee

Justen Carter  
LAC Chair  
San Juan Water District

Local Host:  
SAWWA  
(Sacramento Area Water Works Association)

2019 Spring Conference Awards

Exemplary Operations Supervisor Award  
Tommy Pearce - Helix Water District

Operators Meritorious Service Award  
Michael Jimenez - Long Beach Water Department

Walter O. Weight Membership Award  
Sue Mosburg - Sweetwater Authority

Smaller Utilities Award  
Redwood Glen

Proctor of the Year Award  
Susan Lyon - CalPERS

SOURCE Magazine Editorial Award  
Issam Najm - Water Quality & Treatment Solutions, Inc.  
Brian Gallagher - Water Quality & Treatment Solutions, Inc.  
Gurpal Deol - Zone 7 Water Agency  
Lyda Hakes - Portland Water Bureau  
Peter Zhou - Santa Clara Water District

5-Year Presidents Award - Water Treatment  
City of San Diego - Miramar Water Treatment Plant

Directors Award - Treatment Program (Phase III)  
Contra Costa Water District - City of Brentwood Water Treatment Plant

5-Year Directors Award - Treatment Program (Phase III)  
City of San Diego - Miramar Water Treatment Plant

10-Year Directors Award - Treatment Program (Phase III)  
City of San Diego - Otay Water Treatment Plant

20 Year Directors Award - Treatment Program (Phase III)  
San Francisco Public Utilities Comm. - Sunol Valley Water Treatment Plant

5-Year Directors Award - Distribution Program (Phase III)  
Long Beach Water Department

SAGE DESIGNS, INC.  
SCADA & Security Products

ClearSCADA Enterprise Software  
SCADAPack RTU/PLC Controllers  
RealStream Lift Station Solution  
Pillbox Ruggedized SCADA Enclosures  
WIN-911 Alarm Notification Software  
ScadaDroid Alarm Dailer  
Dream Report Industrial Report Generation

WIRELESS

Accutech Wireless Instrumentation  
Trio Spread Spectrum & Licensed Radios  
Proxim Wireless Broadband Networks  
Teledesign Systems VHF & UHF Licensed  
FreeWave Spread Spectrum Serial & Ethernet

SECURITY

Video Surveillance, Hardware & Software

MS4 PERMITTING SOFTWARE
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From the initial design, AV fabricates and installs treatment systems that include pre-filtration, filtration, and chemical treatment to meet discharge requirements and potable water standards.

<table>
<thead>
<tr>
<th>Pressure Rating (psi)</th>
<th>Model Number</th>
<th>Flow Maximum [gpm/vessel]</th>
<th>Total Volume [ft³/vessel]</th>
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<tr>
<td>125</td>
<td>PF 12-520</td>
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<tr>
<td>75</td>
<td>SF 4-301</td>
<td>50</td>
<td>48</td>
</tr>
</tbody>
</table>

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