Let AC 2013 Be Your Key to Success!

Annual Conference

CWEA 2013

Palm Springs • April 16-19

California Water Environment Association
Protecting our water environment through education and training.
Complete Engineering and Consulting

A full-service approach to help you design, manage and construct.

- Wastewater
- Recycled Water
- Water
- Integrated Planning
- Environmental
AC-13 Helps Your Career Grow

Monsters Work Here

JWCE is proud to produce the brochure for the 2013 CWEA Annual Conference. For 40 years JWCE, and our California representative MISCO Water, have provided the finest in wastewater grinders and fine screens. Need to protect your pump station from trash and debris? Call your local MISCO rep today.

Authorized Representative
NorCal: (925) 225-1900
SoCal: (949) 458-5555
www.miscowater.com
Sponsorship Opportunities ............................................. 2
CWEA President’s Message ............................................... 3
Conference Chairs’ Message ............................................. 4
Water Environment Federation Officer .......................... 4
CWEA Committee Meetings Schedule ........................... 5
Pre-Conference Workshops ............................................... 6-9
Opening Session; Speakers; CWEA’s Business Meeting ...10-11
New Cutting Edge Technology Seminar ........................ 12
Exhibits & Equipment Displays .........................................13
Special Events, Activities, Networking, Food and Fun! ....14-17
  • Golf Tournament  • Sludge Trudge 5k Fun Run/Walk  • Operations Challenge  • Icebreaker Reception  • CWEA Banquet  • Students & Young Professionals  • Industry Partner Tables  • 5-5 Induction Ceremony  • Sweet Treats Social
Technical Tours ..........................................................18-21
CWEA Photo Contest .....................................................22
Technical Sessions .......................................................24-33
Registration Instructions and Forms ...............................34-43
About CWEA .............................................................44
Partial List of Exhibitors ................................................44
Quick Schedule Overview ............................................. Inside Back Cover

CWEA helps our 9,200 members advance their careers and prepare for a rapidly changing profession. (credit: City of San Luis Obispo)
Sponsorships are available at several levels, and each supports key activities and provides your company with attention-getting visibility.
The Key to Our Success? Think Different

Dear Water Quality Colleague,

You want to attend this conference. The quality of training and diversity of exhibitors that has been brought together in beautiful Palm Springs makes AC 2013 your top training event of the year. You will learn how to innovate, motivate, and enjoy connecting with water quality professionals from across the state. The exhibit hall, where you will learn from experts about the most recent advances in our industry, is laid out in a new and inviting format you will want to explore.

Agencies, consultants, and manufacturers have felt the effects of a rough economy and maybe your employer has chosen to cut back on training and education as a cost-cutting measure. Think about this: “Life, like golf, is all about how you play out of the rough.” John McAlley, Spirit Magazine. And it has been rough the past few years. More than ever before in our lifetimes, the workforce of today needs to be prepared for change. Your experience at AC 2013 will help you navigate the volatility, uncertainty, complexity, and ambiguity that fill our world today. And while we may yearn for it, we should not expect things to settle down into a new normal. For this reason, keeping ourselves educated on the latest in technology and methods to meet today’s challenges is critical to success.

On the subject of success - ask someone their definition of success and you’ll often hear some theme related to financial abundance. Yet success is more than this - happiness, health, job satisfaction, learning, family, close relationships with others – here we also find key elements of success.

This year’s conference theme is Key to Success. As you look through this conference brochure you’ll find classes that will help you grow in your profession, opportunities to develop networks of people you can count on to help you when you’ve got a tough question about your work, and, if you’re especially successful, you’ll create friendships that last a lifetime.

What is key to success in these times? Doing more with less has maxed out. Doing things differently is key. Innovation training has a strong presence in this conference, so look for those courses. Does it feel a bit risky to try new ways of doing business? It can bring energy and excitement to your workplace, making what seemed routine, fresh again. This is how we successfully play out of the rough!

The water environment field is at a crossroads. Generations are working together passing information to one another. You will find ways to create connections, and success, at AC 2013 in Palm Springs.

Get yourself to Palm Springs in April 2013. Learn how to innovate. See new stuff. You have outstanding opportunities to improve yourself, your workplace, and your success – however you choose to define it.

See you soon!

To your success,

Carrie Mattingly
CWEA President
Dear Fellow Water Professional,

This year, the conference will be held in the sunny desert at the Palm Springs Convention Center.

“Before anything else, preparation is the key to success,” said Alexander Graham Bell. And the 30+ volunteers on the Conference Committee have been doing just that over the past year...preparing! The committee knows you – the conference attendees – are the true Key to Success of the conference, so our preparation was intensely focused on bringing you the highest quality training, professional development, and networking opportunities you depend on from the CWEA Annual Conference.

Participate in any or all of these conference activities:

- **9 Pre-Conference Workshops:** Collection System Boot Camp 202, Managing Your Biosolids in Tough Economic Times, Laboratory Regulation and Policy Updates, Optimizing Clarifier Performance, Lessons Learned in Facility Design and Construction, FREE TCP Training the Trainer, and a FREE CWEA Leadership Workshop.
- **5 Technical Tours:** Get a close up look at water and water recycling in the Coachella Valley on these great field trips.
- An **Opening Session** that highlights today’s important water issues, including speaker Charles Fishman Author of The Big Thirst.
- A highly diversified and top-quality **Technical Program**, including WERF’s Cutting Edge Technology session featuring game changing wastewater technology.
- An interactive and valuable **Equipment, Materials and Services Exhibition**, organized into a brand new floor plan
- Exciting **Operations Challenge** competition, including an exhibition by members of CWEA’s Board and Committees.
- Our annual **Awards Luncheon** recognizing our profession’s award winning individuals and agencies.
- The end of conference bash – **Dancing with the CWEA Stars**!
- Fun social and professional networking activities, and more.

Take some time to read through this brochure and see how much there is to offer. We think you’ll want to be there and we look forward to seeing you in Palm Springs!

To your success,

Gina Cloutier
Conference Co-Chair
Victor Valley Wastewater Reclamation Authority

Connie Leonard
Conference Co-Chair
CDM Smith Smith

**CWEA Tip**
The State Water Board recommends regular training for all water professionals, and staff members are also participating in AC-13.

We help our members advance their careers - in wastewater operations, maintenance, engineering, instrumentation, collection systems, biosolids and more. (credit: Ddaze Phuong, OCSD)

CWEA Director Zoanne Tafolla; AC-13 Co-Chair Gina Cloutier and CWEA Certification Manager Vivien Malig. (credit: Kent O. McIntosh, LACSD)

Sandra Ralston is 2012-2013 President-Elect of the Water Environment Federation (WEF). She is currently a Principal Consultant with Malcolm Pirnie.

A WEF member since 1989, Sandra served as chair of the WEF Government Affairs Committee from 2005-2008, with particular focus on increasing outreach to Member Association government affairs committees. She was a member of the Committee Leadership Council development working group and served on the planning committee for the Utility Management Conference. Sandra was President of the Indiana Water Environment Association from 2002-2003.
CWEA Committee Meetings

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>APRIL 17 Wed</td>
<td>1:30 – 2:30 PM</td>
<td>Northern Regional Committee Meeting</td>
</tr>
<tr>
<td></td>
<td>1:30 – 2:30 PM</td>
<td>Southern Regional Committee Meeting</td>
</tr>
<tr>
<td></td>
<td>2:30 – 4:00 PM</td>
<td>Joint NRC and SRC Meeting</td>
</tr>
<tr>
<td></td>
<td>1:30 – 4:00 PM</td>
<td>Operations Challenge Pre-Competition Meeting</td>
</tr>
<tr>
<td></td>
<td>5:00 – 6:00 PM</td>
<td>Engineering &amp; Research Committee Meeting</td>
</tr>
<tr>
<td>APRIL 18 Thurs</td>
<td>7:00 – 8:30 AM</td>
<td>Collection Systems Committee Breakfast*</td>
</tr>
<tr>
<td></td>
<td>7:00 – 8:30 AM</td>
<td>Laboratory Committee Breakfast*</td>
</tr>
<tr>
<td></td>
<td>7:00 – 8:45 AM</td>
<td>P3S Committee Breakfast*</td>
</tr>
<tr>
<td></td>
<td>7:00 – 8:30 AM</td>
<td>Operations &amp; Maintenance Committee Breakfast*</td>
</tr>
<tr>
<td></td>
<td>10:00 – 11:00 AM</td>
<td>History Committee</td>
</tr>
<tr>
<td></td>
<td>11:00 – Noon</td>
<td>Training Coordination Committee</td>
</tr>
<tr>
<td></td>
<td>5:00 – 6:00 PM</td>
<td>Biosolids Committee Meeting</td>
</tr>
<tr>
<td>APRIL 19 Friday</td>
<td>7:00 – 8:30 AM</td>
<td>Government Affairs Committee Breakfast*</td>
</tr>
<tr>
<td></td>
<td>7:00 – 8:30 AM</td>
<td>Engineering &amp; Research / AAEE Committee Breakfast*</td>
</tr>
<tr>
<td></td>
<td>7:00 – 8:30 AM</td>
<td>Students &amp; Young Professionals Committee Breakfast*</td>
</tr>
<tr>
<td></td>
<td>7:00 – 8:30 AM</td>
<td>Technical Certification Program Meeting</td>
</tr>
<tr>
<td></td>
<td>7:00 – 8:30 AM</td>
<td>Supergroup Committee Breakfast*</td>
</tr>
<tr>
<td></td>
<td>7:00 – 11:00 AM</td>
<td>Safety Committee Breakfast Meeting*</td>
</tr>
<tr>
<td></td>
<td>10:00 – 11:00 AM</td>
<td>Past Presidents Meeting</td>
</tr>
</tbody>
</table>

*Breakfast Meetings require registration/pre-payment and all breakfasts start at 7:00 AM. See page 38

CWEA Tip
Attending a committee meeting or breakfast is a great way to network and learn the latest trends. Anyone is welcome at a committee breakfast!

Engineering & Research Breakfast

From Rotifers to Rotarians – the Good, Bad and Ugly of Animals in Wastewater Treatment Plants

Dr. David Jenkins
UC Berkeley

Much has been published on the smaller organisms in wastewater treatment plants (viruses, bacteria, protozoa) and about the larger ones (operators, engineers) but little has been summarized with respect to the activities and effects of animals of intermediate sizes.

This talk will attempt to rectify this omission by summarizing the reasons why various types of animals live in treatment systems and discuss some of the beneficial and detrimental activities they perform. No animals will be harmed in this talk.

David Jenkins is Professor Emeritus of Civil and Environmental Engineering. He holds a B.Sc. in Applied Biochemistry from Birmingham University and a Ph.D. in Public Health Engineering from the University of Durham, King’s College. He taught environmental engineering at Berkeley from 1960 until 1999.

His areas of research are biological wastewater and sludge treatment processes, water and wastewater chemistry and microbiology. He is the Author of more than 250 publications and reports and four texts. He is a member of the National Academy of Engineering and a recipient of the Global Water Award from the International Water Association.

CWEA Tip
Don’t miss this great breakfast presentation! Dr. Jenkins is one of America’s most respected wastewater treatment experts. Everyone is welcome. Register on page 38.
Pre-Conference Workshops

- Check-in will be held in the California Ballroom of the Renaissance Hotel.
- Full-day workshops include lunch. Lunch starts at noon.
- There is limited seating. Please register early! See conference registration form on page 37.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Workshop Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection Systems</td>
<td>W1. Collection Systems Boot Camp 203</td>
</tr>
<tr>
<td>Operations &amp; Engineering</td>
<td>W2. Lessons Learned In Facility Design And Construction</td>
</tr>
<tr>
<td></td>
<td>W3. Managing Your Biosolids In Tough Economic Times</td>
</tr>
<tr>
<td></td>
<td>W4. Optimizing Clarifier Performance (Morning, half-day)</td>
</tr>
<tr>
<td>Laboratory</td>
<td>W5. New and Proposed Regulations for Laboratories (Morning session)</td>
</tr>
<tr>
<td></td>
<td>W6. Incorporating the SWRCB “Policy for Toxicity Assessment and Control” Procedures (Afternoon session)</td>
</tr>
<tr>
<td></td>
<td>W7. Attend both Laboratory Workshops (Full-day, includes lunch) - Combo deal!</td>
</tr>
<tr>
<td>CWEA Leadership</td>
<td>W9. CWEA Leadership Training Day: Skills to Boost Your Leadership Success!</td>
</tr>
</tbody>
</table>

Workshop W1

Collection Systems Boot Camp 203

8:30 am – 4:30 pm • Tuesday, April 16
Earn 8.4 Contact Hours
$175 member discounted rate

The Key to Your Success starts with a solid foundation of training. In past years, collection system volunteers have established a tradition of offering training topics entitled Boot Camp 101 and 202. In keeping with that tradition, the Southern Section Collection Systems Committee will be providing the program and speakers for Boot Camp 203 this year. The Boot Camp training is designed for all levels of collection system personnel in an interactive atmosphere of fun and knowledge sharing. We would encourage all collection system professionals to participate in this powerful day of training and sharing. The Southern Section Collection Systems Committee has seasoned veteran speakers from agencies, contracting, vendors and engineering firms speaking on topics that they are very passionate about. Our last session of the day will be “The Collection System Game Show.” This is a fun and educational exercise with audience participation. This is an opportunity to team up with your colleagues and compete with questions that are similar to our technical certification exam questions. And yes, there will be prizes! We hope you can join us for a day of training, networking and team building that will make a difference in the personal growth of your career.

Topics:
- Collection System Management – Mark Chamberlin, Eastern Municipal Water District
- Getting the most out of your CCTV Inspection Program – Jim Aanderud, Innerline Engineering
- Collection System Safety, Real World Experiences – Chris Lopez, Rancho California Water District
- Pipeline Cleaning Essentials – Duane Johnson, Affordable Pipeline Services
- How to Protect and Maintain Sewer Hose from Mini Jetters to Combination Units – Rick Lewis, RL Enterprises
- Collection System Game Show – Test your knowledge... Win Prizes!

Workshop Moderator: Beverly Stumman, SSCSC Chairperson, Apex Companies, LLC
Managing Your Biosolids In Tough Economic Times

8:30 am – 4:30 pm • Tuesday, April 16
Earn 8.4 Contact Hours
$175 member discounted rate

California's challenging economy is impacting the budgets of wastewater agencies throughout the State, and municipalities are looking for ways to save money while maintaining a high level of service and complying with regulations. Many municipalities are facing huge budget deficits, increasing the pressure on managers to seek long term lower cost solutions for biosolids reuse and disposal. Cost control is becoming one of the most important factors affecting determination of management options and selection of biosolids service providers. During the housing boom, we saw the growth of costly, high tech biosolids options, but recently there has been a proliferation of lower cost alternatives giving agencies many more choices. Key learning questions that will be addressed by leading industry experts include:

- What impacts are the current economic and regulatory conditions having on the industry?
- How is the industry adapting to these conditions?
- What are the lessons learned about biosolids reuse/disposal in today's economy?
- What approaches are municipalities using to control costs?
- What management options are available for reducing costs?
- What are the new technologies and disposal/reuse options?
- What are the factors in comparing/evaluating those options?
- What regulatory issues exist or are on the horizon?

These are just few of the questions we'll address. The workshop is designed give biosolids managers, O&M staff, engineers, vendors and regulators the latest info for decision making in today's economy.

Speakers: Greg Kester, CASA; Matt Bao, LACSD; Diane Gilbert, City of Los Angeles; Tom Meregillano, OCSD; Eric Have; Encina Wastewater Agency; Layne Baroldi, Synagro; William Skinner, Holloway Environmental; Jeff Thurber, Terra Renewal; Jeff Meberg, Nursery Products.

Chair and Moderator: Jon Hay, Black & Veatch
**Workshop W4**

**Optimizing Clarifier Performance**

*8:30 am – Noon • Tuesday, April 16*
*Earn 4.2 Contact Hours*
*$85 member discounted rate*

Wastewater clarifiers are often the weak link in the treatment process. Their performance can be impacted by a combination of design, operational and maintenance factors. Through comprehensive field evaluations, we have learned how to identify these performance-limiting factors ... and how to design or modify clarifiers to make them more efficient.

This workshop will begin with a discussion of design standards and details, and describe the various field techniques used to evaluate performance. From this data, the workshop will develop information for improving designs and modifying existing clarifier performance. Referring to case histories from various California plants as well as plants across the country, the attendees will learn how to troubleshoot clarifier problems and discuss the advantages and disadvantages of physical modifications including:

- Alternative inlet devices
- Effective flow distribution
- Effluent weirs and launder configurations
- Sludge collection alternatives

This workshop will also include a two-way discussion of the problems impacting your clarifiers, along with some hands-on exposure to the more important field evaluation devices.

Speaker: **John Esler**, PE, Clarifier Performance Evaluations, Inc.

---

**Workshop W5**

**New and Proposed Regulations for Laboratories**

*8:30 am – Noon • Tuesday, April 16*
*Earn 4.2 Contact Hours*
*$90 member discounted rate*

The Methods Update Rule was finalized last year with some very big surprises, notably the significant reduction in the scope and application for the QC section 136.7. But just when you thought it was safe, CA ELAP has proposed a set of regulations to replace its very old and outdated current requirements.

This workshop will cover the final MUR rule and what labs gained and lost in the process, and a look at the proposed ELAP regulations comparing them with what is currently required.

Presenter: **William (Bill) Ray**, William Ray Consulting LLC

---

**Workshop W6**

**Incorporating the SWRCB “Policy for Toxicity Assessment and Control” into Toxicity Testing Procedures**

*1:00 pm – 4:30 pm • Tuesday, April 16*
*Earn 4.2 Contact Hours*
*$90 member discounted rate*

The SWRCB’s Policy for Toxicity Assessment and Control (WET Policy) will require statewide adoption of the TST statistic for all WET testing programs in California. The impact and implications associated with within test variability and statistical power on test results is very different using the TST statistic than on more familiar endpoints such as the NOEC and LC25. This workshop will include a brief introduction to the WET Policy and the required TST statistic including use of EPA’s spreadsheet tool but will focus on elements associated with controlling variability and increasing statistical power. Interactive discussion topics will include use of dose response information, application of pMSD criteria, the setting of laboratory-specific internal QA/QC criteria, evaluation of minimum test acceptability criteria, and the relative benefit of increased replication.

Other topics will include evaluating most sensitive species screens, multiple concentration testing, analyst training, and evaluation of ongoing laboratory performance. A strong statistical background is NOT a prerequisite and the workshop will be geared toward laboratory staff and managers involved in WET testing as well as those that are charged with interpreting and evaluating results from WET tests. All presentation materials including a copy of the spreadsheet tool and most recent WET Policy will be provided to all attendees on a flash drive so attendees are encouraged to bring a laptop to the workshop.

Instructors: **Philip Markle** and **Josh Westfall**, LACSD
Join your fellow CWEA leaders and dedicated volunteers for a fun and interactive day of training. Do you wish you could:

• Get people to try new ideas without needing to resist?
• Implement new behaviors so they stick for more than just a few days or weeks?
• Facilitate conversations with ease?
• Effectively manage conversation challenges when clashing personalities are on your team?
• Confidently start conversations with strangers?
• Build a network to support your leadership success?

If you answered “Yes” to any of the above questions, you need to attend CWEA'S Leadership Training Day in Palm Springs!

Due to member demand, we are bringing back leadership strategist Cynthia D’Amour, MBA, to lead us in a day of high-energy advanced leadership training focusing on specific how-to ideas you can use right away. You'll delve into topics such as:

• How to get beyond “We’ve always done it that way!”
• How to lead meetings your diverse team enjoys
• How to network like a leader

This is a free pre-conference session, with a great lunch included. Upon completion of this training you’ll receive contact hours. PLUS, your commitment to become a Trainer will allow you access to standardized training material from the State’s finest Trainers, relevant to your vocation.

This Pre-Conference workshop was created to train Certification Prep Study Session Trainers in the subject matter and presentation techniques to best accommodate the different learning styles of adults, as they prepare for CWEA Technical Certification Testing. If you hold certification in Grades II, III or IV of your vocation, now is your chance to learn how to help your fellow wastewater professionals earn their Certification through CWEA’s Technical Certification Program. In addition to understanding adult learning styles, you will also gain other valuable tools that will help you become a trainer capable of effectively assisting others as they strive to obtain CWEA certification in their vocation.

This is a free pre-conference session, with a great lunch included. Upon completion of this training you’ll receive contact hours. PLUS, your commitment to become a Trainer will allow you access to standardized training material from the State’s finest Trainers, relevant to your vocation.

Speakers: Joanna De Sa, City of San Jose; Gina Cloutier, Victor Valley WRA; Marjorie Boone, EHS International Inc.

Cynthia D’Amour, MBA – Leadership strategist Cynthia D’Amour is President of People Power Unlimited. She’s also the Author of seven books including The Lazy Leader’s Guide to Outrageous Results and How to Turn Generation Me Into Active Members of Your Association.

Cynthia has served more than 67 total years on boards and recruited more than 250 members. Cynthia specializes in working with associations that want to get more volunteers involved and leaders who want to achieve outrageous success. She is a frequent speaker at leadership events.
Opening Session • Palm Springs Convention Center

California’s Wastewater Professionals: Where We’ve Been, Where We’re Going

The Historian
Dr. Nick Pinhey
Vice-Chair
History Committee
CWEA

Back to the Future: California’s First Indirect Potable Reuse Facility
Past-President and History Committee Vice-Chair Dr. Nick Pinhey will link California’s water past to its future in his presentation on recycled water circa 1929-1930. Dr. Pinhey will present California’s earliest documented indirect potable reuse project, the California Sewage Works Association’s (now CWEA!) involvement with this cutting-edge project, and discuss how our “water past is being recycled in the 21st century”.

The Journalist
Charles Fishman
Author
The Big Thirst

The Most Important Thing About Water Is How We Talk About It
People who run our water and wastewater services are proud of being a “silent service” — providing something indispensable with unfailing reliability, without any attention. Water’s invisibility is a sign of success. But as water issues become more urgent, water’s invisibility is limiting smart water innovation. Water professionals need to start talking clearly, persuasively and vividly about water problems and solutions — or we won’t get the solutions right!

The Communicator
Ron Wildermuth
Manager, Public & Government Affairs, West Basin MWD

How We “Sold” Drinking Sewer Water in Orange County
Today, water reuse projects are technically amazing. But when it comes to public outreach and overcoming the “yuck factor,” many of these projects are still in the Stone Age. At Orange County Water District, a group of communication experts developed a cost-effective, measurable and successful “Influencer Focused” outreach system that can be used to gain public acceptance of any water project.

The Innovators
Dr. Carl Hensman
Program Officer, Water, Sanitation & Hygiene, Gates Foundation

Innovative Resource Recovery: Addressing The Developing World’s Sanitation Crisis
In the developed world we have the luxury of deciding to adopt sustainable systems. However, in developing countries the natural environment defines the need for sustainable sanitation projects. To achieve sustainability, the resources within human waste must be harnessed. Dr. Hensman will discuss the Gates Foundation’s focus on the sanitation crisis in the developing world and innovative approaches resulting from the efforts of their Water, Sanitation and Hygiene Team.

Schedule
8:15 AM - Carrie Mattingly, CWEA President, City of San Luis Obispo and Steve Pougnet, Mayor of Palm Springs
8:45 AM - Dr. Nick Pinhey
9:15 AM - CWEA 5S Ceremony, Steven Agor, Skanska and Maura Bonnaren, East Bay Municipal Utility District
9:45 AM - Charles Fishman
10:15 AM - Ron Wildermuth
10:45 AM - Dr. Carl Hensman
11:15 AM - Closing Remarks

Photo credits (l-r): CWEA, The Big Thirst, UCLA Luskin Center, BlueTech Forum

Opening Session Co-Chairs
Berlinda Blackburn
City of Coachella
Jon Ganz
LACSD
Charles Fishman

Journalist Charles Fishman gets inside organizations, both familiar and secret, to explain how they work.

In the course of reporting about water to write *The Big Thirst*, Mr. Fishman has stood at the bottom of an empty sludge digester, sampled water directly from the springs in San Pellegrino, Italy, and Poland Spring, Maine, and carried water on his head 2 miles with a group of Indian villagers.

Fishman’s previous book, the New York Times bestseller *The Wal-Mart Effect*, was the first to crack open Wal-Mart’s wall of secrecy, and has become the standard for understanding Wal-Mart’s impact on our economy.

Mr. Fishman is a former reporter for the Washington Post. Since 1996, he has worked for *Fast Company* magazine. Mr. Fishman has won numerous awards, including three times receiving UCLA’s Gerald Loeb Award, the most prestigious award in business journalism.

Mr. Fishman grew up in Miami and went to Harvard. He lives outside Mexico City with his wife, also a journalist, their two children, their two Labradors, and their two parakeets.

Dr. Carl Hensman

Dr. Carl Hensman is Program Officer for the Water, Sanitation and Hygiene team within the Global Development Program of the Bill & Melinda Gates Foundation.

Prior to joining the foundation, Dr. Hensman was an Energy Program Manager for King County (Seattle) focusing on resource recovery in the Wastewater Treatment Division. Additionally, he served as the Chief Technology Officer for Asemblon, an energy storage development company. He has served as Chief Scientist/Engineer, Principal, and Director on the Board of Frontier Geosciences Inc., a consulting company focused on the energy industries. In addition, he’s been an Adjunct Faculty member at Clemson University, served on the National Coal Council, and the NCC Coal Policies Board.

Dr. Hensman has been published in over a dozen peer-reviewed journals, has co-written one book and three book chapters, and served as a scientific advisor. He received his doctorate from New Mexico State University in Applied Chemistry and spent two and a half years as a postdoctoral fellow at Ohio State University.

Dr. Nick Pinhey

CWEA Past President Dr. Nick Pinhey started his career as a wastewater treatment plant operator for the City of Turlock during the heyday of the Clean Water Act Grant Program. He went on to serve as the Director of Public Works for the cities of Patterson, Merced, Tracy and Modesto and as the General Manager of the Stanislaus Regional Water Authority.

He retired from the City of Modesto in 2013 after 37 years of public service and is currently the vice-chair of the CWEA History Committee.

The August 2012 Toilet Fair held at the Bill and Melinda Gates Foundation where Caltech Professor Michael Hoffman (shown above with reporter) and team were announced as the winners of the Reinvent the Toilet Challenge. Photo: Alec Mackie, JWCE

Dr. Pinhey received a master’s degree and doctorate from the University of Southern California’s Price School of Public Policy and has taught at California State University Stanislaus in Turlock.

Mayor Steve Pougnet

Mayor Steve Pougnet has lived in Palm Springs since 2001, and has served as an elected official since 2003, when he was first elected to City Council. Steve was elected to Mayor of Palm Springs in 2007 and reelected in 2013.

Ron Wildermuth

Ron Wildermuth is Manager of Public and Government Affairs at West Basin Municipal Water District in Carson, CA. His current focus is on communicating West Basin’s Water Reliability 2020 plan in which the District will reduce its dependence on imported water from 66% today to 33% percent by 2020.

Mr. Wildermuth worked the previous 10 years at the Orange County Water District, where he served as Director of Communications, and was in charge of public outreach for the Groundwater Replenishment System, a 70,000 acre-feet per year wastewater purification project that recharges Orange County’s largest groundwater basin.

Mr. Wildermuth served 23 years in the Navy as a Public Affairs Specialist and was public relations advisor to General Norman H. Schwarzkopf during the first Gulf War. He earned a B.A. in Sociology and International Relations from St. Ambrose University, a master’s degree in Public Relations from American University, and is a graduate of the Naval War College and honors graduate of the University of Oklahoma’s Communications Short Course.
Calling all curious wastewater professionals! For the first time ever we’ll peek into the future and learn about the newest, most cutting edge wastewater technologies. How will these technologies impact wastewater treatment? How will they impact our profession?

CWEA is developing this forum to exchange new, creative and even unusual ideas about making the treatment process and our profession even better. Tell us what you think!

On Wednesday CWEA’s Gimmicks & Gadgets Committee presents this year’s top operator inventions. Then, on Thursday Jeff Moeller of WERF joins us as moderator and will also present details about their LIFT technology evaluation program. Friday’s moderator is John Jardin, Director of Research & Development for the Encina Wastewater Authority.

Here are just a few breakthroughs to look forward to. The complete list is in the Program.

### Gimmicks & Gadgets

**Moderator**
Peter Gaines
City of Burlingame

For the first time ever operators and mechanics will present their CWEA award winning Gimmicks and Gadgets.

1st prize: $300  
2nd prize: $200  
3rd prize: $100

Award application questions:
- Describe your Gimmick or Gadget (kept confidential)
- What does it accomplish?  
- Estimated time saved per year?  
- Estimated dollars saved per year?  
- Photos of the gimmick or gadget  
- Commercial products are not eligible; however, a unique reuse of a commercial product is eligible.

Entry form: [www.cwea.org/awards](http://www.cwea.org/awards)  
Deadline: January 11, 2013

### Game Changers

**Moderator**
Jeff Moeller
WERF

### Reinventing WWTPs

**Moderator**
John Jardin
Encina Wastewater Authority

CWEA Tip

Encourage young professionals and students to attend AC-13. It’s a chance to develop the next great crop of wastewater leaders.
Technical Exhibits

Exhibit Hall At-A-Glance

<table>
<thead>
<tr>
<th></th>
<th>Wednesday</th>
<th>Thursday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhibit Hours</td>
<td>2:00 pm - 7:00 pm</td>
<td>Noon - 6:30 pm</td>
</tr>
<tr>
<td>Lunch</td>
<td>On your own</td>
<td>Free in exhibit hall</td>
</tr>
<tr>
<td>FREE Drinks &amp; Hors d’oeuvres Reception</td>
<td>5:00 pm Free!</td>
<td>4:30 pm Free!</td>
</tr>
</tbody>
</table>

See the Latest Wastewater Innovations

- Learn from the experts about the latest in water and wastewater technology, equipment and services.
- See the newest instruments, SCADA, sewer cameras, collection systems and process equipment.
- This is your chance to touch, see and discuss what is new in our industry.
- Free lunch at noon on Thursday.
- Free drinks & hors d’oeuvres at the Exhibitor Reception Wednesday and Thursday evening.
- Watch the Ops Challenge right inside the Exhibit Hall.

Free delicious food and drinks each evening!

Cool door prizes – must be present to win!

Reserve Your Booth

Download Exhibitor manual [www.cwea.org/conferences](http://www.cwea.org/conferences)

Committee Co-Chair

**Tom Roberson**
MISCO
troberson@miscowater.com
(949) 458-5555

Committee Co-Chair

**Dave Badgley**
dbadge@aol.com
(818) 843-3318

Committee Co-Chair

**Dave Thomas**
Haaker
davet@haaker.com
(909) 721-7987

Get to know great folks who provide innovative solutions to wastewater problems & support CWEA.
Golf Tournament
11:00 AM Check-in • Noon Start Tahquitz Creek Golf Resort

Spend the afternoon golfing with your fellow CWEA friends and colleagues on a spectacular Palm Springs Golf Course. Famed designer Ted Robinson Sr. applied his philosophy of letting nature take its course in 1995. This modern desert layout rivals most other desert courses in the valley for its uniqueness, use of natural surroundings, and playability. Ted Robinson and his environmentally friendly concepts are held true with this design. The use of natural draught tolerant desert landscape, reclaimed irrigation, and recycled materials like used tires for mounding are an intricate part of the Resort.

Check-in is at 11:00 AM with a box lunch provided. The shotgun start is at 12:00 PM. The format is a 4-person scramble – sign up as a team or an individual. Immediately following the golf event is a buffet dinner and awards presentation in the club house. See page 43 for more information. Use the Conference Registration Form to pre-register for this event. 1885 Golf Club Drive, Palm Springs, CA 92264

Ice Breaker
6:00 PM Renaissance Pool Deck

All registered attendees and their guests are welcome. Visit old friends and make new ones! Swap stories and make up new ones! The famous ice breaker reception is Tuesday, April 16th from 6:00 - 8:00 pm on the Renaissance’s spectacular pool deck. Conference registration, hors d’oeuvres and drinks are all available. Admittance to the ice-breaker is open to all attendees. And it’s FREE – just show up! Good chance to pick-up your registration packet.

Sludge Trudge
4:00 PM Demuth Park

Take a break from the inside activities and get some fresh air at the 30th Annual Sludge Trudge 5k on Thursday, April 18, at 4 PM! This year, in addition to the running and walking categories, participants will have the OPPORTUNITY to enter the team category. Teams consist of any four people.

The fastest TOTAL time of the four team members (runners & walkers included), will be awarded 1st place. Team members are eligible for individual prizes! See page 40 for more information and the registration form. Hope to see you there!
1:00 - 4:30 PM • Exhibit Hall

The Palm Springs Convention Center will be the site of the 2013 CWEA Operations Challenge. The event tests the knowledge and skills of wastewater professional teams from agencies throughout the state. The teams compete in five events including Process Control, Laboratory Procedures, Collection System Repair, Safety and Mechanical Pump Maintenance. The competition pushes team members to the edge as they skillfully perform the necessary tasks as fast and flawlessly as possible. Come out and watch as they challenge one another in their attempts to “Rule the State”. These teams will be very proud to represent YOU and CWEA at “WEFTEC 2013” in Chicago.

This year, Operations Challenge will take place on the Convention Center floor on Thursday, April 18, from 1:00 pm to 4:30 pm.

**Noon • Exhibit Hall**

**Battle of the “Special” Teams**

**Ops Challenge Demonstration**

While enjoying your free lunch Thursday in the exhibit hall, enjoy a special Ops Challenge demonstration as three of CWEA’s leadership Teams go through the grueling challenges as fast as they can. At least we think they’re going as fast as they can!

After three years of rivalry between these teams – who will be victorious in 2013? Will it be the Young Professionals with their youth, strength and fancy smart-phone apps? Or can the older and wiser Board of Directors win? Or will the we’re-not-sure-how-old-they-are-let-us-check-our-Paleontology handbook-for-dates Past Presidents pull out a surprise win this year?!!

Be there for all the excitement as these rivals go head-to-head:

1. CWEA Current Board Members
2. Past CWEA Presidents
3. CWEA Student & Young Professionals Committee

**Luncheons**

**Noon**

**Free Exhibit Hall Luncheon**

Check out over 200 manufacturers and service exhibitors while enjoying a free lunch. The Exhibit Hall opens at noon.

**Noon**

**Awards Luncheon Convention Center**

Celebrate with your fellow members as they receive the recognition they have earned. Approximately 20 CWEA awards will be given out to individuals and agencies by CWEA President Carrie Mattingly.

This luncheon sells out, so reserve your seat on page 38!
Even More Activities...

Industry Partner Tables

**Wednesday thru Friday**

Convention Center Lobby

Want to find out what’s going on in the water/wastewater world? Come join our partners in the industry, and learn about the exciting opportunities and resources they have to share! Take a break between sessions, and talk to representatives from a variety of organizations. Hear about different training and volunteer programs and find out how you can make a difference!

Are you part of a water/wastewater related group and want to share your group's story? Contact Megan today to reserve your **FREE** industry partner table! Display tables are located in the busy central lobby. *Subject to approval.*

**Industry Partners Organizer**

Megan Yoo
Hazen & Sawyer
megan.yoo@gmail.com
(949) 278-5761

Students & Young Professionals Activities

**Sponsored By**

Brown and Caldwell

Sludgy Scavenger Hunt!

A Unique One-on-One Experience

Calling all young professionals! Sign up to “buddy up” with a seasoned professional during the Wednesday Exhibit Hall Reception. Listen to their personal story and experiences and tour the exhibit hall while embarking on a fun and informative wastewater-themed scavenger hunt. Make new contacts and meaningful connections with industry veterans while exploring the wonders of the water and wastewater world. Great networking event! Everyone is invited!

Please see page 42 to sign-up.

Speed Mentoring at the Sweet Treats Social

Come take part in a fun and exciting activity at the sweet treat social! Sign up to meet and greet potential mentors and mentees, and build your network fast! Participants will have the opportunity to talk to industry members of all backgrounds. Our goal is to connect students and young professionals with industry insiders who will share their knowledge, experience and advice with the next generation of leaders so our industry continues to grow stronger! Another great networking event!

RSVP using form on page 42.

Sweet Treats Social

3:40 PM

Near the session rooms

With all those Technical Presentations, workshops, and Technical Tours, the CWEA 2013 Annual Conference can be exhausting. What better way to take a break from training than to kick back with your friends and colleagues and enjoy some delicious sweet treats.

After the Friday afternoon technical sessions enjoy some free treats and a last bit of networking with other industry professionals. Also don’t miss the Students & Young Professionals mentoring going on at the same time. We’ll get you re-fueled for the CWEA Banquet later in the evening.
After business is taken care of, live from the Palm Springs Convention Center, it’s the sewer showdown to end all sewer showdowns - it’s Dancing with the CWEA Stars. The best wastewater professionals from Northern and Southern California will face off in a winner take all competition that’s sure to have you dancing in the aisles. Dance lessons included!

Join 200 other CWEA professionals for our annual end of the conference let’s-have-a-ton-of-fun banquet. Have some fun dancing under the stars in Palm Springs as you get to dance with all your favorite CWEA stars.

Hurry - tickets will sell out!
Technical Tours

Tours fill-up fast – sign-up today for these great tours!

- Register early! See Registration Form page 38.
- Buses leave from Convention Center entrance promptly at departure time indicated.
- Tour registration may only be purchased with purchase of a one-day or full-conference registration.

<table>
<thead>
<tr>
<th>Tour #</th>
<th>Tour Name - Location</th>
<th>Day &amp; Time</th>
<th>Bus Departs</th>
<th>Bus Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>Water in the Coachella Valley (All Day)</td>
<td>Tues 4/16</td>
<td>7:00 am</td>
<td>4:30 - 5:30 pm</td>
</tr>
<tr>
<td>T2</td>
<td>Maximizing Use of Recycled Water and Other Sources</td>
<td>Wed 4/17</td>
<td>8:00 am</td>
<td>Noon</td>
</tr>
<tr>
<td>T3</td>
<td>Valley Sanitation District – Major Plant Overhaul</td>
<td>Wed 4/17</td>
<td>Noon</td>
<td>4:00 pm</td>
</tr>
<tr>
<td>T4</td>
<td>Collection System Maintenance &amp; Rehabilitation Street Fair</td>
<td>Thur 4/18</td>
<td>Noon</td>
<td>4:30 pm</td>
</tr>
<tr>
<td>T5</td>
<td>Replenishment &amp; Irrigation in the Coachella Valley</td>
<td>Fri 4/19</td>
<td>8:00 am</td>
<td>Noon</td>
</tr>
</tbody>
</table>

Tour T1

Water in the Coachella Valley
(7-8 hours)

7:00 am – 4:30 pm • Tuesday April 16 • Pre-Conference
Earn 9.6 Contact Hours
$75 member discounted rate • Lunch is included

A once in a lifetime tour of Southern California water projects. Coachella Valley Water District in conjunction with Desert Water Agency has the right to import 194,100 acre-feet of water per year to replenish the groundwater basin that supports 110,000 domestic and agricultural users within CVWD’s 1,000 square mile service area. Follow the imported water from the MWD State Project Water exchange point to the Windy Point replenishment area, the CVWD’s largest replenishment site. Then see how stormwater is managed by using the natural Whitewater River Channel and constructed Coachella Valley Stormwater Channel. Learn how all water – domestic, irrigation and sanitation is monitored and controlled through a sophisticated telemetry system. Gather an understanding of domestic delivery and water treatment through ion exchange. Finally, learn about the Salton Sea and its significance in the water cycle of Southern California.

Highlights include:
1. Whitewater turnout
2. Windy Point replenishment (left)
3. Stormwater
4. Control Room
5. Well 6806 Domestic water & ion exchange
6. Salton Sea
Maximizing Use of Recycled Water and Other Sources

Tour T1

Mid-Valley Pump Station
Credit: CVWD

Tour T2

Maximizing Use of Recycled Water and Other Sources

8:00 am – Noon • Wednesday, April 17
Earn 4.8 Contact Hours • $30 member discounted rate

Effective water use begins with putting water resources to the best possible use. Begin at the Mid-Valley Pipeline where Colorado River water is pumped from the Coachella Canal and is used to supplement recycled water produced at CVWD’s largest wastewater treatment plant for golf course irrigation. A tour of Water Reclamation Plant 10 (WRP10) to see how activated sludge, clarification, flocculation, filtration and disinfection are used to produce high-quality Title 22 reclaimed water for irrigation uses. Then, meet with an actual reclaimed water customer at Desert Willow Golf Resort to learn about the water quality concerns and nuances of using reclaimed water in a successful turf management program.

Tour Coachella Valley Water District’s main Palm Springs Water Reclamation Plant #10. Credit: CVWD
Tour T3

Valley Sanitation District – Major Plant Overhaul
Noon – 4:00 • Wednesday April 17
Earn 4.8 Contact Hours
$30 member discounted rate

Founded in 1925 as the Indio Sanitation District, Valleys Sanitation has evolved from providing service to about 1,000 residents and a service area of one half square mile to a current area of over 19 square miles. Installation of a constructed wetlands system in 2000 provided VSD with over one million gallons per day treatment capacity and created habitat for the Coachella Valley Wild Bird Center.

VSD is currently undergoing a major plant overhaul (Phase 2A Plant Improvement Project) that includes upgrades or replacement of many facilities including: primary clarifiers, grit chamber expansion, biofilter for belt filter press facility, new lab and operations buildings, major remodel of the main office building, and a new fiber optic network for the plant SCADA system. Phase 2A is being constructed at an estimated cost of $19.2 million, with completion scheduled in late 2013. Phase 2A is anticipated to lead to the larger Phase 2B improvements, including a tertiary process and recycled water distribution system being planned jointly with Indio Water Authority at an estimated cost of approximately $121 million.

The tour will showcase the exciting improvements happening at Valley Sanitary District and will include a walking tour of the constructed wetlands facility. For more information go to www.valley-sanitary.org.

Tour T4

Collection System Maintenance and Rehabilitation Street Fair
Noon – 4:30 pm • Thursday, April 18
Earn 5 Contact Hours
$30 member discounted rate

This hands on demonstration will provide participants with a unique opportunity to see, feel, hear and smell a myriad of new and proven collection system maintenance and rehabilitation products and equipment. A half mile of sewer pipe and several manholes will be the stage for vendors to perform demonstrations of their wares. Each station will offer guidelines for optimum applications and techniques of the items demonstrated.

This tour will be a great compliment to the items displayed in the exhibitors’ hall. Products and equipment to be demonstrated will include push cameras with tracking sondes, trenchless point repair equipment, bypass pumps and inflatable plugs, polymer concrete manhole products, pole cameras, jetter nozzles, pipeline cleaning equipment, CCTV equipment, manhole rehabilitation products, pipeline rehabilitation products, lateral connection rehabilitation products, sewer headspace airflow and odor evaluation techniques and more. There will surely be something new for every collection system professional to see in action.
Tour T5

Replenishment & Irrigation in the Coachella Valley

8:00 am – Noon • Friday, April 19
Earn 4.8 Contact Hours
$30 member discounted rate

Begin at CVWD’s terminal reservoir – Lake Cahuilla – with a capacity to store 1,300 acre-feet of excess Colorado River water from the 123-mile Coachella Branch of the All American Canal. Two-hundred-fifty-thousand acre-feet of Colorado River water is delivered to 1,120 agricultural users irrigating 78,530 acres of land in the Coachella Valley. Also, discover how water moves from Lake Cahuilla to the Levy Replenishment facility (the east valley’s most effective replenishment site) with the capacity to replenish 40,000 acre-feet per year for the benefit of east valley users. Visit the Coachella Canal and gain an understanding of how canal water travels by gravity flow along the entire length of the canal and is then delivered via an underground delivery system to area farms. Hear firsthand from a local grower how Colorado River/canal water is delivered and how water conservation measures have shifted agricultural practices to micro-irrigation.
Entry Form & Contest Rules

CWEA invites all amateur photographers to enter the Opening Session Photo Contest. Over $500 in prizes will be awarded to first, second, and third place winners.

- Photos should depict resource management/recycling/recovery, energy conservation, green practice or sustainable solution for a wastewater related facility (innovative process, digester gas project, recycled water, biosolids project, fuel cell, etc.)
- Photos may be either black & white or color.
- Judging will be based on originality, educational value and scenic presentation.
- Entries will be displayed at the Opening Session
- The contest is open to all CWEA members.

Photos must be submitted as 8” x 10” on photo paper. Please tape a copy of this entry form to the back of each photo. Also submit an electronic copy to Ddaze Phuong at dphuong@ocsd.com. I acknowledge all entries become the property of the CWEA and may be used by CWEA at its discretion. Photos will not be returned. Entry deadline is March 18, 2013. Maximum 3 entries per person.

Mail form and prints to:
Ddaze Phuong, OCSD, 10844 Ellis Ave, Fountain Valley, CA 92708
Congratulations Natalie Ng

Natalie Ng is a junior at Monta Vista High School in Cupertino, CA. She loves the experience of conducting independent scientific research projects and sharing her discoveries with others. Since middle school, she actively participates at regional, state, and international science fairs and has won many awards.

She was named grand-prize winner at the 2010 California State Science Fair and a 2013 Google Science Fair Global Finalist. Her love of science and yearning to share knowledge are her personal strengths. For two consecutive years, she was selected as a regional finalist to present her project to an audience of 300+ students and teachers at the Regional JSHS Symposium.

In addition to her passion for science, she also enjoys playing the violin and ice-skating. Ms. Ng’s career goal is to become a clinical physician, so she can make a contribution to her community by conducting advanced research in the laboratory while maintaining a personal touch with patients.

Quarter Century Recognition Program

Calling all CWEA members with 25 years of dedicated service to the most challenging and most vital profession, the water field – CWEA would like you to step up and be recognized

The CWEA Quarter Century Recognition Program acknowledges water professionals for their commitment to improving the quality of life and the protection of the environment. These essential professionals have spent countless hours improving our water environment and include: Operators, Collection System, Maintenance, Laboratory, Environmental Compliance personnel, Engineers and Administrators.

CWEA Quarter Century honorees receive a framed certificate honoring their achievement and a lapel pin they can proudly wear identifying them as members of this elite group of professionals.

Criteria:
1. Must be a current CWEA member and a member in good standing for the last five consecutive years.
2. Must have been a vital, full-time participant in the water environment field for a period of 25 years, 10 years of which must have been actively involved in the day-to-day tasks associated with treatment or conveyance of wastewater.
3. Must submit an application.
4. Include detailed resume with dates of employment, project / plant location, positions held, and specific achievements. Electronic applications are acceptable.

Application: www.cwea.org/awards

Tips, Hints, and Suggestions to Get Approval to Attend Annual Conference 2013

Identify benefits of attending:
1. Highlight sessions you will attend and how they will impact your work.
2. Visit exhibitors that can help your organization
3. Identify processes/problem areas that you are looking for solutions?
4. Attend sessions that offer CWEA, CADPH and SWRCB contact hours.

Share what you learn:
1. Take notes during the sessions you attend and summarize key points.
2. Pass on key learning points to colleagues – share how they will impact your organization – new State or Federal policies or regulations, new technologies...
3. Continue your learning by using the online conference proceedings including speaker contact information and presentations for future reference.

Save time & money for your organization:
1. Register and get the Early Bird discount by March 19, 2013.
2. Book your hotel with a CWEA host hotel at a discounted rate.
3. Earn valuable CWEA contact hours, SWRCB CEUs, and CADPH contact hours for your water and wastewater certification in ONE

CWEA Tip
For more info visit www.cwea.org/conferences

Questions? Call us! 510.382.7800 x 107
# Technical Sessions

## WEDNESDAY AFTERNOON

<table>
<thead>
<tr>
<th>CWEA Committee</th>
<th>Collection Systems</th>
<th>Biosolids</th>
<th>Laboratory</th>
<th>Operator &amp; Maintenance</th>
<th>Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session Title</td>
<td><strong>Building a Better Maintenance Program</strong></td>
<td><strong>Biosolids Treatment, Management, &amp; Use</strong></td>
<td><strong>Laboratory Training</strong></td>
<td><strong>Process Optimization and Troubleshooting</strong></td>
<td><strong>Ready For The Unexpected? Safety Is Your Responsibility</strong></td>
</tr>
<tr>
<td>Session Chair</td>
<td>Robert Potter, City of Los Angeles</td>
<td>Todd Jordan, Carollo</td>
<td>Gina Cloutier, Victor Valley WRA</td>
<td>Donald Hurdle Southern California Edison</td>
<td>Marjorie Boone ehs International, Inc.</td>
</tr>
</tbody>
</table>

### Presentation Title

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:40 - 2:30 PM</td>
<td>Let’s Try Something New: West Valley Sanitation Pilot Project Using Spiral-Wound PVC Liner Colin Dudley, Brown and Caldwell; Jonathan Lee, West Valley Sanitation Dist Addtl Authors: Chris Peteres, Brown and Caldwell; Ed Oyama, West Valley Sanitation District</td>
</tr>
<tr>
<td>1:40 - 2:30 PM</td>
<td>Fluid Mechanics and Chemistry in Advanced Polymer Mixing for Improved Sludge Dewatering Yong Kim ProMinent Fluid Controls Mark Hill, P.E., RBF Consulting Addtl Author: Etienne Prehoda, ProMinent Fluid Controls</td>
</tr>
<tr>
<td>1:40 - 2:30 PM</td>
<td>Capillary Ion Chromatography - A New Platform for High Throughput or High Resolution Separations of Ionic Compounds Peter Bodsky ThermoFisher Scientific</td>
</tr>
<tr>
<td>1:40 - 2:30 PM</td>
<td>Older Pump Stations: Keep ’Em Running Phillip Tormey South Tahoe Public Utility District Addtl Author: Glenn Roderick, South Tahoe Public Utility District</td>
</tr>
<tr>
<td>1:40 - 2:30 PM</td>
<td>Safety Considerations in Purging Gas Systems - Case History Steve Laren, Delta Diablo Sanitary District; Bob Corner, Industrial Scientific Addtl Author: Shawn Redmond Delta Diablo Sanitation District</td>
</tr>
</tbody>
</table>

### Presentation Title

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:40 - 3:30 PM</td>
<td>Design, Construction &amp; Startup Challenges of Rehabilitating a 55 MGD Pump Station Karl Yakich East Bay Municipal Utility District</td>
</tr>
<tr>
<td>2:40 - 3:30 PM</td>
<td>Comparing Screw Press, Centrifuge and Belt Filter Press at Lake Arrowhead Fred Soroussian, CH2M Hill Addtl Authors: Ken Nelson, Bob Bobik, Lake Arrowhead Comm. Services Dist. and Qingshan Wang, CH2M Hill</td>
</tr>
<tr>
<td>2:40 - 3:30 PM</td>
<td>Producing Class A Biosolids from with a Solar Thermal Dryer David Bachtel, Lee &amp; Ro Addtl Author: Ruben Mireles, City of Brawley</td>
</tr>
<tr>
<td>2:40 - 3:30 PM</td>
<td>Automated Titration Method for Determining Volatile Acids and Alkalinity of Digested Biosolids Leslie A. Sidio City of Los Angeles</td>
</tr>
<tr>
<td>2:40 - 3:30 PM</td>
<td>A Review of Online Nutrient Analyzers for Process and Compliance Monitoring Aren Hansen Brown and Caldwell Addtl Author: Adam Scheuber Brown and Caldwell</td>
</tr>
<tr>
<td>2:40 - 3:30 PM</td>
<td>Electrical Arc Flash Safety for the Non-Electrician Wayne Ziemann Workplace Safety Specialists</td>
</tr>
</tbody>
</table>

### Presentation Title

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:40 - 4:30 PM</td>
<td>Force Main Condition Assessment is an Iterative Process Derek Wurst V&amp;A Consulting Engineers Addtl Author: Jose Villalobos, V&amp;A</td>
</tr>
<tr>
<td>3:40 - 4:30 PM</td>
<td>Accurate Costing and Budgeting for Disposal of Residual Biosolids Concurrent to Plant Upgrades or Retrofits Thomas Amaro JND Thomas Company, Inc.</td>
</tr>
<tr>
<td>3:40 - 4:30 PM</td>
<td>Reproduction Toxicity with Ceriodaphnia dubia: “False Positives” Due to Epibionts Stephen L. Clark Pacific EcoRisk Mitch Maidrand, Sacramento Regional County Sanitation Dist Addtl Authors: Dr. Richard Ogle and Alison Briden, Pacific EcoRisk</td>
</tr>
<tr>
<td>3:40 - 4:30 PM</td>
<td>Chemical Pump Troubleshooting Tim Berschauer CP Crowley</td>
</tr>
<tr>
<td>3:40 - 4:30 PM</td>
<td>Active Shooter John Chadwell, ehs International, Inc.</td>
</tr>
<tr>
<td>Supergroup</td>
<td>Public Education</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------</td>
</tr>
<tr>
<td>Asset Management</td>
<td>Maximum Impact for Minimal Investment</td>
</tr>
<tr>
<td>Dale Ducharme</td>
<td>Dianne Lee</td>
</tr>
<tr>
<td>Veolia Water West Operating Services, Inc.</td>
<td>West Yost Associates</td>
</tr>
</tbody>
</table>

**A View From Inside Vista Irrigation District’s Flume Conveyance System**
Derek Wurst
V&A Consulting Engineers

**Big City, Small Budget: Maximize Your Public Outreach With Minimal Resources**
Samantha Eshelman
City of Riverside Public Works Department

**Effect of Ozone Pretreatment on MF Optimization, NDMA Formation, CEC Removal and RO Performance**
Frederick W. Gerringer
Trussell Technologies; Rajen Budhi
West Basin MWD; Addtl Authors: Marc Serna, West Basin MWD; Teresa Venezia and Shane Trussell, Trussell Technologies

**Tale of Two Headworks: Improving Operations with an Identical Headworks Design**
Kimberly Wilson and Anne Kemkamp, CH2M Hill

**Sustainable Aeration Design – “Right-Sizing” Blowers and Aeration Systems to Facilitate Energy Efficient Operation of WWTFs**
Joe Rohrbacher
Hazen and Sawyer
Addtl Authors: Megan Yoo and Lynn Grijalva, Hazen and Sawyer; Diego Rosso, University of California, Irvine

### 1:40 - 2:30 PM

**A View From Inside Vista Irrigation District’s Flume Conveyance System**
Derek Wurst
V&A Consulting Engineers

**Big City, Small Budget: Maximize Your Public Outreach With Minimal Resources**
Samantha Eshelman
City of Riverside Public Works Department

**Effect of Ozone Pretreatment on MF Optimization, NDMA Formation, CEC Removal and RO Performance**
Frederick W. Gerringer
Trussell Technologies; Rajen Budhi
West Basin MWD; Addtl Authors: Marc Serna, West Basin MWD; Teresa Venezia and Shane Trussell, Trussell Technologies

**Tale of Two Headworks: Improving Operations with an Identical Headworks Design**
Kimberly Wilson and Anne Kemkamp, CH2M Hill

**Sustainable Aeration Design – “Right-Sizing” Blowers and Aeration Systems to Facilitate Energy Efficient Operation of WWTFs**
Joe Rohrbacher
Hazen and Sawyer
Addtl Authors: Megan Yoo and Lynn Grijalva, Hazen and Sawyer; Diego Rosso, University of California, Irvine

### 2:40 - 3:30 PM

**Achieving Regulatory Compliance and Cost Savings through Asset Management**
Jeff Kirshberg
Rancho California Water District

**Putting a Human Face on Government: Spotlighting Employees in Public Communications**
Faviola Ochoa Miranda
Orange County Sanitation District

**UV Disinfection and Landfill Leachate – a Troublesome Combination**
Morayo Noibi
Carollo Engineers; Addtl Authors: Andrew Salveson and Brian Matson, Carollo Engineers; Andrew Perez, Pierce County

**Influent Pump Station Expansion to 90 mgd on 60’ of Bay Mud in Napa**
Rob Natoli, HDR
Addtl Authors: Brad Leidecker, HDR; Jennifer Johnson, Napa Sanitation Dist.

**Enhancing Primary Sedimentation Basins**
Samantha Engelage and Clint Shima, Central Contra Costa Sanitary District; Addtl Author: Michael Penny, Central Contra Costa Sanitary District

**Energy Planning Considerations For San Jose/Santa Clara Water Pollution Control Plant**
Arvind Akela
CDM Smith Smith

### 3:40 - 4:30 PM

**Completion of Operations & Maintenance Strategy Business Initiative**
Helen Hu
Sacramento Regional County Sanitation Dist. Addtl Author: Glenn Bielefeld, Sacramento Regional County Sanitation Dist.

**Social Media and the Power of Engaging Your Audience**
Stephen Groner
S. Groner Associates

**What 2 Flush: The Three P’s—Pee, Poop and Paper**
Faviola Ochoa Miranda
Orange County Sanitation District

**UV Disinfection Challenges at Nevada County’s Lake Wildwood WWTP**
Kenneth K. Shuey
HydroScience Engineers

**The Approach and Value of a Science-Based UV Design – A Case Study in Monroe Washington**
Nitin Goel
Carollo Engineers

**Primary Effluent Filtration as an Intermediary Treatment Step**
Onder Caliskaner
Kennedy/Jenks Consultants; Addtl Authors: Dr. George Tchobanoglous, UC Davis

**New Hampshire DES Quantitative Assessment of Energy Use for Aeration in Lagoons & Equalization Basins**
David Summerfield
Medora Co. Addtl Author: Ken Hudnell, Medora Co.

**Energy Management Success Stories – What Can You Do?**
Zeynep Erdal
CH2M Hill Addtl Author: Tim Constantine, CH2M Hill
<table>
<thead>
<tr>
<th>Presentation Title</th>
<th>Session Title</th>
<th>Session Chair</th>
<th>CWEA Committee</th>
<th>Collection Systems</th>
<th>Laboratory Training</th>
<th>Safety</th>
<th>Supergroup</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Site-Specific PSRP-Equivalent Anaerobic Digestion Increases Capacity By 50%</td>
<td>No Presentation CONSIDER ATTENDING THE COLLECTION SYSTEM BREAKFAST MEETING 7:00 AM</td>
<td>Robert Potter, City of Los Angeles</td>
<td>Building a Better Maintenance Program</td>
<td>No Presentation CONSIDER ATTENDING THE LABORATORY COMMITTEE BREAKFAST MEETING 7:00 AM</td>
<td>Gina Cloutier, Victor Valley WRA</td>
<td>Marjorie Boone, ehs International, Inc.</td>
<td>Dale Ducharme, Veolia Water West Operating Services, Inc.</td>
</tr>
<tr>
<td>8:00 - 8:50 AM</td>
<td>9:00 - 9:50 AM</td>
<td>10:00 - 10:50 AM</td>
<td>11:00 - 11:50 AM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot Trial of Additive (BAE) to Improve Digester Performance &amp; Efficiency</td>
<td>Sewer Cleaning 101</td>
<td>Thomas Hintz, SeaHold, LLC; Greg Shreeve, City of Hayward</td>
<td>Collection Systems</td>
<td>Kenneth Billingham KEG GMBH/KEG Technologies, Ltd.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Napa’s FOG Receiving Facility: How to Increase Performance and Reduce Costs</td>
<td>Leveraging Maintenance and CCTV Data to Reduce SSOs</td>
<td>Ryan Hougham; HDR, Inc; Jennifer Johnson, Napa Sanitation District</td>
<td>Laboratory Training</td>
<td>Michael Flores, RMC Water and Environment; Curt Swanson, Central Contra Costa Sanitary District</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00 - 9:50 AM</td>
<td>10:00 - 10:50 AM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confinement Space – Level 1 OSHA Updates: For Authorized Entry and Attendants</td>
<td>Safety In A Changing Workplace</td>
<td>Todd Guenther RuSafe2 Training and Compliance</td>
<td>Laboratory Training</td>
<td>Ron Sciarro Workplace Safety Specialists</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00 - 11:50 AM</td>
<td>12:00 - 12:50 AM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Large-Scale FOG and Food Waste Facility at Hyperion Treatment Plant to Optimize Renewable Energy</td>
<td>Quality Assurance in Collection System Maintenance</td>
<td>Michael Sarullo, City of Los Angeles</td>
<td>Biosolids</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 - 12:50 AM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00 - 1:50 PM</td>
<td>2:00 - 2:50 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sale of Surplus Renewable Energy Generated at a Treatment Plant</td>
<td>Harnessing the Power of GIS to Increase Service Charge Revenue</td>
<td>John Hake East Bay MUD</td>
<td></td>
<td>Wendy Waudby LA County Sanitation Districts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Session Title</td>
<td>Speakers</td>
<td>Authors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00 - 8:50 AM</td>
<td><strong>Cutting Edge Technology</strong></td>
<td><strong>Operator &amp; Maintenance Training</strong></td>
<td><strong>Engineering &amp; Research</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Game Changers – Wastewater as a Resource</em></td>
<td>Jeff Moeller</td>
<td>Brian Peck South Orange County Water Authority</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Going Big – Pushing the Envelope of O&amp;M</em></td>
<td>Donald Hurdle Southern California Edison</td>
<td>Brian Peck South Orange County Water Authority</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Lessons Learned from the Sacramento Regional County Sanitation District Expansion Project</em></td>
<td>Brian Peck South Orange County Water Authority</td>
<td>Brian Peck South Orange County Water Authority</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00 - 9:50 AM</td>
<td><strong>Microbial Fuel Cells For The Treatment Of Sludge</strong></td>
<td>Greg Ryan Pasteurization Technology Group</td>
<td>Rion Merlo Brown and Caldwell</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>No Presentation</em></td>
<td><strong>Demonstrating Title 22 Equivalency to Save Money</strong></td>
<td><strong>The Journey Towards Maintenance Excellence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Consider Attending</em>*</td>
<td>Kurt Ohlinger SRCSD</td>
<td>Francis Concernino Inland Empire Utilities Agency Addtl Author: Ernest Yeboah IEUA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>The OPERATIONS AND MAINTENANCE BREAKFAST MEETING 7:00 AM</em></td>
<td>Kurt Ohlinger SRCSD</td>
<td>Brown &amp; Caldwell</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Meeting Stringent Nitrogen Limits with a Biological Nutrient Removal Process in the Central Valley</em></td>
<td>Rion Merlo Brown and Caldwell</td>
<td>Steve Ramberg SRCSD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Designing and Building a 0.25-mgd Pilot – A 10-Month Success Story</em></td>
<td>William Yu SRCSD</td>
<td>Tom Mongee Brown &amp; Caldwell</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Extended Air Activated Sludge N/DN Plant Producing Class A Biosolids in Brawley, CA</em></td>
<td>David Bachtel Lee &amp; Ro</td>
<td>Vince Faraone Lee &amp; Ro</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Operator's Guide to Big Projects</em></td>
<td>Ray Busch City of San Leandro; Zaheer Shaikh Carollo Engineers</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Advanced Oxidation Using Ozone – Pros and Cons</em></td>
<td>Mitch Maidrand SRCSD</td>
<td>Ying Sun Bonnie Jones Yuri Levitin San Francisco PUC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Trace Organic Chemical Removal in an Advanced Treatment Pilot Plant</em></td>
<td>Kurt Ohlinger SRCSD</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>O&amp;M Considerations for an Advanced Treatment Plant – Lessons Learned at Pilot Scale</em></td>
<td>Mitch Maidrand SRCSD</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Design Challenges and Approach to Converting an Oxidation Ditch to an MLE Process</em></td>
<td>Fred Bhakoo City of Fortuna; Russell M. Adams Consulting Sanitary Engineer</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>StormBLOX®: A New Physical-Chemical Treatment Producing Recycled Water Without Biological Treatment</strong></td>
<td>Jeff Moeller WERF</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Innovative Process Avoids Major Capital Expense</em></td>
<td>Hank Brenard City of Fortuna; Russel M. Adams Consulting Sanitary Engineer</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Designing an Aeration System Using Ozone – Pros and Cons</em></td>
<td>Mitch Maidrand SRCSD</td>
<td>Ying Sun Bonnie Jones Yuri Levitin San Francisco PUC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Trace Organic Chemical Removal in an Advanced Treatment Pilot Plant</em></td>
<td>Kurt Ohlinger SRCSD</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>O&amp;M Considerations for an Advanced Treatment Plant – Lessons Learned at Pilot Scale</em></td>
<td>Mitch Maidrand SRCSD</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00 - 10:50 AM</td>
<td><strong>Decentralizing Wastewater Treatment and Reuse: SFUC Headquarters Leads to Cutting Edge Institutional Change</strong></td>
<td>Sarah Rhodes and John Scarpulla San Francisco PUC Addtl Author: Paula Kehoe, SFUC</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Operator’s Guide to Big Projects</em></td>
<td>Ray Busch City of San Leandro; Zaheer Shaikh Carollo Engineers</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Advanced Oxidation Using Ozone – Pros and Cons</em></td>
<td>Mitch Maidrand SRCSD</td>
<td>Ying Sun Bonnie Jones Yuri Levitin San Francisco PUC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Trace Organic Chemical Removal in an Advanced Treatment Pilot Plant</em></td>
<td>Kurt Ohlinger SRCSD</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>O&amp;M Considerations for an Advanced Treatment Plant – Lessons Learned at Pilot Scale</em></td>
<td>Mitch Maidrand SRCSD</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Design Challenges and Approach to Converting an Oxidation Ditch to an MLE Process</em></td>
<td>Fred Bhakoo City of Fortuna; Russell M. Adams Consulting Sanitary Engineer</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00 - 11:50 AM</td>
<td><strong>StormBLOX®: A New Physical-Chemical Treatment Producing Recycled Water Without Biological Treatment</strong></td>
<td>Jeff Moeller WERF</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Innovative Process Avoids Major Capital Expense</em></td>
<td>Hank Brenard City of Fortuna; Russel M. Adams Consulting Sanitary Engineer</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Designing an Aeration System Using Ozone – Pros and Cons</em></td>
<td>Mitch Maidrand SRCSD</td>
<td>Ying Sun Bonnie Jones Yuri Levitin San Francisco PUC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Trace Organic Chemical Removal in an Advanced Treatment Pilot Plant</em></td>
<td>Kurt Ohlinger SRCSD</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>O&amp;M Considerations for an Advanced Treatment Plant – Lessons Learned at Pilot Scale</em></td>
<td>Mitch Maidrand SRCSD</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>StormBLOX®: A New Physical-Chemical Treatment Producing Recycled Water Without Biological Treatment</em>*</td>
<td>Jeff Moeller WERF</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Innovative Process Avoids Major Capital Expense</em></td>
<td>Hank Brenard City of Fortuna; Russel M. Adams Consulting Sanitary Engineer</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Designing an Aeration System Using Ozone – Pros and Cons</em></td>
<td>Mitch Maidrand SRCSD</td>
<td>Ying Sun Bonnie Jones Yuri Levitin San Francisco PUC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Trace Organic Chemical Removal in an Advanced Treatment Pilot Plant</em></td>
<td>Kurt Ohlinger SRCSD</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>O&amp;M Considerations for an Advanced Treatment Plant – Lessons Learned at Pilot Scale</em></td>
<td>Mitch Maidrand SRCSD</td>
<td>Stuart Humphries, EnviroMix LLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presentation Title</td>
<td>Session Title</td>
<td>Session Chair</td>
<td>CWEA Committee</td>
<td>Government Affairs</td>
<td>Collection Systems</td>
<td>Cutting Edge Technology</td>
<td>P3S</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>----------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>----------------------</td>
<td>-----</td>
</tr>
<tr>
<td><strong>THURSDAY AFTERNOON</strong></td>
<td>Regulatory Hurdle Potpourri</td>
<td>Lisa Haney OCSD</td>
<td>CWEA Committee</td>
<td>Government Affairs</td>
<td>Collection Systems</td>
<td>Cutting Edge Technology</td>
<td>P3S</td>
</tr>
<tr>
<td><strong>Presentation Title</strong></td>
<td>Building a Better Maintenance Program</td>
<td>Robert Potter City of Los Angeles</td>
<td>Jeff Moeller WERF</td>
<td>Preeti Ghuman LA County Sanitation District</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improving the Regulatory and Environmental Challenges for Rehabilitating OCSD’s Main Ocean Outfall</td>
<td>Pam Koester Orange County Sanitation District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prioritizing Sewer Rehabilitation Projects in a Limited Capital Improvement Budget</td>
<td>Fernando Villaluna, County of Los Angeles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Meeting the Regulatory and Environmental Challenges for Rehabilitating OCSD’s Main Ocean Outfall</td>
<td>Pam Koester Orange County Sanitation District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What is the NNE Process and How It Might Impact My Next Permit</td>
<td>Mike Falk HDR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Start Up of An Industrial Wastewater Treatment Plant-Challenges and Lessons Learned</td>
<td>Madan Arora Parsons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improving the Regulatory and Environmental Challenges for Rehabilitating OCSD’s Main Ocean Outfall</td>
<td>Pam Koester Orange County Sanitation District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prioritizing Sewer Rehabilitation Projects in a Limited Capital Improvement Budget</td>
<td>Fernando Villaluna, County of Los Angeles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Meeting the Regulatory and Environmental Challenges for Rehabilitating OCSD’s Main Ocean Outfall</td>
<td>Pam Koester Orange County Sanitation District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What is the NNE Process and How It Might Impact My Next Permit</td>
<td>Mike Falk HDR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Start Up of An Industrial Wastewater Treatment Plant-Challenges and Lessons Learned</td>
<td>Madan Arora Parsons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Presentation Title</strong></td>
<td>Hardness Selection Criteria for CTR Metals Criteria Calculation</td>
<td>James Schofield and Rich Czapkay Union Sanitary District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Managing and Prioritizing the Workload” (No Workorder Left Behind)</td>
<td>James Schofield, Central Valley Regional Water Quality Control Board</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The New Wastewater Collection System Challenges Caused by Modern Trash</td>
<td>Bob Domkowski, Xylem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identifying and Quantifying Private Sanitary Sewer Lateral Infiltration</td>
<td>Mark Grabowski Electro Scan, Inc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Preparing Incoming Environmental Compliance Inspectors</td>
<td>Jason Finn LA County Sanitation Districts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resolution Of Regulatory Cross Media Jurisdictional Issues For Acceptance Of Hauled In Organic Waste For Digestion at POTWs</td>
<td>Michael Flores RMC Water and Environment; Lewis Harrison San Francisco PUC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Determining Whether Localized Pipe Repair or Full-Scale Pipe Renewal Is the Best Option</td>
<td>Michael Flores RMC Water and Environment; Lewis Harrison San Francisco PUC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Easements are Easy – Using Remote Real-Time Monitoring to Reduce Spills, Save Time and Reduce Risk</td>
<td>Leo Schemp, Hadronex; Jeff Stecker, Leucadia Wastewater District</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FOG Control Program: From 0 to 60 in One Year</td>
<td>Delia McGrath, City of Sacramento</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Optimization of Anaerobic Wastewater Treatment at Sierra Nevada Brewing Co.</td>
<td>Adam Shy, Sierra Nevada Brewing Company</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Thursday Afternoon

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Solids Process Management</td>
<td>Todd Jordan, Carollo</td>
</tr>
<tr>
<td></td>
<td>Digester Gas Use and Management</td>
<td>Todd Jordan, Carollo</td>
</tr>
<tr>
<td></td>
<td>Solids Handling</td>
<td>Brian Peck, South Orange County Water Authority</td>
</tr>
<tr>
<td></td>
<td>Membrane Treatment</td>
<td>Brian Peck, South Orange County Water Authority</td>
</tr>
<tr>
<td>2:40 - 3:30 PM</td>
<td>Teamwork: The Operators Greatest Tool</td>
<td>Keon D. Nelson, City of Garden Grove</td>
</tr>
<tr>
<td></td>
<td>Efficient Low Energy Mixing In Anaerobic Digestion Tanks Utilizing Linear Motion</td>
<td>James Goldhardt, Ovivo USA, LLC</td>
</tr>
<tr>
<td></td>
<td>Biosolids Management Practices - Beginning with the End in Mind</td>
<td>Jennifer Shore, HDR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addtl Authors: Michael Falk and Michael Moore, HDR</td>
</tr>
<tr>
<td></td>
<td>1400 kW Digester Gas Fuel Cell At City Of San Jose WWTP Without City Money</td>
<td>Sarwan Wason, Tom Mossier, Carollo Engineers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addtl Author: Nick Fontaine, UTS Bioenergy, Amit Mutsuddy, City of San Jose</td>
</tr>
<tr>
<td></td>
<td>Pilot Study of Anaerobic Digestion of Food Waste With Sludge to Generate Renewable Energy</td>
<td>Manisha S. Berde, City and County of San Francisco</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addtl Author: Domenec Jolis, City and County of San Francisco</td>
</tr>
<tr>
<td></td>
<td>The Impact Of Long Sludge Age on Dewatering From Extended Aeration and Aerobic Digestion</td>
<td>Zheng “Jerry” Teng, Provost and Pritchard Consulting Group</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addtl Author: Ken Moore, Doug Hearld, City of Kerman</td>
</tr>
<tr>
<td>3:40 - 4:30 PM</td>
<td>How Focused Teambuilding Can Make Your Agency High Performing</td>
<td>Roland P. Williams, Jr., Castro Valley Sanitation Dist.</td>
</tr>
<tr>
<td></td>
<td>Solids Handling Systems Odor Control - Trends in California</td>
<td>David McCaw, Brown and Caldwell</td>
</tr>
<tr>
<td></td>
<td>Digester Gas Fuel Cells – Lessons Learned After 5 Years</td>
<td>Steven Delight, Dublin San Ramon Services District</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thinking Inside the Box: Containerized Combined Heat and Power Equipment</td>
</tr>
<tr>
<td></td>
<td>Removing Hydrogen Sulfide from Digester Gas Using Biotrickling Filters</td>
<td>Andy Lee, LACSD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addtl Authors: Robert Morton, Chi-Chung Tang &amp; Phil Friess, LACSD</td>
</tr>
<tr>
<td></td>
<td>Fully Automated, Optimized Centrifuge Dewatering at Small WWTP</td>
<td>David Bachtel, Lee &amp; Ro</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addtl Authors: Ruben Mireles and Andrew Escobar, City of Brawley;</td>
</tr>
<tr>
<td></td>
<td>Product Recovery Enhancement with Waste Minimization for the Expansion of the Leo J. Vander Lans Water Treatment Facility</td>
<td>Thomas Martin and Dr. Paul Fu, PhD., Water Replenishment District of Southern California</td>
</tr>
<tr>
<td>3:40 - 3:30 PM</td>
<td>Effective Coaching and Discipline</td>
<td>Mark Chamberlin, Eastern Municipal Water Dist.</td>
</tr>
<tr>
<td></td>
<td>Case Studies of Theoretical &amp; Practical Evaluation of Struvite Control and Recovery</td>
<td>Paul Pitt, Hazen and Sawyer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addtl Author: Enrique Vadiveloo, Hazen and Sawyer</td>
</tr>
<tr>
<td></td>
<td>Riding the Digester Gas Roller Coaster</td>
<td>Jason Wiser, Brown and Caldwell</td>
</tr>
<tr>
<td></td>
<td>Float It or Sink It? Comparison of DAF versus Floculating Clarifiers to Remove Oxidation Pond Effluent Solids</td>
<td>Dan Frost, Carollo Engineers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addtl Authors: Rick Chan, Carollo Engineers, Andrew Damron &amp; Shar Maglione, Napa Sanitation District</td>
</tr>
<tr>
<td></td>
<td>Turn Your Plant Into a Sidestream Green Machine!</td>
<td>Tye R. Jordan, HDR</td>
</tr>
<tr>
<td></td>
<td>Dawn over secondary clarifiers at the LACSD's Joint Water Pollution Control Plant in Carson. Credit: Dan Gary, LACSD</td>
<td>Dawn over secondary clarifiers at the LACSD's Joint Water Pollution Control Plant in Carson. Credit: Dan Gary, LACSD</td>
</tr>
<tr>
<td>3:40 - 3:30 PM</td>
<td>Pilot-Scale Testing of an Alternative High-Pressure Membrane Treatment System</td>
<td>Bruce Mansell, LACSD</td>
</tr>
<tr>
<td></td>
<td>Preventing Biofilm in RO: Electrically Conducting Thin Film Polyamide-Carbon Nanotubes</td>
<td>David Jassby, UC Riverside</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Addtl Authors: Mark Wiesner and Charles-Francois de Lannoy, Duke University</td>
</tr>
</tbody>
</table>
## FRIDAY MORNING

<table>
<thead>
<tr>
<th>CWEA Committee</th>
<th>Collection Systems</th>
<th>Students &amp; Young Professionals</th>
<th>Government Affairs</th>
<th>Operations &amp; Maintenance</th>
<th>Cutting Edge Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session Title</strong></td>
<td><strong>Building a Better Maintenance Program</strong></td>
<td><strong>Student Papers</strong></td>
<td><strong>Regulatory Hurdle Potpourri II</strong></td>
<td><strong>Maintaining the Legacy of Effective O&amp;M</strong></td>
<td><strong>Reinventing WWTPs – From Headworks to Biosolids</strong></td>
</tr>
<tr>
<td><strong>Session Chair</strong></td>
<td>Robert Potter</td>
<td>Amanda Schmidt</td>
<td>Lisa Haney</td>
<td>Donald Hurdle</td>
<td>John Jardin</td>
</tr>
<tr>
<td><strong>City of Los Angeles</strong></td>
<td>AECOM</td>
<td>OCSD</td>
<td>Southern California Edison</td>
<td>Encina Wastewater Authority</td>
<td></td>
</tr>
</tbody>
</table>

### 8:00–8:50 AM

**Presentation Title**

- Effectiveness of Air Jumpers for Airflow Conveyance
  - Shahriar Eftekhazadeh, HDR
  - Addtl Authors: Marco Polo Velasco, OCSD, Mandira Sudame & Kai-te Wang, HDR

- No Presentation
  - CONSIDER ATTENDING THE SYP COMMITTEE BREAKFAST MEETING 7:00 AM.

- No Presentation
  - CONSIDER ATTENDING THE GOVT AFFAIRS BREAKFAST MEETING 7:00 AM.

- Training the Next Generation of Operators - A Look Into Sacramento Regional's Operator Training Program
  - Darrin Carter and Glenn Bielefeld
  - Sacramento Regional County Sanitation District

### 9:00–9:50 AM

**Presentation Title**

- The Backbone of Your Collection System: Large Diameter Pipe Inspection & Cleaning
  - Jimmy Stewart
  - Brenford Environmental Systems

- Modelling the San Dimas Watershed for Research and Outreach Purposes
  - Patricia Hsia and Shannon Smith, Cal Poly Pomona
  - Addtl Author: Dr. Seema C. Shah-Fairbank Ph.D., Cal Poly Pomona

- Application of Hydraulic Models to Examine Yosemite's Drinking Water System
  - Natalie Muradian, University of the Pacific
  - Addtl Author: Garrett Chun, National Park Service

- Tri-TAC, Land, Air and Water Updates
  - Tom Meregillano
  - Lisa Rothbart, OCSD
  - Addtl Author: Harmonie A. Hawley, Cal State Fullerton

- Operations of the Future: Operators with Higher Skills, in Higher Demand
  - Hugh Logan
  - Logan Services

### 10:00–10:50 AM

**Presentation Title**

- Odor & Corrosion Control in Collection Systems with No Recurring Expense
  - Jay Boyd
  - Anue Water Technologies

- Evaluation of Egg Waste and Grape Pomace for Co-Digestion
  - Jeremy Domen and Matthew Ebia, University of Pacific
  - Addtl Authors: William T. Stringfellow and Mary Kay Camarillo, University of Pacific

- Photovoltaic-Powered Electrolysis Cell (PWECl) for Sustainable On-site Treatment
  - Kangwoo Cho, Caltech
  - Addtl Author: Michael Hoffmann, Caltech

- Revised Monitoring and Reporting Requirements
  - Victor Lopez
  - SWRCB

- Developing and Implementing a Strategy for Sustainable Operator Training
  - Eric Coates
  - McKissack & McKissack

- Sludge Reed Beds: An Innovative, “Green” and Cost Effective Solution to Biosolids Management
  - Scott Davis
  - Constructed Wetland Group, Inc.

### 11:00–11:50 AM

**Presentation Title**

- Application of Risk Reduction Techniques to Optimize Sewer Monitoring Systems
  - Cari Dale
  - City of Oceanside
  - Addtl Authors: Keith Lewinger, Advisor to City of Oceanside

- Summer Estuary Monitoring for SoCal Stormwater Management
  - Colby Condor, Cal State Fullerton
  - Addtl Author: Harmonie A. Hawley, Cal State Fullerton

- Air/Gas Pockets in Sewer Force Mains: A Case Study
  - Kirstin Byrne, Cal State Long Beach
  - Addtl Author: Antonella Sciortino, Ph.D., Cal State Long Beach
  - William Cassidy, OCSD

- Status of Efforts to Contest NPDES Permit Requirements for Nutrient Removal & Tertiary Filtration
  - John N. Gallegos
  - Sacramento Regional County Sanitation Dist.

- State Proposed Nutrient Policy
  - Mitch Myśliwiec
  - Larry Walker & Associates

- Maintaining Teamwork with Operations and Engineering in Solving Complex Challenges
  - J. Mark Reynolds
  - CDM Smith

- Water-Innovation: Understanding Innovation Companies and Developing a Successful Partnership
  - Soma Bhadra
  - PROTEUS Consulting
  - Kevin Hardy
  - Encina Water Authority
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 - 8:50 AM</td>
<td>Evaluation of Commercially Available Industrial Stormwater Treatment Technologies George Caamano, Stormwater Online, Inc.</td>
</tr>
<tr>
<td>9:00 - 9:50 AM</td>
<td>Hidden Treasure of Garvanza – Facility to Capture, Treat, Infiltrate, and Use Stormwater Vik Bapna, CWE</td>
</tr>
<tr>
<td>10:00 - 10:50 AM</td>
<td>Machado Lake Nutrient TMID Source Identification Study – Overcoming Costly Monitoring Requirements Jason Pereira, CWE</td>
</tr>
<tr>
<td>11:00 - 11:50 AM</td>
<td>Construction Site Compliance: How QSDS and QSPS Can Work Together Melanie Soteilo and Michael O’Hear, AEI-CASC Consulting</td>
</tr>
</tbody>
</table>
### FRIDAY AFTERNOON

<table>
<thead>
<tr>
<th>CWEA Committee</th>
<th>Collection Systems</th>
<th>P3S</th>
<th>Supergroup</th>
<th>Cutting Edge Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session Title</strong></td>
<td><strong>Building a Better Maintenance Program</strong></td>
<td><strong>Stormwater</strong></td>
<td><strong>Professional &amp; Personal Growth</strong></td>
<td><strong>Reinventing Onsite Systems - Award Winning Breakthroughs</strong></td>
</tr>
<tr>
<td><strong>Session Chair</strong></td>
<td>Robert Potter</td>
<td>Preeti Ghuman</td>
<td>Dale Ducharme, Veolia Water West Operating Services, Inc.</td>
<td>John Jardin Encina Wastewater Authority</td>
</tr>
<tr>
<td><strong>Presentation Title</strong></td>
<td><strong>Is There a Silver Bullet to Reduce SSOs?</strong></td>
<td><strong>Los Angeles County MS4 Permit Hydromodification Analysis and Management Tools</strong></td>
<td><strong>How to Buy More Time Without Selling Your Soul: Time Management Skills to Build Success!</strong></td>
<td><strong>The Living Machine Tidal Flow Wetland®: Game-Changing Treatment and Reuse Technology</strong></td>
</tr>
<tr>
<td><strong>Presentation Chair</strong></td>
<td>Sergio Ramirez West Bay Sanitary District</td>
<td>Bennington Willardson, PhD. City of Santa Clarita</td>
<td>Megan Yoo, Hazen and Sawyer; Denis Pollak, V&amp;A Consulting Engineers; Nick Arhontes, Orange County Sanitation District</td>
<td>Les Behrends, PhD and Eric Lohan, Living Machine Systems</td>
</tr>
<tr>
<td><strong>Presentation Time</strong></td>
<td>1:40 - 2:30 PM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Presentation Title</strong></td>
<td><strong>How Seamless is Seamless? Collection System GIS Database Development for Hydraulic Modeling</strong></td>
<td><strong>John Wayne Airport – As the Duke Would Say “Tomorrow Hopes We Have Learned Something From Yesterday”</strong></td>
<td><strong>The Role of the Community Colleges in Building the Next Generation of Water/Wastewater Industry Professionals</strong></td>
<td><strong>WEF Innovative Technology Award Winning Packed-Bed Wastewater Treatment Technology</strong></td>
</tr>
<tr>
<td><strong>Presentation Chair</strong></td>
<td>Tim Loper and Debra Dunn, Carollo Engineers</td>
<td>Maria Pope, County of Orange, John Wayne Airport Jason Pereina, CWE</td>
<td>Don Jones California:WaterWorks Grant - Cuyamaca College</td>
<td>Mark Gross, Orenco Systems, Inc; Steven Brabands, Biosolutions, Inc.</td>
</tr>
<tr>
<td><strong>Presentation Time</strong></td>
<td>2:50 - 3:40 PM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# FRIDAY AFTERNOON

<table>
<thead>
<tr>
<th>Operations &amp; Maintenance</th>
<th>Engineering &amp; Research</th>
<th>Engineering &amp; Research</th>
<th>Engineering &amp; Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Frontiers in BNR Operation</strong></td>
<td><strong>Focus on Flows</strong></td>
<td><strong>Sustainable Facility Design</strong></td>
<td><strong>Innovations in Facility Engineering</strong></td>
</tr>
<tr>
<td>Donald Hurdle</td>
<td>Brian Peck, South Orange County Water Authority</td>
<td>Brian Peck, South Orange County Water Authority</td>
<td>Brian Peck, South Orange County Water Authority</td>
</tr>
</tbody>
</table>

| **BNR Operation at the Outer Limits of Technology** | **Where Does the Flow Go? The Use of CFD to Save Time, Cost, and Concrete** | **Collection System Operations Department Administration, Crew and Warehouse Facility** | **The City of Los Angeles’ First Design-Build Wastewater Project Produces Innovation and Significant Cost Savings** |
| Ronald Sheets | Jennifer Shore | Paul Seitz and Edgar Lopez, Central Contra Costa Sanitary District | Al Bazzi City of Los Angeles |
| Ojai Valley Sanitary District | HDR | Addtl Author: Jennifer Geimini MWH | Addtl Authors: Slavica Dedovic-Hammond, MWH; Michael Sarullo, City of Los Angeles; Mike Fenley, Brutoco Engineering |
| Addtl Author: Roger Stephenson MWH | Addtl Author: Hany Gerges HDR | | |
| | | Philip Brandhuber HDR | Electrical and SCADA System Lessons Learned From A Multi-Year, Staged MBR WWTP Construction Project |
| | | Addtl Author: Jennifer Geimini MWH | David Bloxom, Tetra Tech, Inc. |

| **Fine-tuning Your BNR Removal System without the Use of an External Carbon Source** | **A More Sustainable and Reliable High Cycles Approach to Cooling Tower Water Savings** | **Onsite Reuse Decision Support Tool: The Emergence of Water Reuse Projects in New Developments for LEED Credits and Related Sustainability Goals** | **Optimized Design and Modeling of Granular Medium Filtration Systems** |
| John N. Gallegos and Greg Thomas CDM Smith Smith | Matthew McMullen Nalco Company | Anni Luck Hazen and Sawyer | Onder Caliskaner, Kennedy/Jenks Consultants |
| | | Addtl Authors: Yanjin Liu, American Water; Paul Knowles, Natural Systems Utilities; Benjamin Stanford, Hazen and Sawyer | Addtl Author: Dr. George Tchobanoglous, UC Davis |

---

**CWEA Tip**

Share your expertise with other wastewater professionals – submit your presentation proposal for AC-14 in Santa Clara.

Submit your abstract proposal at www.cwea.org/conferences It’s so easy!

---

*Central Contra Costa Sanitary District Collection System Operations Department Administration, Crew and Warehouse Facility. Photo credit: CH&D Architects*
Registration Instructions

To ensure accuracy, please photocopy the Registration Form for each attendee registering if you are submitting multiple attendee registrations. Read all instructions prior to filling out the Registration Form and all other necessary forms. Discrepancies may result in delays when you pick up your registration materials at the Conference. All conference attendees, including speakers, are required to register.

Early Bird Registration

Early Bird registration means you will pay reduced conference registration rates, and your entire registration package will be prepared and ready for you to pick up when you arrive at the Icebreaker Reception or the Conference Registration Desk at the Convention Center. You will avoid the wait time that is necessary for all on-site registrations, and you or your employer will save money! Early Bird registration must be accompanied with the appropriate fee in order to be processed.

Icebreaker Reception

In addition to picking up your packet at the Main Registration Desk at the Palm Springs Convention Center, registration packets may also be picked up at the Icebreaker Reception on Tuesday after 6:00 PM at the Renaissance Pool Deck.

Online Registration

Conference attendees can also register online by visiting CWEA's secure website at: www.cwea.org/conferences. This registration process requires a credit card payment and member ID.

Member-Discounted Rates

You must include your current, valid membership number to receive member-discounted rate. All membership numbers will be verified. Only CWEA, WEF, or CA-NV AWWA membership qualifies for member-discounted rate. The additional cost of the Regular Registration rate will be applied toward one year of CWEA membership.

Retired Members

Retired Members are eligible for a special registration rate of $250. CWEA Bylaws state a retired member is any person retired from and not currently affiliated professionally or technically with the field.

Student Members

Full-time students are eligible for free registration. This special registration rate does not include meals, which can be purchased separately. Students must provide proof of full-time status (9 or more units per semester) to receive this special registration rate.

Exhibits Only Pass

Special passes are available for those wishing to tour the exhibit hall exclusively at a rate of $150 for the full conference expo or $85 for one day at the expo. Fill out and submit the registration form, selecting either Full Conference “Exhibits Only” or One-Day “Exhibits Only,” with your payment and pick up your pass at the registration desk.

Spouse/Guest Registration

The Spouse/Guest Registration includes: participation in the Icebreaker Reception on Tuesday night, entrance into the Exhibit Hall on both days, a drink ticket for each of the Exhibit Hall receptions, Thursday lunch in the Exhibit Hall, and Friday’s Sweet Treats Social. You must be registered for the conference as an attendee to earn contact hours. Spouses/Guests are not eligible for contact hours.

Pre-Conference Workshops

Cost includes lunch for all workshops. Registration and workshops will be in the Palm Springs Convention Center.

Exhibitor Registration

Exhibitors are encouraged to participate in social events. Exhibitors must register spouses and/or guests. All exhibitor meals and spouse/guest meals must be paid for on the conference registration form.

Exhibitor registration will be handled through the CWEA office. Please pick up your company’s packet at the Icebreaker Reception on Tuesday evening at the Renaissance Pool Deck after 6:00 PM or on Wednesday morning at the Registration Desk. Exhibitors are assigned booth spaces in the order of receipt of paid registration.

Golf and Sludge Trudge 5K Registrations

Competitive activities registration forms are included in the conference brochure as well as a description of each event. The appropriate form for the activity must be included with your registration form. If you are registering for these by personal check, the registration is paid by your agency, please enclose all forms and payments together. This will allow us to better coordinate all of your activities and process a complete registration packet for you. See the following registration pages for the Golf Tournament details and Sludge Trudge 5K details.

Conference Meals

Please indicate which conference meals you and your spouse/guest will be attending by checking the appropriate box. Note the number attending plus the cost in the space provided.

Hotel Registration

To book your hotel rooms, please go to www.cwea.org/conferences and click on “Book Rooms” under AC-13 to secure your rooms for the CWEA 2013 Annual Conference or turn to page 39 for the housing reservation form.

Operations Challenge Registration

Use the registration form included in this brochure to sign up your team. Pay the team fee in addition to each participant’s conference registration. If participants are sending separate conference registration, make sure the Operations Challenge fee and form are sent with the team captain’s registration.

Registration Hours

The Registration Desk will be located at the Palm Springs Convention Center. Registration hours are as follows:

Tuesday, April 16:
Workshop Registration Only 7:00 AM – 1:00 PM - Palm Springs C.C.
Icebreaker Reception 6:00 – 8:00 PM - Renaissance Pool Deck

Wednesday & Thursday, April 17-18:
7:00 AM – 5:00 PM - Palm Springs C.C.

Friday, April 19:
7:00 AM – 12:00 PM - Palm Springs C.C.
Registration Payment
Check or money order payable to: CWEA 2013 Annual Conference. Credit card payments are also accepted using the enclosed registration form or through CWEA’s secure website (www.cwea.org/conferences). Early Bird registration MUST be postmarked by March 18, 2013. Those who submit payments with an Early Bird registration fee after March 18th will be billed for the difference.

All fees for conference registration shall be paid in full at the time of Early Bird registration or on-site registration. Full payment may be made by credit card, personal check or agency/check. Purchase orders are also acceptable. Registrations received by CWEA without full payment or purchase order will not be processed.
You must be registered for the conference as an attendee to receive contact hours. Guests/spouses and exhibits only registrations are not eligible for contact hours.

Registration Questions
Registration questions may be referred to CWEA’s office at (510) 382-7800, x107.

Important Hotel Info
CWEA has negotiated discounted hotel rates for CWEA attendees. You must make your hotel reservation through Orchid Event Solutions. A link is available online at www.cwea.org/conferences

Hotel reservations are taken on a first-come, first-served, space available basis. Submit your request as soon as possible for the best opportunity of receiving your hotel choice. The Coachella Music Festival is April 19-21 so rooms will sell out quickly.

Deadline
All reservations must be received by March 26, 2013, to guarantee availability and conference rates. After this date, reservations will be made based on availability and hotels may charge higher rates.

Deposit
All reservation requests must be accompanied by a credit card guarantee or check equaling the amount of one night’s room and tax for each room reserved.

Acknowledgments
Orchid Event Solutions will send reservation acknowledgements within 24 hours via email if booked online or by telephone; fax and mail acknowledgements will be sent within 72 hours of receipt. If you do not receive your acknowledgement in this time frame, contact Orchid Event Solutions.

Cancellations/Changes/Refunds
No-shows or cancellations within 72 hours of arrival date will be charged the first night’s room rate and tax.

Through April 10, 2013 send requests for changes and cancellations in writing to Orchid Event Solutions via e-mail help@orchideventssolutions.com or fax to 801-355-0250. After April 10, 2013, contact hotels directly to make changes and cancellations.

Questions or Special Requests?
For questions or special requests, please contact Orchid Event Solutions at (855) 285-4791 between 7:00 a.m. and 6:00 p.m. Mountain Standard Time, Monday through Friday or e-mail to help@orchideventssolutions.com. Special requests are not guaranteed. Hotels will assign specific room types upon check-in, based on availability.

Hospitality Suites
While CWEA welcomes “Hospitality Occasions” provided for our members, they must not open until after all regularly scheduled conference events or exhibits have closed. Hospitality suites are available. All hospitality events (both on-site and off-site) must be arranged/approved through the Conference Chairs, Connie Leonard and Gina Cloutier. Please send an e-mail request to gcloutier@vwra.com indicating hosting organization, details of proposed event, preferred evening (Wednesday or Thursday), and coordinator’s name and contact information.

Refund Policy
Written cancellation notice is required and must be received at least 30 days prior to the conference date. A 25% service fee shall be retained on all cancellations. No refunds shall be given for cancellations made less than 30 days prior to the conference.

Hotel Suites
If you are interested in booking a hotel suite, please email help@orchideventssolutions.com. There are a limited number available at a discounted rate for CWEA attendees.

Important Housing Message
Don’t fall for the housing scam phone calls - use the enclosed hotel form. Orchid Event Solutions is CWEA’s official Housing Company, and is coordinating AC-13 hotel reservations. When you book your room with Orchid Event Solutions you will receive the following benefits:

• Immediate email acknowledgement of your hotel assignment;
• Entitled to receive reduced and discounted rates at official meeting hotels;
• Free access to the internet in your guest room;
• Complimentary shuttle service from hotels to the Convention Center;
• Protection in the event the hotel has oversold guest rooms;
• And much more!

When rooms are booked at hotels that are NOT within our official hotel block and/or you do not use Orchid Event Solutions:

• CWEA is exposed to penalties for not fulfilling our room block commitments;
• CWEA risks our ability to rebook preferred meeting hotels and receive reduced rates;
• CWEA could possibly lose qualification for the amount of space needed at the convention center.

Help make this meeting a success. Book early and with Orchid Event Solutions!
“Your experience at AC-13 will help you navigate the volatility, uncertainty, complexity, and ambiguity that fill our world today. And while we may yearn for it, we should not expect things to settle down into a new normal. For this reason, keeping ourselves educated on the latest technologies and methods to meet today’s challenges is critical to success.”

Carrie Mattingly
CWEA President

Photo credit: Ddaze Phuong, OCSD
PLEASE PRINT OR TYPE ALL INFORMATION

NAME FOR BADGE: ________________________________
FIRST NAME: ____________________________ LAST NAME: ____________________________
AGENCY/COMPANY: ________________________________________________________________
ADDRESS: ________________________________________________________________________
CITY: __________________________________ STATE: __________________ ZIP: ___________
PHONE NUMBER: ( ) ______________________ FAX: ( ) ______________________ E-MAIL: _______
EMERGENCY CONTACT: _____________________________________________________________
EMERGENCY PHONE: ( ) ________________

☐ CWEA MEMBER ☐ WEF MEMBER or ☐ CA-NV AWWA MEMBER (must list your current membership # for member rates): Member # ____________________________

Regular rate includes 1 year membership in CWEA. Please check here if you do not wish to take advantage of CWEA membership: ☐

Special Services: ☐ Please check here if you require special accommodations to fully participate. Attach a written description of your needs.

FULL CONFERENCE ATTENDANCE—Wednesday, April 17 – Friday, April 19

Early Bird (Deadline: 3-18-13) $450
Regular Registration (After 3-18-13) $550
Member-Discounted Rate $430
Regular Rate $530
Retired Member—Same fee for Early Bird or Regular Registration $250
Full-Time Student (must provide proof of attendance at a college or university with a minimum of 9 units) $0
Name of School ____________________________
Exhibits Only—Same fee for Early Bird or Regular Registration for both days $150

Use Member-Discounted Fee for pre-conference workshops.

Day of Attendance: ☐ WEDNESDAY (4/17) ☐ THURSDAY (4/18) ☐ FRIDAY (4/19)

Early Bird (Deadline: 3-18-13) $275
Regular Registration (After: 3-18-13) $300
Member Discounted Rate $255
Regular Rate $330
Full-Time Student (must provide proof of attendance at a college or university with a minimum of 9 units) $0
Name of School ____________________________
Exhibits Only—Same fee for Early Bird or Regular Registration (one day) $85
Please select which day you would like to attend: ☐ WEDNESDAY (4/17) ☐ THURSDAY (4/18) (No Exhibits on Friday)

PRE-CONFERENCE WORKSHOPS—Tuesday, April 16 (See workshop pages for session descriptions.) Full-day workshops include lunch!

(Note: If you are registering for Full Conference Attendance as a member or non-member above, then use Member-Discounted Fee for pre-conference workshops.)

Check-in will be held in the California Ballroom of the Renaissance Hotel.

Member-Discounted Rate $175
Regular Rate $215
W1. Collection Systems Boot Camp 203 $175
W2. Lessons Learned in Facility Design and Construction $175
W3. Managing Your Biosolids in Tough Economic Times $175
W4. Optimizing Clarifier Performance (morning half-day) $85
W5. New and Proposed Regulations for Laboratories (morning session) $90
W6. Toxicity Testing Labs: SWRCB’s “Policy for Toxicity Assessment and Control” Procedures (Afternoon Session) $90
W7. Laboratory Combo Workshop (both laboratory workshops W5 and W6) $175
W8. Certification Prep Task Force Presents: Train the Trainer 2013 No cost
W9. CWEA Leadership Training Day: Skills to Boost Your Leadership Success! No cost

FEE SUBTOTAL $ __________________________

Register online: www.cwea.org/conferences

Registration Form

Early Bird Deadline: March 18, 2013

www.cwea.org/conferences • AC-13 • Your Key to Success 37
CONFERENCE MEALS  Unless otherwise noted, meals are not included with registration. Meals noted as free not automatically included.

<table>
<thead>
<tr>
<th>Meal Description</th>
<th>Fee</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Icebreaker Reception (Tue, 4/16), Renaissance Pool Deck</td>
<td>Free with Registration</td>
<td></td>
</tr>
<tr>
<td>Exhibit Hall Luncheon (Thu, 4/18), Convention Center</td>
<td>Free with Registration</td>
<td></td>
</tr>
<tr>
<td>Awards Luncheon (Fri, 4/19), Renaissance Hotel</td>
<td>$42</td>
<td></td>
</tr>
<tr>
<td>Social (Fri, 4/19), Convention Center</td>
<td>Free with Registration</td>
<td></td>
</tr>
<tr>
<td>CWEA Banquet - Dancing with the CWEA Stars (Fri, 4/19), Renaissance Hotel</td>
<td>$65</td>
<td></td>
</tr>
</tbody>
</table>

COMMITTEE BREAKFAST MEETINGS AT THE PALM SPRINGS CONVENTION CENTER: (only one may be attended per day)

THURSDAY, 4/18 (7:00–8:30AM):
- Collection Systems: $30
- Laboratory: $30
- P3S: $30
- Operator & Maintenance: $30

FRIDAY, 4/19 (7:00–8:30 AM):
- Engineering & Research: $30
- Safety: $30
- Super Group: $30
- Government Affairs: $30
- Students & Young Professionals: $30

TECHNICAL TOURS (See tours pages for complete descriptions)

- Water in the Coachella Valley (All Day/includes lunch) (Tue, 4/16) (meet in the Renaissance Lobby): $75
- Maximizing Use of Recycled Water and Other Sources (Wed, 4/17): $30
- Valley Sanitation District – Major Plant Overhaul (Wed, 4/17): $30
- Collection System Maintenance & Rehabilitation Street Fair (Thu, 4/18): $30
- Replenishment & Irrigation in the Coachella Valley (Fri, 4/19): $30

SPECIAL EVENTS AND ACTIVITIES (See special events pages for full descriptions)

- Golf Tournament (Tue, 4/16):
  - Early Bird (Deadline: 3-18-13): $100 (Individual)
  - Regular Registration (After 3-18-13): $135 (Individual)
- Sludge Trudge 5K Fun Run/Walk (Thu, 4/18):
  - $25 (Pre-race)
  - $35 (Race Site)
- $10 T-Shirt only
- T-Shirt Sizes: S, M, L, XL, XXL
- Spouse/Guest Registration (for more info on what is included in spouse/guest registration see page 34): $50

Mail registration payments and forms to: CWEA, 7677 Oakport Street, Suite 600, Oakland, CA 94621-1935

For payments by check or money order, make payable to: CWEA 2013 ANNUAL CONFERENCE

For payments by credit card, please indicate:

- VISA
- MASTERCARD
- DISCOVER
- AMEX

SIGNATURE: ____________________________

Account number: ____________________________ Expiration date: ____________________________

Name of account holder: ____________________________ Billing zip code: ____________________________

Credit card payments may be mailed to the address above or faxed to CWEA at (510) 382-7810.

Disclaimer: “CWEA is not responsible for theft of or damage to personal or agency/company property whether intended to be used for CWEA purposes or not.”

You may also register online: www.cwea.org/conferences

REFUND POLICY (See policy on page 35)
Hotel Reservation Form

Instructions: There are 4 ways you can book your room:
1. **ONLINE.** Go to www.cwea.org/conferences and click on the Housing link.
2. **FAX.** Complete this form and fax to ORCHID at (801) 355-0250.
3. **MAIL.** Send completed form to Orchid Event Solutions
   175 S. West Temple, Suite 140, Salt Lake City, UT 84101
4. **PHONE.** Toll-free (855) 285-4791 (7:00 am – 6:00 pm MST, Mon–Fri)

**CONTACT INFORMATION**

Name: 
Company: 
Address: 
City: State: Zip: Country: 
Phone: Fax: 
Email (required to receive confirmation):

**HOTEL SELECTION**

Please review hotels below and indicate your hotel choice. Requests will be honored on a first-come, first-served, space available basis. Submit your request as soon as possible for the best opportunity of receiving your hotel choice.

- **Renaissance Palm Springs Hotel**
  - $174 per night single/double
  - 15.5% tax rate (subject to change)

- **Hilton Palm Springs Hotel**
  - $174 per night single/double
  - 15.6% tax rate (subject to change)

**ROOM INFORMATION**

Arrival Date: ____________________________  Departure Date: ____________________________

List names of all room occupants: 
1. ___________________________________ 2.  _______________________________________
3.  __________________________________ 4.  _______________________________________

**ROOM TYPE**

- Single (1 bed/1 person)
- Double (1 bed/2 persons)
- Double (2 beds/2 persons)
- Triple (2 beds/3 persons)
- Quad (2 beds/4 persons)

- Check here if you have a disability requiring special services
- Non-Smoking  Smoking

**DEPOSIT / IMPORTANT INFORMATION**

- Check payable to Orchid Event Solutions    Check #________________
- Card #: ______________________________________________________________
- Exp. Date: _____________________________________________________________ 
- Name: ________________________________________________________________
- Signature: _____________________________________________________________

Your hotel reserves the right to charge this card a deposit for one night’s room and tax for each room reservation on or after March 26, 2013. Credit card must be valid through April 2013.

- Amex  MasterCard  Visa  Discover
- Check payable to Orchid Event Solutions    Check #________________

Card #: ______________________________________________________________

Exp. Date: _____________________________________________________________ 

Name: ________________________________________________________________

Signature: _____________________________________________________________

Coachella Music Festival is April 19-21 so weekend rooms will sell out quickly.
The Key to **SUCCESS**... is putting in the roadwork!

30th Annual
**SLUDGE TRUDGE**
CWEA 2013 • Palm Springs • April 16, 17, 18, & 19

**WHEN:** Thursday, April 18, 2013
4:00 pm Start

**WHERE:** Demuth Park

**FORMAT:** Run or walk

**FEE:**
- $25 pre-race registration (includes t-Shirt)
- $35 race day (includes t-shirt)
- $10 t-shirt only

There will be 1st place man and woman in each of the runner categories. There will be one prize drawing each for all men’s and women’s walker categories, and one team (consisting of four individuals) prize. Teams will consist of any four individuals and placing will be determined by the total time of ALL four runners. Teams may sign up at the conference or at the race site.

**PLEASE COMPLETE THE FOLLOWING INFORMATION**

**Waiver:** In consideration of the acceptance of my entry, I the undersigned, intending to be legally bound to myself, my executors, administrators and assignees, do hereby waive and release the California Water Environment Association and all persons and agencies connected with the 2013 Sludge Trudge 5K from all claims for damages arising from my participation in and travel to and from this event. I also certify that I am physically fit and adequately trained to participate in this event.

Signature: _____________________________________  Date: ______________________________________________

**Sludge Trudge Chairs**

**Greg Jowyk**
**Carlos Guerra**
LA County Sanitation Districts
gjowyk@lacsd.org or cguerra@lacsd.org
(562) 699-7411 Ext. 2307 or 2309

**PLEASE INCLUDE THIS FORM WITH YOUR COMPLETED CONFERENCE REGISTRATION FORM**
WAIVER: In consideration of the acceptance of my entry, I the undersigned, intending to be legally bound to myself, my executors, administrators and assignees, do hereby waive and release the California Water Environment Association and all persons and agencies connected with the CWEA Operations Challenge 2013 from all claims for damages arising from my participation in and travel to and from this event. I also certify that I am physically fit and adequately trained to participate in this event.

Captain’s Signature: _________________________________
Date: ____/_____/_____       Telephone: __________________

Submit with registration payment (payable to CWEA 2013 Annual Conference) to:
CWEA, 7677 Oakport Street, Suite 600
Oakland, CA 94621

Entry Deadline: March 1, 2013
Everyone is Welcome – Both Members and SYPs Needed!

1. Sludgy Scavenger Hunt & Networking Opportunity
   Wednesday, April 17th
   5:30 PM
   Meet in the Palm Springs Convention Center’s central lobby
   □ Yes I will participate as a student and/or young professional (SYP)
   - or -
   □ Yes I will volunteer as a professional mentor

2. Speed Mentoring at the Sweet Treats Social
   Friday, April 19th
   3:40 PM
   Meet in the Palm Springs Convention Center’s central lobby
   □ Yes I will participate as a SYP
   - or -
   □ Yes I will volunteer as a professional mentor

RSVPing will result in CWEA purchasing transportation and/or food for you. Please be sure to attend. If you need to cancel please call the CWEA office at (510) 382-7800 x107.

WAIVER: In consideration of the acceptance of my entry, I the undersigned, intending to be legally bound to myself, my executors, administrators and assignees, do hereby waive and release the California Water Environment Association and all persons and agencies connected with the CWEA Community Service Project from all claims for damages arising from my participation in and travel to and from this event. I also certify that I am physically fit and capable of participating in this event.

Signature: _____________________________
Date: __/__/___  Telephone: __________________

Please enter me in the Students & Young Professionals activities checked above

Name: ____________________________________________  E-mail address: ____________________________________________
School or Employer: ____________________________________________________________
Address: ____________________________________________  City: _____________________________  Zip: ________________
Work phone: ______________________________________  Home phone: ____________________________

Students & Young Professionals Committee Chair

Megan Yoo
Hazen & Sawyer
meganyoo@gmail.com
(949) 278-5761

Entry Deadline: March 1, 2013

PLEASE INCLUDE THIS FORM WITH YOUR COMPLETED CONFERENCE REGISTRATION FORM OR FAX TO CWEA AT (510) 382-7810
PLEASE COMPLETE THE FOLLOWING INFORMATION:(Each golfer must submit a signed form)

WAIVER: In consideration of the acceptance of my entry, I the undersigned, intending to be legally bound to myself, my executors, administrators and assignees, do hereby waive and release the California Water Environment Association and all persons, firms and agencies connected with the CWEA Golf Tournament from all claims for damages arising from my participation in and travel to and from this event. I also certify I am physically fit and adequately trained to participate in this event.

Signature: ___________________________ Date: ______________________

Please enter me in the CWEA Golf Tournament

Name: ___________________________ E-mail: ___________________________

Employer: _________________________________________________________

Address: ___________________________ City: ___________________________ Zip: __________

Work Phone: ___________________________ Cell Phone: ___________________________

Foursome Preferences (optional):

Name: ___________________________ Phone: ___________________________ E-mail: ___________________________

Name: ___________________________ Phone: ___________________________ E-mail: ___________________________

Name: ___________________________ Phone: ___________________________ E-mail: ___________________________

Name: ___________________________ Phone: ___________________________ E-mail: ___________________________

PLEASE INCLUDE THIS FORM WITH YOUR COMPLETED CONFERENCE REGISTRATION FORM

Golf Tournament Co-Chair
Bradley Davis
United Water
(818) 972-1115 x80
steve.agor@skanska.com
(951) 386-6484

Golf Tournament Co-Chair
Steven Agor
Skanska
steve.agor@skanska.com
(951) 386-6484

WHEN: Tuesday, April 16, 2013
11:00 AM Check-in and 12:00 PM Shotgun Start

WHERE: Tahquitz Creek Golf Resort
1885 Golf Club Drive, Palm Springs, CA 92264
www.tahquitzcreek.com

FORMAT: 4-Person Scramble

FEE: $100 per player. Includes range balls, green fees, golf cart, box lunch and awards dinner. Great prizes too!

WHEN: Tuesday, April 16, 2013
11:00 AM Check-in and 12:00 PM Shotgun Start

WHERE: Tahquitz Creek Golf Resort
1885 Golf Club Drive, Palm Springs, CA 92264
www.tahquitzcreek.com

FORMAT: 4-Person Scramble

FEE: $100 per player. Includes range balls, green fees, golf cart, box lunch and awards dinner. Great prizes too!

Golf Tournament Co-Chair
Bradley Davis
United Water
(818) 972-1115 x80
steve.agor@skanska.com
(951) 386-6484

Golf Tournament Co-Chair
Steven Agor
Skanska
steve.agor@skanska.com
(951) 386-6484
About CWEA

The California Water Environment Association (CWEA) is a 9,200+ member educational and professional association that supports the environmental and water quality industries.

Founded in 1928, CWEA provides training and certification in six technical areas of municipal and industrial water quality and pollution control:

- Collection Systems Maintenance Technology
- Laboratory Analysis
- Plant Maintenance Technology
- Environmental Compliance Inspection
- Industrial Waste Treatment Plant Operator
- Biosolids Land Application Management

CWEA members include engineers, biologists, chemists, governmental officials at all levels, municipal and industrial wastewater operations staff and managers, consultants, pollution control equipment manufacturers, academicians, and students interested in clean water vocations.

CWEA is the largest Member Association of the 37,000-member Water Environment Federation (WEF) and CWEA has seventeen active local sections throughout California. For more information about CWEA or its technical certification program, please contact CWEA at:

CWEA
7677 Oakport St., Suite 600
Oakland, CA 94621
510-382-7800
www.cwea.org

Disclaimer
CWEA and its Board, members and volunteers are not responsible for the actions of speakers or the contents of their papers, and no endorsement is implied or given of any persons or their philosophies, ideas or statements; nor of any products or processes; nor of any organizations or companies who volunteer to serve as speakers at the conference or exhibitors who purchase display space in the exhibit hall.

List of Exhibitors

The exhibits and equipment displays (exhibition) will have over 200 exhibitors. Below is a partial list of exhibitors (as registered at time of brochure preparation).

For an up-to-date listing, see www.cwea.org/conferences and follow links to the Exhibitors/Virtual Trade Show page.

(*Company listed may represent several other companies (not listed) that will exhibit at the show.)

- ADS Environmental Services
- Airvac, Inc.
- Aqualitec - screening equipment
- CS-amsco
- Centriphase, LLC
- Coombs-Hopkins
- D & D Engineering
- DN Tanks
- Dialight Corporation
- Duke’s Root Control, Inc.
- D&H Water Systems, Inc.
- Emerson Process Management
- Flow Works Inc.
- Fluid Control Products, Inc.
- Ford Hall Company
- GFG Instrumentation
- Goble Sampson Associates
- Haaker Equipment Company
- Hadronex, Inc.
- Helix Labs
- Hopkins Technical Products, Inc.
- Insituform Technologies
- J. A. Crawford Co.
- Kemira
- Mid-West Associates, Inc.
- MISCOwater
- Molycorp Inc.
- Multi W Systems
- Pipelogix Inc.
- Rain For Rent
- Raven Lining Systems
- Rockwell Engineering and Equipment, Co.
- Sage Designs, Inc.
- Shand & Jurs, an L&J Technologies Company
- Shin Maywa (America), Ltd.
- US Peroxide
- Tesco Controls, Inc.
- Workplace Safety Specialists
- Weld-On Adhesives, Inc.
- Xylem Inc.
- Zebron
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>16</strong>&lt;br&gt;Tues</td>
<td>7:00 AM - 4:30 PM</td>
<td>Tour: Water in Coachella Valley</td>
</tr>
<tr>
<td></td>
<td>8:30 AM - 4:30 PM</td>
<td>All Day Training Workshops</td>
</tr>
<tr>
<td></td>
<td>Noon - 7:00 PM</td>
<td>Golf Tournament &amp; Dinner</td>
</tr>
<tr>
<td></td>
<td>6:00 - 8:00 PM</td>
<td>Ice Breaker Reception</td>
</tr>
<tr>
<td><strong>18</strong>&lt;br&gt;Thur</td>
<td>8:00 AM - 4:30 PM</td>
<td>Technical Sessions</td>
</tr>
<tr>
<td></td>
<td>Noon - 6:30 PM</td>
<td>Tour: Collection System Street Fair</td>
</tr>
<tr>
<td></td>
<td>Noon</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td></td>
<td>Noon</td>
<td>Free Lunch in Exhibit Hall</td>
</tr>
<tr>
<td></td>
<td>Noon</td>
<td>Operations Challenge “Special Teams”</td>
</tr>
<tr>
<td></td>
<td>Noon</td>
<td>Exhibition in the Exhibit Hall</td>
</tr>
<tr>
<td></td>
<td>1:30 - 4:00 PM</td>
<td>Operations Challenge Competition in the Exhibit Hall</td>
</tr>
<tr>
<td><strong>19</strong>&lt;br&gt;Fri</td>
<td>8:00 AM - 3:40 PM</td>
<td>Technical Sessions</td>
</tr>
<tr>
<td></td>
<td>8:00 AM - Noon</td>
<td>Tour: Water Replenishment</td>
</tr>
<tr>
<td></td>
<td>Noon - 1:30 PM</td>
<td>Awards Luncheon</td>
</tr>
<tr>
<td></td>
<td>3:40 - 4:00 PM</td>
<td>Sweet Treats Social and SYP Career Speed Mentoring</td>
</tr>
<tr>
<td></td>
<td>6:00 - 11:00 PM</td>
<td>Banquet - Dancing with the Stars</td>
</tr>
</tbody>
</table>