



**JULY 23-27, 2017**  
**11TH IWA INTERNATIONAL CONFERENCE**  
**ON WATER RECLAMATION AND REUSE**  
 LONG BEACH, CALIFORNIA



IN PARTNERSHIP WITH:  
  

## 11<sup>th</sup> IWA International Water Reclamation and Reuse Conference

### Pre-Conference Workshops

[www.iwareuse2017.org](http://www.iwareuse2017.org)

### Workshop 1: Moving Towards Safe Water Reuse for Food Crop Irrigation: A Sustainable Solution in an Era of Climate Variability

Sunday, July 23, 2017

8:30 am – 10:00 am

In this workshop, speakers will describe 1) the state of the science regarding water reuse on food crops; 2) grower perspectives; 3) the complex regulatory framework concerning water reuse on food crops in the U.S.; and 4) reflections from Israel, a global leader in agricultural water reuse.

Time	Topic/Title	Speaker
8:30 am	Welcome and Introduction	Dr. Amy R. Sapkota, <i>University of Maryland</i> Dr. Channah Rock, <i>University of Arizona</i> Dr. Sarah Allard, <i>University of Maryland</i>
8:35 am	Audience Introductions, Brief Survey/Poll	All
8:45 am	<b>Talk 1:</b> Water Reuse, Crop Irrigation, and Public Health: Moving the Science Forward to Achieve Sustainable Water Reuse in a Changing Climate	Dr. Amy R. Sapkota, <i>University of Maryland</i>
9:05 am	Audience Engagement	
9:10 am	<b>Talk 2:</b> Will they use it? Grower Perspectives and the Regulatory Landscape Concerning Water Reuse for Food Crop Irrigation	Dr. Channah Rock, <i>University of Arizona</i>
9:30 am	Audience engagement	
9:35 am	<b>Talk 3:</b> Learning from Leaders in Agricultural Water Reuse: Practices in Israel and Other Water Conserving Nations	Dr. Sarah Allard, <i>University of Maryland</i>
9:55 am	Brief Wrap-up/Discussion/Poll	
10:00 am	Adjourn	

## **Workshop 2: Antibiotic Resistance: What Every Water Professional Needs to Know**

Sunday, July 23, 2017

10:30 am – 12:00 noon

Over the past several years, several highly-publicized research projects have attempted to identify direct links between bacterial antibiotic resistance and water reclamation processes. This session will cover the realities of antibiotic resistance: What do we know? What is not known? What separates a well-designed study from research studies reporting spurious results?

<b>Time</b>	<b>Topic/Title</b>	<b>Speaker</b>
10:30 am	Welcome and Introduction of All Speakers	Jean E. McLain, <i>University of Arizona</i>
10:40 am	Wastewater Reclamation, Antibiotic Resistance, and Protection of Public Health	Amy Sapkota, <i>University of Maryland</i>
10:55 am	Microbiological Methods for Determination of Antibiotic Resistance	Channah Rock, <i>University of Arizona</i>
11:10 am	Antibiotic Resistance through Wastewater Treatment Processes	Daniel Gerrity, <i>University of Nevada Las Vegas</i>
11:25 am	<i>Antibiotic resistance? Naturally!</i> The Confounding Factor of Natural Antibiotic Resistance	Walter Jakubowski, <i>Consultant</i>
11:40 am	Key Research Needs in Antibiotic Resistance in Water	Jeff Mosher, <i>Water Environment &amp; Reuse Foundation</i>
12:00 pm	Adjourn	

## Workshop 3: Successful Strategies for Sustainable Industrial Water Reuse

Sunday, July 23, 2017

9:00 am – 12:00 noon

Panelists will describe the motivations for companies to implement water reuse strategies and discuss the technologies used to reuse and recycle water in industrial settings. These strategies will be illustrated further with case studies that explore the implementation of industrial water reuse from both public and private perspectives.

Time	Topic/Title	Speaker
9:00 am	Welcome and Introduction	Elise Goldman, <i>West Basin Municipal Water District</i>
9:05 am	Participant Introductions	All
9:10 am	An Overview of Industrial Water Reuse	Eric Rosenblum, <i>EnviroSpectives</i>
9:20 am	Water Recycling Milestones in the Indian Petrochemical Industry	Josef Lahnsteiner, <i>VA TECH WABAG GmbH</i>
9:40 am	Microbial and Scale Considerations for the Utilization of Reclaimed Water in the Oil and Gas Industry	Tony Adel Rizk, <i>Eastern Washington University</i>
10:00 am	Drivers, Successes, Challenges and Opportunities for Onsite Industrial Water Reuse: a Path Forward for Collaboration and Growth	Joan Oppenheimer, <i>Stantec</i>
10:20 am	Discussion: Research Needs for Commercial and Industrial Water Reuse	All
10:30 am	Break	
10:45 am	<b>Panel Discussion: Industries Choose to Reuse Water—Incentives and Challenges</b> Three presenters will discuss the technical, economic and institutional factors that influence their project selection and implementation.	Michael Lesniak, <i>EcoLab</i> Brent Sutter, <i>Woodard and Curran</i> Steve Ashton, <i>City of Victorville</i> Frank Fuchs, <i>West Basin Municipal Water District</i>
11:15 am	Discussion: Issues in Implementing Industrial Water Reuse	All
11:30 am	Measuring Sustainability in Industrial Water Use: <i>An IWA Initiative</i>	Cheryl Davis, <i>Water Resource Consultant</i>
11:45 am	Discussion: Promoting Industrial Water Reuse	All
11:55 am	Wrap Up	Eric Rosenblum, <i>EnviroSpectives</i> Elise Goldman, <i>West Basin Municipal Water District</i>
12:00 pm	Adjourn	

## Workshop 4: DPR Risk Reduction and Critical Control Point Monitoring for Public Health

Sunday, July 23, 2017

8:00 am – 12:00 noon

This workshop will take advantage of several recently completed and integrated ongoing research projects by the Water Environment & Reuse Foundation to provide design engineers and utility managers a better understanding of CCP management within their potable reuse facilities. Studies included are:

- Reuse-11-10 Risk Reduction Principles for DPR (Carollo)
- Reuse-12-06 Guidelines for Engineered Storage for DPR (Carollo)
- Reuse-13-03 Critical Control Point Assessment to Quantify Robustness and Reliability of Multiple Treatment Barriers of DPR Scheme (Hazen and Sawyer)
- Reuse-14-01 Integrating Management of Sensor Data for a Real Time Decision Making and Response System (Black and Veatch)
- Reuse-14-16 Operational, Monitoring and Response Data from Unit Processes in Full-Scale Water Treatment, IPR, and DPR (Carollo)
- Reuse-15-11 Demonstration of High Quality Drinking Water Production Using MultiStage Ozone-Biological Filtration (BAF): A Comparison of DPR with Existing IPR Practice (Gwinnett County Dept. of Water Resources)

<b>Time</b>	<b>Topic/Title</b>	<b>Speaker</b>
8:00 am	Introductions and Workshop Overview	Ben Stanford, <i>American Water</i>
8:10 am	Risk Reduction Approach for DPR	Andy Salveson, <i>Carollo Engineers</i>
8:30 am	Equivalency of Treatment Trains for Redundancy	Shane Trussell, <i>Trussell Technologies, Inc.</i>
9:00 am	HACCP Overview and Identification of CCPs	Ben Stanford, <i>American Water</i>
9:30 – 10:30 am	Hands-On Activity: Identifying CCPs in Potable Reuse	All
10:00 am – 10:15 am	(Networking Break)	
10:30 am	Reporting Back on CCP Hands-on Activity	All
11:00 am	Operations Training and Response in DPR	Troy Walker, <i>Hazen and Sawyer</i>
11:30 am	Case Study of Identifying CCPs from Catchment to Distribution: GCDWR DPR Pilot	Denise Funk, <i>GCDWR</i>
12:00 pm	Adjourn	

## Workshop 5: Acceptance of Potable Reuse Projects - What We've Learned So Far

Sunday, July 23, 2017

9:00 am – 12:00 noon

How do you gain public acceptance of proposed potable reuse projects? Learn what tactics, methods, and messages are working in terms of outreach related to introducing potable reuse projects to communities. This workshop will provide several illuminating views and insights into what it takes to successfully introduce and potentially implement potable reuse projects into a community. This series of speakers will describe and share what they see is working and what challenges remain for gaining public acceptance.

<b>Time</b>	<b>Topic/Title</b>	<b>Speaker</b>
9:00 am	Welcome and Introduction/ Audience Introductions	Mark Millan, <i>Data Instincts, Public Outreach Consultants</i>
9:15 am	Framing Risk Management to Support Public Engagement	Heather Smith, <i>Thames Water</i>
9:45 am	3D Visualization of Strategies for Communication and Decision-Making	Kevin DeVito, <i>CyberCity 3D, Inc.</i>
10:15 am	Water – Too Valuable to Use Once	Melissa McChesney, <i>Padre Dam Municipal Water District, CA</i>
10:45 am	The Pure Water Monterey Story	Steve Thomas, <i>Pure Water Monterey</i>
11:15 am	Potable Reuse Acceptance, What Have We Been Learning?	Mark Millan, <i>Data Instincts, Public Outreach Consultants</i>
11:35 am	Final Panel Discussion and Q&A/Participant Engagement	All
12:00 pm	Adjourn	