



WATERREUSE

LOS ANGELES

Chapter Newsletter

JUNE 2015

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NEXT MEETING

Tuesday, June 9th
11:30am-1:30pm

LOCATION:

Walnut Valley Water District
271 Brea Canyon Road
Walnut, CA 91789

Lunch sponsored by:
Kenedy Jenks

2015 Annual WaterReuse Conference Recap

by Monica Gasca, Sanitation Districts of Los Angeles County

The 2015 Annual Conference was a HUGE success! It was the largest conference to date, with 500 attendees! I want to wholeheartedly thank all of the conference volunteers for your time and efforts in making this conference a success! I've heard nothing but compliments on the conference and this is in great part because of the efforts of our awesome volunteers. I'm am deeply grateful for all of your help. This conference would not have been the success it was without you. Special thanks to John Robinson, whose hard work landed us the largest number of exhibitors and sponsorship donations of any of the past conferences. Also, special thanks to Doug Walters, whose relentless efforts scored us a special welcome to the city from the mayor of Los Angeles, Eric Garcetti. If you haven't seen the video yet, check it out at <http://www.watereuse.org/conferences/california-annual>. Thank you all again and I hope to see you next year in Santa Rosa!

Presentations by LA Chapter members at the 2015 California conference:

Pilot-Scale Evaluation of the Closed-Circuit Desalination Process for Minimizing RO Concentrate Disposal Volume

Bruce Mansell, Los Angeles County Sanitation Districts

Breaking IPR Boundaries at Padre Dam's Advanced Water Purification Demonstration Project

Brian Pecson, Trussell Technologies

Full-Scale Testing of Alternative UV Advanced Oxidation Processes for the Vander Lans Water Treatment Facility

Greg Wetterau, CDM Smith

Scaling-up Advanced Oxidation Process (AOP) from Pilot to Full Scale - an Investment Decision

Roshanak Aflaki, City of Los Angeles

Maximizing Water Use and Minimizing Sewer Discharge

Patrick Stahl, MWH

Advocacy is in the Eye of the Stakeholder

Serge Haddad, Los Angeles Department of Water and Power

Demonstrating the Compliance of Direct Potable Reuse Treatment Trains with Public Health Criteria

Fredrick Gerringer, Trussell Technologies

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

Update on Metropolitan's Local Resources Program

Ray Mokhtari, Metropolitan Water District of Southern California

**2015
WATERREUSE
CALIFORNIA
ANNUAL CONFERENCE**

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



Monica Gasca, conference co-chair and chapter trustee; Ray Mokhtari, 2015 WaterReuse staff person of the year; and Raymond Jay, conference co-chair and LA Chapter president.



Jennifer Valdez, student art contest leader and LADWP Water Recycling Planning Group and education representative.

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President's Column

Although many of us wished for more rain and snow over the winter, it is now evident that we are going to have to survive at least another year of exceptional drought with reduced water allocations. California's exceptional drought condition has increased from 25 percent last year to 50 percent this year causing the Governor to institute mandatory conservation actions to reduce statewide water use by 25 percent. Many water agencies will likely be implementing local water allocations to meet the conservation directive. Industrial and institutional customers should consider retrofitting sites with recycled water to lower cost and help meet their conservation goals. I look forward to working with all of you to expand the safe use of recycled water throughout Los Angeles to help us survive this dry year and be prepared for future challenges.



WaterReuse recently updated its logo to better represent the water recycling continuum and illustrate different qualities of water being continuously renewed for additional beneficial use. The three water drops also represent WaterReuse's focus: research, education, and advocacy. As Wa-

teReuse advocates, it is our opportunity to find and demonstrate through research and education new and expanded safe uses of recycled water in our service areas to offset potable demand. The potential to make significant progress is here. I encourage you and your agency to take full advantage of the available Proposition 1, On-Site Retrofit, and Local Resources Program funding to expedite projects in your area that expand beneficial use of recycled water.

I want to thank all who helped make the 2015 WaterReuse California Annual Conference spectacular! The conference was one of the largest and most diverse programs including several innovative features like operator certification credit, student art and poster contests, and live polls that would not have been possible without your help. I also want to congratulate our own LA Chapter member, Mr. Ray Mokhtari, for receiving WaterReuse's staff person of the year award.

Please feel free to contact me if you would like to get more involved in the Chapter or have suggestions on how to expand recycled water use in your area.

Raymond Jay, President

Legislative Panel Discusses Future of Potable Reuse

by Jennifer West, Managing Director, California WaterReuse

As part of the May 11 Drought Summit, WaterReuse California and the California Water Environment Association hosted a legislative panel that explored the future of potable reuse in California.

"1.64 billion gallons a day of water is discharged to the ocean," said panelist Rich Nagel, General Manager of West Basin Municipal Water District. "Reusing just 25 percent of this resource could provide water for 3.5 million Californians."

Other panelists included Martha Guzman-Aceves, Deputy Legislative Secretary for Governor Brown; Dennis O'Connor, Principal Consultant for the Senate Natural Resources and Water Committee; and Tina Cannon Leahy, Principal Consultant for the Assembly Water Parks and Wildlife Committee. The panel was moderated by WRCA legislative advocate Richard Harris of Nossaman LLP.

While the panel recognized the great potential for expanding potable reuse in the drought, legislative staff expressed caution about "cutting corners" or rushing the Expert Panel process established by SB 918 (Pavley).

As a result of that law, state and national water industry experts were appointed in 2013 to an independent, third-party Expert Panel to provide advice to SWRCB on developing Water Recycling Criteria for indirect potable reuse (IPR) through surface water augmentation and determining the feasibility of developing criteria for direct potable reuse (DPR). At this point the panel remains on

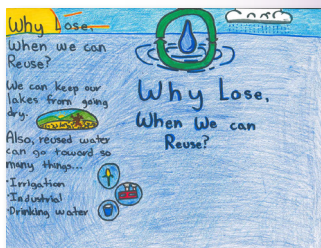
schedule to complete its work on or before the statutory deadline of December 2016.

The panel also discussed Governor Brown's call for expediting or streamlining CEQA as a way to fast track recycled water projects in the drought.

More than 150 people attended the sold-out Drought Summit in Sacramento. Other speakers included Senator Robert Hertzberg; Cindy Forbes, Deputy Director SWRCB, Division of Drinking Water; and Karla Nemeth, Deputy Director for Water Policy at the California Natural Resources Agency.



Student Art Contest Winners



Winner: Ian Castro (5th)
Paloma Elementary School



Runner up: Tyler Kigis (5th)
Plasencia Math and Science Magnet



Runner up: Ashley Reyes Joann (8th)
Borendo Middle School



Runner up: Anyssa Penalzoa (5th)
Joli Ann Leichtag Elementary School

Annual Water Reuse and Desalination Conference

by Kira Alonzo, Metropolitan Water District of Southern California

The 19th Annual WaterReuse and desalination research conference highlighted the latest research on developing alternative water supplies. The conference covered various topics including Indirect Potable Reuse and Seawater Desalination, with a major focus on Direct Potable Reuse and Seawater Desalination.

The sessions could be categorized into the following:

Safety

- Risk assessments
- Techniques to assess safety

Regulatory

- Groundwater Recharge Regulations

Treatment and monitoring

- Reliability through treatment
- Source control
- Membrane treatment
- Emerging technologies
- Pathogens



- Disinfection
- SAT, UV
- Byproducts
- Bio-filtration

Operation and training

- Development of Maintenance Plan and Certification

Barriers

- Odors

There was a great discussion on the framework that is being developed for Direct Potable Reuse Guidelines. The framework is intended to be a starting off point for discussions on the national level. The expert panel gave a good detailed discussion on the components of the framework. The framework includes defining DPR, Public Health, source control, treatment, operation and outreach. This will be a great communication tool when completed.

2015 Annual WaterReuse Conference Recap ► continued from pg. 1

Presentations by LA Chapter members at the 2015 California conference:

Effects of Ozone and Biofiltration on Membrane Performance of IMGD Potable Reuse Demonstration Facility

Aleks Pisarenko, Trussell Technologies

Required CT Value for 5-log Virus Inactivation in a Full-Scale Chlorine Contactor

Michael Adelman, MWH

Comparison of Two Disinfection Strategies Prior to Soil Aquifer Treatment for Potable Reuse

Shane Trussell, Trussell Technologies

California's Drought: How Can the Sanitation Districts Help?

Earle Hartling, Los Angeles County Sanitation Districts

Engaging Future Ratepayers in Los Angeles

Jennifer Valdez, Los Angeles Department of Water and Power

The Far, Near, and Here of LA's Water Recycling Program

George Zordilla, Los Angeles Department of Water and Power

Twenty Years of Purple Pipe: What will the next Twenty Years Bring for West Basin?

Joe Walters, West Basin Municipal Water District

Student Technical Poster Contest Winners

Judges Choice:

Biofouling and Cleaning Effectiveness of Surface Nanostructured Reverse Osmosis Membranes

– Kari Moses, UCLA

Attendees Choice:

Drought Solutions through Green Treatment Technology: A Photovoltaic Electro-Dialysis Unite

– Michael Lepore, California State Polytechnic University, Pomona

Agency Spotlight: Water Replenishment District of Southern California

Formed in 1959 by a vote of the people, the Water Replenishment District of Southern California (WRD) is the largest groundwater agency in the state of California. WRD manages and protects local groundwater resources for four million residents living in 43 cities in a 420 square mile area of south Los Angeles County, the most populated county in the nation. This region is home to 10% of the population of the State and uses about 250,000 acre-feet of groundwater annually. Groundwater meets 40% of the water demands for the region.

In the past, WRD relied on a large percentage of water imported from the environmentally sensitive Bay Delta in Northern California and the drought stricken Colorado River. More than a decade ago, WRD developed its Water Independence Now (WIN) program to completely eliminate the need for imported water to replenish the Central and West Coast Groundwater Basins. The WIN Program is a collection of projects that will greatly increase WRD's use of local stormwater and recycled water sources to restore and protect the basins. Within 5 years, WIN projects will eliminate WRD's need for imported water, resulting in a completely locally sustainable groundwater supply.

Key WIN projects include:

Leo J. Vander Lans Advanced Water Treatment Facility

The Leo J. Vander Lans Advanced Water treatment Facility is capable of producing 8 million gallons per day of advanced treated (microfiltration/ reverse osmosis/ultraviolet radiation plus hydrogen peroxide) water, which is then injected into the Alamitos Gap Seawater Intrusion Barrier located immediately to the south of the facility. The fresh water creates a hydraulic pressure barrier against seawater intrusion into the fresh water aquifers and also replenishes the Central Groundwater Basin.

Typical advanced water treatment facilities recover

about 80%, meaning 20% of the source water is wasted. To improve efficiency, WRD constructed this facility with two unique treatment processes. One is a microfiltration backwash recovery system; the other is a third stage high recovery reverse osmosis system. Together, these processes are capable of increasing the overall recovery rate from about 80% to 92%, equivalent to a waste reduction of 60%. By employing those two additional steps in

the treatment process, we are making every drop count.

Groundwater Reliability Improvement Program (GRIP)

The Groundwater Reliability Improvement Program will replace 21,000 acre feet of imported water currently being purchased for groundwater replenishment in the Montebello Forebay with locally produced recycled water. Construction will begin on the new Advanced Water Treatment Facility in the City of Pico Rivera, California, later this year.

Groundwater Reliability Improvement Program (GRIP) Turnout Structures

Currently under construction are two new turnout structures at the San Gabriel Coastal Spreading Basins. These turnout structures will increase operations at the spreading basins to allow increased quantities of recycled water to be spread for groundwater replenishment.

Providing an adequate supply of safe, affordable water to southern California is always a challenge, and for many years now WRD has been meeting that challenge with its innovative recycled water programs.

For additional information about the Water Replenishment District or any of its projects or programs, please contact Dr. Cathy Chang, Water Quality Program Manager, at cchang@wrdd.org or (562)275-4245.



Earle Hartling
is the Water
Recycling
Coordinator for
the Sanitation
Districts of Los
Angeles County, and has been
involved with water reuse for
33 years and counting. He ain't
getting any younger, so ask your
questions before it's too late!



Ask the Guru

Question: Just exactly how did the L.A. Chapter of WateReuse get started and when and who was in it?
— Just Wondering

Dear Wondering,

We have to go back in time several decades to answer this question. Believe it or not, as bad as this current drought is, it isn't our first rodeo. "Purple pipe" water recycling as we know it had its genesis following the 1976-77 drought, with construction of a number of distribution systems throughout the Los Angeles Basin starting not long after. This was good timing, because California entered into another drought around 1986-87 that peaked in 1991.

Several events were taking place in the late 1980's in the field of water recycling: accelerated growth of reuse due to the on-going drought which prompted the City of L.A. to form the (now defunct) Office of Water Reclamation, the State Department of Health Services (now the Division of Drinking Water) began its revisions of Title 22, and the L.A. County Health Department began its overview of reuse projects with new regulations.

To discuss these events and plot a path forward, staff from the Sanitation Districts of Los Angeles County, the City of Los Angeles' Office of Water Reclamation, Department of Water and Power and Bureau of Sanitation, the Central and West Basin Municipal Water Districts (back when they shared a single staff), the Metropolitan Water District, and the City of Glendale Department of Water and Power came together over lunch in February 1990.

From this initial lunch meeting was born the Los Angeles County Reclaimed Water Advisory Committee, or LACRWAC (pronounced "lacker-whack"). The Guru takes full responsibility/credit for this unfortunate/awesome acronym. Monthly lunch meetings were held on a rotating basis amongst this initial group and later members, the Long Beach

Water Department, the City of Burbank Department of Water and Power, the Las Virgenes Municipal Water District, and the State Department of Water Resources, among others, to discuss the burgeoning water recycling efforts in L.A. County. Whoever hosted that month's meeting bought lunch and got to be the meeting Chair! Very democratic.

You'll notice that representatives from the Regional Board and health departments were not included in these early meetings. Unlike our current cooperative and collegial relationship, the early days of water recycling were much more contentious and, dare I say, antagonistic between recyclers and regulators. Many of our first meetings were spent developing strategies for dealing with the regulations that were being proposed and acting as a counter-weight to the regulators. It took a lot of time and many, many interactions between staff from both sides to arrive at the point where we find ourselves now, on the same page (more or less) and driving water recycling forward.

LACRWAC eventually became the second local Chapter of the WateReuse Association, California Section (with a new acronym, LACWRA, bylaws and elected officers), opening its membership to that other disadvantaged and under-represented group: Consultants! As a group, LACWRA has made significant contributions to the water recycling industry: the Urban Irrigation Users' Manual, standardizing the cross-connection testing protocol, affecting positive changes in regulations and legislation, and research, amongst other things.

And the best thing about the evolved Chapter: the consultants buy lunch!



OUR MEMBERS

AECOM
Black and Veatch
Burbank Water and Power
California Department of Public Health
California Department of Water Resources
California Regional Water Quality Control Board
California State Water Resources Control Board
Calleguas Municipal Water District
Cannon
Carollo Engineers
Castaic Lake Water Agency
CDM Smith
Central Basin Municipal Water District
City of Cerritos
CH2M Hill
Dudek
Environmental Now
Eurofins Eaton Analytical
Forest Lawn
Glendale Water and Power
Irvine Ranch Water District
Kennedy/Jenks Consultants
City of Lancaster
Las Virgenes Municipal Water District
LEE & RO, Inc.
Long Beach Health Department
Long Beach Water Department
Los Angeles Bureau of Sanitation
Los Angeles Department of Public Health
Los Angeles Department of Public Works
Los Angeles Department of Water and Power
Los Angeles Regional Water Quality Control Board
Metropolitan Water District of Southern California
MWH Americas, Inc.
NALCO
Newhall Land and Farming Company
Pacifica Services, Inc.
City of Palmdale - Public Works Program Management

City of Pasadena
Phoenix Civil Engineering, Inc.
City of Pomona
Precise Landscape Water Conservation, Inc.
Psomas
RBF Consulting, a Baker Company
Red Wolf Studio
RMC Water and Environment
Rowland Water District
SA Associates
Sanitation Districts of Los Angeles County
City of Santa Monica
Sequia Technologies
Separation Processes, Inc. (SPI)
Surfrider Foundation
Test America
Three Valleys Municipal Water District
United Water
Upper San Gabriel Valley Municipal Water District
Valencia Water Company
City of Vernon
Walnut Valley Water District
Water Replenishment District of Southern California
WateReuse California
West Basin Municipal Water District



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Monica Gasca, Trustee to WateReuse
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GOT NEWS?

We're always looking for interesting stories and informational articles to keep our members up to speed on all that's happening in water reuse and reclamation. Email articles or ideas to Matthew Elsner (melsner@ci.burbank.ca.us) or Shelah Riggs (sriggs@dudek.com)

WateReuse Association: www.watereuse.org/sections/california/losangeles

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