Endless Water Reuse

2015 WaterReuse California Annual Conference

Millennium Biltmore Hotel
Los Angeles, CA
March 15-17, 2015

www.watereuse.org
Sunday, March 15, 2015

9:00 a.m. – 12:30 p.m. Pre-Conference Tour: Griffith Park Tour (departing from the Hotel Lobby)
12:00 p.m. – 5:30 p.m. Registration Open (Main Galeria Foyer)
1:00 p.m. – 5:30 p.m. Technical Tour: City of Los Angeles’ Environmental Learning Center at Hyperion Treatment Plant and West Basin Municipal Water District’s Edward C. Little Water Recycling Facility (departing from the Hotel Lobby)
2:00 p.m. – 5:00 p.m. Pre-Conference Workshops (additional fees apply)
- WS1: Recycled Water Site Supervisor Training Program (Roman Room)
- WS2: Recycled Water for Cooling Towers (Corinthian Room)
5:30 p.m. – 7:00 p.m. Exhibit Hall Open (Gold Room)
5:30 p.m. – 7:00 p.m. Welcome Reception in the Exhibit Hall (Gold Room)

Monday, March 16, 2015

7:30 a.m. – 3:30 p.m. Registration Open (Main Galeria Foyer)
7:30 a.m. – 3:30 p.m. Exhibit Hall Open (Gold Room)
7:30 a.m. – 8:30 a.m. Continental Breakfast (Gold Room)
8:30 a.m. – 9:30 a.m. Opening Session (Crystal Ballroom)
9:30 a.m. – 10:00 a.m. Networking Break (Gold Room)
9:30 a.m. – 10:00 a.m. Student Poster Sessions (Main Galeria Foyer)
10:00 a.m. – 12:00 p.m. Technical Sessions
- A1: Case Studies: Potable Reuse (Emerald Room)
- B1: Innovative Treatment (Heinsbergen Room)
- C1: Public Outreach & Education – Part 1 (Tiffany Room)
- D1: Funding (Bernard Room)
12:00 p.m. – 1:30 p.m. Gordon Cologne Luncheon (Crystal Ballroom)
1:30 p.m. – 3:00 p.m. Technical Sessions
- A2: Meeting Potable Reuse Regulations (Emerald Room)
- B2: Recycled Water Applications (Heinsbergen Room)
- C2: Recycled Water & Alternative Sources (Tiffany Room)
- D2: Panel Discussion: Recycled Water & Agriculture (Bernard Room)
3:00 p.m. – 3:30 p.m. Networking Break (Gold Room)
3:00 p.m. – 3:30 p.m. Student Poster Sessions (Main Galeria Foyer)
3:30 p.m. – 5:00 p.m. Town Hall Plenary Session: What Will be the Catalyst that Propels California to Direct Potable Reuse? (Crystal Ballroom)
4:00 p.m. – 5:00 p.m. Student Engagement Meeting (Tiffany Room)
5:30 p.m. – 7:00 p.m. President’s Reception at Mrs. Fish

Tuesday, March 17, 2015

7:30 a.m. – 12:00 p.m. Registration Open (Main Galeria Foyer)
8:00 a.m. – 9:30 a.m. Awards Breakfast and Annual Membership Meeting (Crystal Ballroom)
9:30 a.m. – 3:00 p.m. Exhibit Hall Open (Gold Room)
9:30 a.m. – 10:00 a.m. Networking Break (Gold Room)
10:00 a.m. – 12:00 p.m. Technical Sessions
- A3: Regulatory (Emerald Room)
- B3: Research (Heinsbergen Room)
- C3: Case Studies: Out of State (Tiffany Room)
12:00 p.m. – 1:00 p.m. Networking Lunch (Gold Room)
12:45 p.m. – 4:30 p.m. Technical Tour: Behind-the-Scenes Studio Warner Bros. Tour (additional fees apply, departing from the Hotel Lobby)
1:00 p.m. – 2:30 p.m. Technical Sessions
- A4: Planning & Program Issues – Part 1 (Emerald Room)
- B4: Operation & Maintenance (Heinsbergen Room)
- C4: Public Outreach & Education – Part 2 (Tiffany Room)
2:30 p.m. – 3:00 p.m. Networking Break (Gold Room)
3:00 p.m. – 4:30 p.m. Technical Sessions
- A5: Planning & Program Issues – Part 2 (Emerald Room)
- B5: Reuse & the California Drought (Heinsbergen Room)
- C5: Recycled Water Innovations & Sustainability (Tiffany Room)
Student Art Contest - Sponsored by Metropolitan Water District of Southern California

Welcoming the Next Generation - In order to help educate children and communities about recycled water, the conference planning committee developed a Student Art Contest (K-12) for school kids throughout California to submit drawings that illustrate “Endless Water Reuse”. We hope this, the Student Poster Contest, and the College/University Student Engagement session will attract the next generation of innovative thinkers to WateReuse California. Be sure to check out the winning art submissions on display here at the conference and, on Monday, don’t miss your opportunity to vote for your favorite student poster!

President’s Reception at Mrs. Fish - Sponsored by Irvine Ranch Water District

Monday, March 16, 2015
5:30 p.m. - 7:00 p.m. Located Just Two Blocks from the Millennium Biltmore Hotel. **Walking Directions can be found in your registration packet**

We hope you will join us on Monday evening for some great food and drinks as well as networking amongst your colleagues and friends at the brand-new Mrs. Fish. Located in the basement of the historic Pershing Square Building, Mrs. Fish features an overhead 5,500 gallon aquarium brimming with sea life.
Professional Development Hours
The WateReuse Association is pleased to offer Professional Development Hours (PDHs) for the 2015 WateReuse California Annual Conference. More and more certification and licensing authorities, companies, government agencies, and organizations are requiring that professionals earn a certain number of continuing education or professional development hours each year. A Professional Development Hour is generally defined as one clock hour that is spent engaged in an activity that contributes to the advancement or enhancement of professional skills or scientific knowledge of a professional engineer.

Professional Development Hours are available for individuals successfully completing concurrent technical sessions throughout the conference. PDHs are acquired on a contact hour basis with one PDH equaling one hour attended. It is the attendee’s responsibility to keep his or her own record of PDHs and submit them to the WateReuse office. Forms for tracking Professional Development Hours will be available at the conference.

Terminology and education credit requirements and restrictions vary widely. All participants are responsible for checking with their license/certification authority to ensure that the WateReuse technical concurrent sessions meet specific requirements.

NOTE: The form for tracking Professional Development Hours is located in your registration packet. These forms can be dropped off at one of the drop boxes located throughout the conference or mailed to the WateReuse Association office after the conference.

Operator Certification Contact Hours
NEW THIS YEAR!! Contact hours available for attendees. Operators seeking contact hours for certificate renewal will be able to do so at the 2015 WateReuse California Annual Conference. Up to 11.5 continuing education hours are available. Earn 3 hours for either of the Sundays workshops, 3.5 hours for attending the Track B Mondays sessions, and 5 hours for attending the Track B Tuesdays sessions. Verification of attendance is required. See your registration packet for more information.

Session and Presentation Surveys
Your feedback is important to us so please remember to rate each of the sessions and/or presentations that you attend. Surveys for each session and/or presentation can be found on the Conference Mobile App.

Conference Mobile App - Sponsored by Kennedy/Jenks Consultants
The Conference Mobile App provides easy-to-use interactivity that will enhance your conference experience:

- Browse the technical program by time, speaker or track and create your own personalized agenda
- View speaker bios and communicate directly with speakers on the app
- Rate the sessions you attend and comment on them, too
- View and download the technical presentations and papers from the app
- Connect with Sponsors and Exhibitors and view or download their handouts
- Receive important real-time communication during the Conference
- Connect with other attendees based on interests and areas of expertise
- Attendee to Attendee messaging through private messaging within the app
- Interactive Activity Feed where attendees can post, comment on, or “like” other posts
- Share your thoughts about the conference on Facebook, Twitter and LinkedIn right from the app

Technical Papers and PowerPoint Presentations
Technical Papers and PowerPoint Presentations can be found on the Conference Mobile App under each Session and Presentation.
**PLENARY EVENTS**

**Opening Session**

**Monday, March 16, 2015 • 8:30 a.m. - 9:30 a.m.**

**ROOM: Crystal Ballroom**

Mike Markus, Orange County Water District and WateReuse California President

Jennifer West, WateReuse California Managing Director

Matt Peterson, Chief Sustainability Officer, City of Los Angeles

John Marler, Senior Director of Energy and Environment, AEG

Jeff Kightlinger, General Manager, Metropolitan Water District of Southern California

**Gordon Cologne Luncheon**

**Monday, March 16, 2015 • 12:00 p.m. - 1:30 p.m.**

**ROOM: Crystal Ballroom**

The Gordon Cologne Luncheon, honoring Judge Gordon Cologne (ret.), author of the Porter-Cologne Act and the first lobbyist for the WateReuse Association, brings together policy makers and conferees for an informal update of the latest issues of the day in Sacramento and Washington DC.

California remains in the grip of one of the worst droughts in its history. Bill Croyle, the Emergency Drought Manager for the Department of Water Resources, will discuss the current state of the drought, the activities of the Governor’s drought task force, Proposition 1 implementation and more.

This session will also includes the presentation of the Gordon Cologne Award, which recognizes individuals who have made a significant contribution to the legislative or regulatory advancement of water recycling in California. This year the award goes to Assembly Member Anthony Rendon for his tireless work in ensuring that Proposition 1 contained seven times more funding for recycled water than in any other bond in California’s history.

Additionally, Richard Harris, Nossaman LLP, legislative advocate for WateReuse California and Melissa Meeker, Executive Director of the WateReuse Association will provide state and federal legislative and regulatory updates.
Town Hall Plenary Session: What Will be the Catalyst that Propels California to Direct Potable Reuse?

Monday, March 16, 2015 • 3:30 p.m. - 5:00 p.m.

ROOM: Crystal Ballroom

What will it take to kick-start implementing direct potable reuse in California? An all-star panel of water reuse leaders will launch this discussion based on audience live poll responses at this session. Their perspectives will spring from expertise and experience in treatment technologies, operations, public policy, regulations and public perception. This session will rely on your real-time input, so come ready to share your thoughts!

PANELISTS:
Shane Trussell, Trussell Technologies
Nancy Sutley, Los Angeles Department of Water and Power
Felicia Marcus, State Water Resources Control Board
Daniel Nix, Wichita Falls Public Works Department
Ken Murray, MD

Awards Breakfast and Annual Membership Meeting

Tuesday, March 17, 2015 • 8:00 a.m. - 9:30 a.m.

ROOM: Crystal Ballroom

The Awards Breakfast recognizes exceptional water reuse, reclamation, and recycling projects and practitioners. The California Section of the WateReuse Association will present the following Awards of Excellence during the breakfast on Tuesday:

• Recycled Water Agency of the Year (Large, Medium, and Small)
• Recycled Water Community Outreach/Public Education Program of the Year
• Recycled Water Advocate of the Year
• Recycled Water Customer of the Year
• Recycled Water Staff Person of the Year

The California Section of the WateReuse Association will also conduct its annual membership meeting during this breakfast.
One Water LA is a collaborative approach between LA Sanitation, LADWP, other city departments, and regional agencies to develop an integrated framework for managing the City’s watersheds, water resources, and water facilities in an environmentally, economically and socially beneficial manner.
Congratulations to our 2015 WateReuse California Award Winners. Be sure and view the Award Winners icon on the Conference Mobile App where you can find the full award description as well as an informational video on each of the awardees.

**Recycled Water Agency of the Year – Small**  
*City of San Clemente*

**Recycled Water Agency of the Year – Medium**  
*Rincon del Diablo Municipal Water District*

**Recycled Water Agency of the Year – Large**  
*Irvine Ranch Water District*

**Recycled Water Community Outreach and Public Education Program of the Year**  
*Dublin San Ramon Services District’s Residential Recycled Water Fill Station*

**Recycled Water Customers of the Year**  
*City of Lake Forest  
San Diego Gas & Electric  
Citizens Business Bank Arena*

**Recycled Water Staff Person of the Year**  
*Reza (Ray) Mokhtari, Metropolitan Water District of Southern California*

**Recycled Water Advocate of the Year**  
*Kimberly Thorner, Olivenhain Municipal Water District*
Please be sure and check out the Sponsor and Exhibitor listings on the Conference Mobile App where you can view their contact information, their company description, along with valuable downloads and information about each one.

<table>
<thead>
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<th>Conference Sponsors</th>
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<td><strong>Platinum Conference Sponsors</strong></td>
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<td>Trussell Technologies</td>
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<td>Upper San Gabriel Valley Municipal Water District</td>
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and Exhibitors for their Support!

**Bronze Conference Sponsors**
- Dudek
- El Toro Water District
- Inland Empire Utilities Agency
- Michael Baker International
- West Basin Municipal Water District
- Western Municipal Water District

**Purple Conference Sponsor**
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- Data Instincts, Public Outreach Consultants
- HydroScience Engineers
- John Robinson Consulting, Inc.
- Katz & Associates
- Long Beach Water Department
- Olivenhain Municipal Water District
- Psomas
- Public Financial Management, Inc.
- Stantec Consulting Services Inc.
- The Covello Group

**Exhibitors**
- Bio-Microbics, Inc.
- BKT Co. Ltd.
- Calgon Carbon UV Technologies
- City of Los Angeles, LA Sanitation
- Degremont Technologies
- DN Tanks
- Eurofins Eaton Analytical, Inc.
- Los Angeles Department of Water and Power
- Metropolitan Water District of Southern California
- MNS Engineers, Inc.
- Nova Water Technologies
- Pacific States Environmental Contractors
- RMC Water and Environment
- Sustainable Water
- Tetra Tech
- TrojanUV
- Water Replenishment District of Southern California
- Water Systems Consulting, Inc.
- Xylem
### Sunday, March 15, 2015

<table>
<thead>
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<td><strong>Technical Tour</strong>: City of Los Angeles’ Environmental Learning Center at Hyperion Treatment Plant and West Basin Municipal Water District’s Edward C. Little Water Recycling Facility <em>(additional fees apply, departing from the Hotel Lobby)</em></td>
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| 2:00 p.m. – 5:00 p.m. | **Pre-Conference Workshops** *(additional fees apply)*  
  - WS1: Recycled Water Site Supervisor Training Program *(Roman Room)*  
  - WS2: Recycled Water for Cooling Towers *(Christian Room)* |

### Monday, March 16, 2015

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<td>7:30 a.m. – 8:30 a.m.</td>
<td>Continental Breakfast <em>(Gold Room)</em></td>
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<td>8:30 a.m. – 9:30 a.m.</td>
<td>Opening Session <em>(Crystal Ballroom)</em></td>
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<td>Student Poster Sessions <em>(Main Galeria Foyer)</em></td>
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| 9:30 a.m. – 9:40 a.m. | Biofouling and Cleaning Effectiveness of Surface Nanostructured Reverse Osmosis Membranes  
  **Kari Moses, UCLA** |
| 9:40 a.m. – 9:50 a.m. | Persistence and Fate of Emerging Contaminants, Disinfectants, and Disinfection Byproducts in Recycled Water Stored or Discharged  
  **Miguel Garcia, University of California, Riverside** |
| 9:50 a.m. – 10:00 a.m. | Drought Solutions through Green Treatment Technology: A Photovoltaic Electro-Dialysis Unit  
  **Michael Lepore, California State Polytechnic University, Pomona** |

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<tr>
<th>Session</th>
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| A1:      | 10:00 a.m. – 10:30 a.m. | Case Studies: Potable Reuse  
  **Moderator: Paul Jones, Eastern Municipal Water District**  
  **Room: Emerald** |
| B1:      | 10:00 a.m. – 10:30 a.m. | Innovative Treatment  
  **Moderator: Fred Gerringer, Trussell Technologies**  
  **Room: Heinsbergen** |
| C1:      | 10:00 a.m. – 10:30 a.m. | Public Outreach & Education - Part 1  
  **Moderator: Toby Roy, San Diego County Water Authority**  
  **Room: Tiffany** |
| D1:      | 10:00 a.m. – 10:30 a.m. | Funding  
  **Moderator: Martha Davis, Inland Empire Utilities Agency**  
  **Room: Bernard** |
|          | 10:30 a.m. – 11:00 a.m. | Panel Discussion: Recycled Water Funding and Drought Relief  
  2014 was a banner year for recycled water funding. This panel will explore how this funding can accelerate water supply projects during one of the worst droughts in the state’s history and beyond.  
  **Dan Newton, State Water Resources Control Board**  
  **Tracie Billington, Department of Water Resources**  
  **David White, Bureau of Reclamation**  
  **James Bodnar, Metropolitan Water District of Southern California**  
  **Maria Mariscal, San Diego County Water Authority** |
|          | 11:00 a.m. – 11:30 a.m. | Use of T-MBR for Producing Ammonia Free Recycled Water for Industrial Reuse  
  **Ufuk Erdal, CH2M HILL** |
|          | 11:00 a.m. – 11:30 a.m. | Enhanced the Pure Water San Diego Community Outreach Program: A Partnership with the University of San Diego  
  **Brent Edson, City of San Diego Public Utilities Department** |

**Panel Discussion: Recycled Water Funding and Drought Relief**

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<td>Scaling-up Advanced Oxidation Process (AOP) from Pilot to Full Scale - an Investment Decision. Roshanak Aflaki, City of Los Angeles</td>
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<td>12:00 p.m. - 1:30 p.m.</td>
<td>Gordon Cologne Luncheon (Crystal Ballroom)</td>
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<tr>
<td>1:30 p.m. - 2:00 p.m.</td>
<td>Permitting IPR Under the New 2014 CDPH (DDW) Regulations - Measured Steps for Rapid Regulatory Approval. Dan Rydberg, Oxnard</td>
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<tr>
<td>2:00 p.m. - 2:30 p.m.</td>
<td>Demonstrating the Compliance of Direct Potable Reuse Treatment Trains with Public Health Criteria. Fredrick Gerringer, Trussell Technologies</td>
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<td>2:30 p.m. - 3:00 p.m.</td>
<td>Using Real-time Online Operational Monitoring Data to Validate Ongoing Pathogen Control for an Indirect Potable Reuse Project. Cathy Chang, Water Replenishment District of Southern California</td>
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<td>3:00 p.m. - 3:30 p.m.</td>
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<td>Student Poster Sessions (Main Galeria Foyer)</td>
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<td>3:00 p.m. - 3:10 p.m.</td>
<td>Surface Nanostructuring with Polymer Brush Layers for Fouling Resistant Ultrafiltration (UF) Membranes. Soomin Kim, UCLA</td>
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<tr>
<td>3:10 p.m. - 3:20 p.m.</td>
<td>Treatment Methods and Regulations for Contaminants of Emerging Concern in RO Brine Concentrate. Travis Romeyn, California State Polytechnic University, Pomona</td>
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<tr>
<td>3:20 p.m. - 3:30 p.m.</td>
<td>Field Deployment of Smart Integrated Membrane Systems Technology For Cooling Tower Water Treatment and Reuse. Han Gu, UCLA</td>
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<td>3:30 p.m. - 5:00 p.m.</td>
<td>Town Hall Plenary Session: What Will Be the Catalyst that Propels California to Direct Potable Reuse? (Crystal Ballroom)</td>
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**AZ: Meeting Potable Reuse Regulations**

- **Moderator:** Seval Sen, RMC Water and Environment
- **Room:** Emerald

**B2: Recycled Water Applications**

- **Moderator:** John Robinson, John Robinson Consulting
- **Room:** Heinsbergen

**C2: Recycled Water & Alternative Funding**

- **Moderator:** Steven Friedman, HDR
- **Room:** Tiffany

**D2: Panel Discussion: Opportunities and Challenges for Agricultural Water Reuse**

- **Moderator:** AG Kawamura, Orange County Produce
- **Room:** Bernard

Growers in California are increasingly looking to recycled water as a way to consistently meet their irrigation demands in the face of growing water scarcity and pollution concerns.
8:00 a.m. – 12:00 p.m.  Registration Open (Main Galeria Foyer)
8:00 a.m. – 9:30 a.m.  Awards Breakfast and Annual Membership Meeting (Crystal Ballroom)
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10:00 a.m. – 10:30 a.m.  Department of Drinking Water Updates
Cindy Forbes, State Water Resources Control Board

10:30 a.m. – 11:00 a.m.  The Who, What, Where, When and Why of the State Water Board General Order for Recycled Water Use
Annalisa Kihara, State Water Resources Control Board

11:00 a.m. – 11:30 a.m.  Salt and Nutrient Management Plans - Where are We and What Have We Learned?
Sally McCraven, Todd Groundwater

11:30 a.m. – 12:00 p.m.  Recycled Water Reporting in the 2015 Urban Water Management Plans and Linkage to the 2015 Recycled Water Survey
Toni Pezzetti, Department of Water Resources

12:00 p.m. – 1:00 p.m.  Networking Lunch (Gold Room)

12:45 p.m. – 4:30 p.m.  Technical Tour: Behind-the-Scenes Warner Bros Studio Tour (additional fees apply, departing from the Hotel Lobby)

1:00 p.m. – 1:30 p.m.  California’s Drought: How Can the Sanitation Districts Help?
Earle Hartling and Lyssa Ghaboulian, Sanitation Districts of Los Angeles County

1:30 p.m. – 2:00 p.m.  The Far, Near, and Here of LA’s Water Recycling Program
George Zordilla, Los Angeles Department of Water and Power

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1:00 p.m. – 1:30 p.m.  California’s Drought: How Can the Sanitation Districts Help?
Earle Hartling and Lyssa Ghaboulian, Sanitation Districts of Los Angeles County

1:30 p.m. – 2:00 p.m.  The Far, Near, and Here of LA’s Water Recycling Program
George Zordilla, Los Angeles Department of Water and Power
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| 2:00 p.m. – 2:30 p.m. | Twenty Years of Purple Pipe: What will the Next Twenty Years Bring for West Basin?  
Joe Walters,  
West Basin Municipal Water District  
AOP for Control of Biofouling of RO Membranes  
Jason Wert  
and  
Michele Braas,  
RETTEW Associates, Inc.  
Dilemma of Water Quandary  
Linda Macpherson,  
New Water Resources |
| 2:30 p.m. – 3:00 p.m. | Networking Break (Gold Room) |
| 3:00 p.m. – 3:30 p.m. | South Bay Water Recycling: Expanding Role in Stabilizing the Water Supply of Silicon Valley - Part I Strategic Planning  
Kerrie Romanow,  
City of San Jose, South Bay Water Recycling  
Advancing Water Reuse to Help Meet California’s Water Needs  
Wendy Broley,  
California Urban Water Agencies  
You Can Have it Both Ways: Maximizing Recycled Water Use, Protecting Fish and Wildlife  
Ben Giudice,  
Robertson-Bryan, Inc. |
| 3:30 p.m. – 4:00 p.m. | Regulatory Incentives and Disincentives to Recycled Water Production  
Logan Olds,  
Victor Valley Wastewater Reclamation Authority  
Denise Conners and  
Betsy Elzuifon,  
Larry Walker Associates  
Understanding the Potential Impacts of Climate Change on Water Resources in Southern California  
Brianna Rita Pagan,  
Loyola Marymount University  
City of Escondido’s Future Advanced Reuse Facilities: Expanding Recycled Water Use to Support the Local Economy  
James DeCarolis,  
Black & Veatch |
| 4:00 p.m. – 4:30 p.m. | Protection of Highly Valued Water Resources Impacted by Groundwater-Surface Water Interconnections through Maximized Recycled Water  
Steve Clary, RMC Water and Environment  
Maximizing Reclamation Potential by Local Optimization of Resources  
Kartiki Naik,  
UCLA  
Accelerating New Technologies to Solve Water Challenges  
Wigs Mendoza,  
Metropolitan Water District of Southern California |
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Dual-Plumbed Buildings
Since 1991, IRWD has served recycled water in dual-plumbed commercial buildings for toilets, urinals, trap primers and make-up water to cooling towers. In 2014, six more dual-plumbed commercial buildings were connected to recycled water. There are currently 62 dual-plumbed commercial buildings with an additional nine dual-plumbed commercial buildings under construction.

City of Lake Forest Sports Park
The City of Lake Forest completed construction in 2014 of an 86-acre sports complex irrigated with recycled water. Park amenities include: A dual-plumbed recreational center building and two dual-plumbed clubhouses, four baseball fields, two soccer fields, two tot lots, one soft ball field, outside basketball courts, a grass area amphitheater designed for large community events, a multi-use turf field, picnic areas, a bio-retention area and walking trails. In total, it is estimated that the park will use 40 million gallons of recycled water annually. The City of Lake Forest has been nominated by IRWD for the 2015 WaterReuse Recycled Water Customer of the Year Award.

Dual-Plumbed Single Family Lots
IRWD has served recycled water to dual-plumbed single family lots since 1993. There are more than 600 dual-plumbed single family lots with front and backyard irrigation in IRWD and an additional 30 lots currently under construction. These single family lots range from 10,000 square feet to 100,000 square feet.

Overall: In 2014, IRWD connected 106 additional sites to recycled water. This brings the total number of recycled water sites to more than 5,200 which saved more than 7 billion gallons of potable water in 2014.
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Recycled Water Advisory Group (RWAG)

For their valued input and dedicated service to the City's Recycled Water Program since 2009 and for helping to advance recycled water as a safe, local, and reliable supply for our City.

The City's RWAG is a group of approximately 60 key stakeholder organizations, formed in 2009 to provide input and ideas related to increasing the amount of recycled water beneficially used in Los Angeles. The group has provided significant feedback in the development and implementation of the City's Recycled Water Master Planning documents. RWAG participants reflect a wide diversity of interests, including neighborhood councils, environmental groups, business organizations, and recycled water customers.
The Metropolitan Water District of Southern California and its 26 member public agencies have spent the past 25 years preparing for drought by investing in diverse water sources, becoming a leader in conservation, wastewater recycling and groundwater recovery. These investments to date exceed $1 billion with cumulative savings of nearly 18 million acre-feet of water and include:

- $352 million for conservation programs
- $356 million for recycled water projects
- $125 million for groundwater recovery projects
The Orange County Water District’s Groundwater Replenishment System is the world’s largest advanced water purification system for potable reuse. It takes treated wastewater that would otherwise be sent to the Pacific Ocean, and purifies it using an advanced three-step process consisting of microfiltration, reverse osmosis and ultra violet light with hydrogen peroxide.

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[Carlsbad Seawater Desalination Plant, KSD Joint Venture](#)

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[Groundwater Replenishment System Program, OCWD & OCSD](#)

[Brackish Groundwater Desalination Plant, San Antonio Water System](#)

[As-Needed Engineering Services Projects, West Basin Municipal Water District](#)
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The Water Replenishment District of Southern California is the regional groundwater management agency that protects and preserves the quantity and quality of groundwater for two of the most utilized urban basins in the State of California. The service area is home to over ten percent of California’s population residing in 43 cities in southern Los Angeles County.

Please visit us at Booth #17

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