



## President's Column

As we near the close of 2019 and look ahead to 2020, it has become apparent that the future of water reuse could be strongly influenced by the events of this year. WaterReuse California published the California WaterReuse Action Plan, recommending specific actions for the State of California to take to more than double water reuse and to prepare for the effects of climate change. Not to be outdone, the Environmental Protection Agency released its draft National Water Reuse Action Plan, which contained nearly 4 dozen proposed actions to support water reuse in the USA. Additionally, the Division of Drinking Water produced the second edition of the Proposed Framework for Regulating Direct Potable Reuse in California. This document informed the water reuse community that the direct potable reuse (DPR) regulations released in 2023 will encompass not only raw water augmentation, but all types of DPR. This update means “flange-to-flange” DPR, treated water augmentation, could become a reality in California sooner than previously expected. Combined, these three documents have the potential to significantly impact the future of water reuse in California.

For the WaterReuse LA Chapter, 2019 was a successful year with six meetings that had a total attendance of 425 people from 39 WaterReuse member agencies and other, non-member organizations. Those meetings included tours of the Hyperion Water Reclamation Plant and the Albert Robles Center for Water Recycling and Environmental Learning. Looking forward, the LA Chapter meetings will continue to provide the networking opportunities, legislative and regulatory updates, regulator interaction, technical topics and tours, and delicious lunches that all of you have come to expect. With the release of this newsletter, we are once again establishing a useful means of communication with those who are unable to attend our meetings. Our chapter will also seek to increase the attendance of non-governmental organizations (NGOs) at our meetings because NGOs are important stakeholders and influencers who can provide a valuable and distinct perspective on water reuse.

As always, do not hesitate to contact me at [fgerringer@hazenandsawyer.com](mailto:fgerringer@hazenandsawyer.com) if you want to support the chapter by volunteering or if you have ideas about how to improve our meetings. Your feedback and participation are always appreciated.

Happy Holidays!

Fred Gerringer, President  
WaterReuse California, Los Angeles Chapter



*Fred Gerringer, President of WaterReuse California Los Angeles Chapter, and Dylan Grise of Katz & Associates enjoying the 34th Annual WaterReuse Symposium in San Diego.*

### IN THIS ISSUE:

**President's Column**  
Page 1

**LA Shines at 2019 WaterReuse Symposium**  
Page 2

**PFAS: An Emerging Concern**  
Page 4

**Executive Committee Accomplishments**  
Page 5

### NEXT MEETING:

**February 11, 2020**  
11:30am - 1:30pm

**HOST:**  
Long Beach  
Water Department

**SPONSOR:**  
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# LA Shines at 2019 WaterReuse Symposium

*By: Evelyn Cortez-Davis, Assistant Director of Water, Operations, LADWP Water Operations*

This year’s national WaterReuse Symposium in San Diego on September 8-11 was a tremendous success! Attendance broke records with 1049 attendees from 38 states and 12 countries.

The achievements of WaterReuse members were recognized at the Awards Luncheon. Bill Van Wagoner, recently retired from LADWP, was awarded the National Advocacy Achievement Award for his career-long contributions to the advancement of recycled water use in L.A. Bill championed the East Valley Water Recycling Project, and worked to convert the system for non-potable reuse after the groundwater recharge permit for LA was rescinded in the early 2000’s. Bill’s advocacy in the face of such a significant setback kept the City of LA moving towards a reliable water future that includes recycled water. He was also a founding member of the LA chapter of WaterReuse. In addition, LA Sanitation, and the Sanitation Districts of Los Angeles County were both recognized as “Utilities of the Future”.

Planning for the next WaterReuse California conference in San Francisco this March 15-17, 2020 is well under way.



*Bill Van Wagoner recently retired Assistant Director of Water Engineering and Technical Services at LADWP celebrates his recognition as the National Advocacy Achievement Award recipient with his wife Lori.*



*Raymond Jay of MWD Former LA Chapter President, David Petersen Las Virgenes Municipal Water District General Manager, Ann Hill Los Angeles County Sanitation Districts, Grace David of LADWP, Dean Wang Long Beach Water Department, Amy Webb of LADWP, and Serene Hayes of LADWP celebrate a successful and informative Symposium.*

The WaterReuse LA Chapter had a strong and visible presence at the Symposium. Conference committee participants from L.A. included:

### Symposium Planning Committee

Dawn Taffler, PE, - Kennedy Jenks

### Technical Session Committee

R. Bruce Chalmers, - Metropolitan Water District of Southern California  
Paul Chau, PE, CEM, - Kennedy Jenks



# WaterReuse Los Angeles Chapter Newsletter

The technical program benefited greatly from the contributions of our members. Presentations by L.A. Chapter members included:

- **Panel Discussion: Making the Pitch: How to Speak With Elected Officials and Customers about the Value of Water Recycling** – Hubertus (Huub) Cox, Recycled Water Implementation Division (LASAN); Scott Houston (President, West Basin Municipal Water District Board of Directors)
- **WRD Grip UV/C-I<sup>2</sup> AOP for Indirect Potable Reuse:** Tom Knoell (Water Replenishment District of Southern California)
- **Federal Government Engagement Can Lead to Success:** Sharon Green (Sanitation Districts of Los Angeles County)
- **Regulatory Impacts of Decreasing Wastewater Flows on City of Los Angeles Water Recycling:** Stephen Opot (LASAN)
- **LAGWRP: Addressing LA's Water Needs Through Technology and Partnerships:** Yoshiko Tsunehara (LADWP); Roshan Aflaki & Joline Munoz (LASAN); Hannah Ford (Brown and Caldwell); Teresa Venezia (Trussell Technologies)
- **Engaging Future Ratepayers in Los Angeles:** Anthony Tew (LADWP)
- **Reduce Dependency on Imported Water in Los Angeles: Water Reuse is the Answer:** Azya Jackson (LASAN); Anthony Tew (LADWP)
- **The Secret of Developing State DPR Regulatory Frameworks:** Jeff Mosher (Carollo Engineers)
- **Implementation of a Large-Scale IPR Program with DPR Options on the Horizon:** John Bednarski (Metropolitan Water District of Southern California)
- **Nitrogen Management Strategies for Large-Scale Potable Reuse:** Zakir Hirani (Stantec); Gloria Lai-Blüml (Metropolitan Water District of Southern California)

- **Regional Approach to Brackish Water Reclamation in the West Coast Groundwater Basin:** Diane Gatza (Water Replenishment District of Southern California)
- **Innovative Design Concepts for an Advanced Water Treatment Demonstration Facility:** Zakir Hirani (Stantec); Gloria Lai-Blüml (Metropolitan Water District of Southern California)



*Yoshiko Tsunehara (LADWP), Joline Munoz (LASAN) , & Roshan Aflaki (LASAN) discuss the necessity of collaborating to meet challenges.*

## Call for Awards for the 2020 Annual Water Reuse California Conference in San Francisco

March 15-17, 2020 – applications due January 10, 2020 via the following link:

[watereuse.org/sections/watereuse-california/california-section-awards](https://watereuse.org/sections/watereuse-california/california-section-awards)

All WaterReuse members are eligible to submit nominations for these awards:

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

This a great opportunity to recognize the contributions of our LA Chapter organizations and individuals toward the advancement of water reuse.

# PFAS: An Emerging Concern

*By: Scott Grieco, PhD, PE, Jacobs. Global Technology Leader for Groundwater Treatment and Global Practice Leader for Emerging Contaminants*



PFAS (per- and polyfluoralkyl substances) are a unique class of compounds that are resistant to heat, water and oil and have been used for decades as firefighting foam and in hundreds of industrial applications and consumer products such as furniture fabrics, food packaging, clothing and water, grease or stain repellency. Environmentally, PFAS exhibit a combination of high persistence, solubility, and mobility.

Recent studies have shown PFAS in wastewater treatment plant (WWTP) influents. Conventional treatment methods do not efficiently remove PFAS and are detected in both treated effluent and biosolids. As PFAS in treated effluent are discharge to water recharge basins, PFAS cycling in the environment is becoming an increasing concern. Additionally, biosolids from WWTPs as a soil amendment can result in a transfer of PFAS to soil, which can then leach to groundwater or be available for uptake by plants and biota and bio-magnify in the food chain.

Even with its PFAS Action Plan released in 2016 and health advisory of 70 ng/L for PFOA (perfluorooctanoic acid) and PFOS (perfluorooctanesulfonic acid), the USEPA is taking a cautious approach in considering national standards. As such, states like California have taken action, recently establishing their own drinking water notification levels (NL) of 5.1 and 6.5 ng/L for PFOA and PFOS. Currently California DDW has set an interim response limit (RL) that matches USEPA's health advisory and expected to issue lower and RLs in January 2020.

In response, Orange County Water District (OCWD) has initiated the nation's largest PFAS treatment testing programs with Jacobs to evaluate different types of granular activated carbon (GAC) and ion exchange (IX) products, as well as novel adsorbents just emerging in the market. Programs like this can be used to determine which applications are best suited for diverse aquifer water quality and geochemistry, and can serve as a starting point to evaluate treatment for water reuse and aquifer recharge applications.

# Executive Committee Accomplishments

*We asked the Executive Committee, the founding members of the Los Angeles Chapter, what their greatest accomplishments in potable reuse have been this year. Here's what they said:*

## BURBANK WATER AND POWER (BWP)

BWP and Caltrans successfully retrofitted irrigation to recycled water along the I-5 from Tulare Street to Security Avenue located near the northern edge of Burbank.

## CENTRAL BASIN MUNICIPAL WATER DISTRICT

This year, Central Basin connected 10 new recycled water customers in our service area, including the Legacy High School complex in the City of South Gate and the Montebello Golf Course in the City of Montebello. Combined, the new site connections amount to 337 acre-feet per year of new recycled water use.

## GLENDALE WATER & POWER

In March of 2019, Glendale received an order from the State Water Resources Control Board, Division of Water Rights, approving increased recycling and reuse within Glendale's and Pasadena's service areas. Despite protests and an environmental lawsuit against increased water reuse, Glendale will be able to continue its 41 year history of water recycling and environmental stewardship by continuing to reduce its reliance on imported water supplies.

## LAS VIRGENES MUNICIPAL WATER DISTRICT

The LVMWD Pure Water demonstration facility and demonstration garden are more than halfway complete. In early 2020, the District will be releasing an RFP in support of a full-scale pure water facility and are extending the recycle water system north to provide irrigation services for Canyon Oak Park in Westlake Village.

## LONG BEACH WATER DEPARTMENT

The Port of Long Beach is the second busiest port in the United States and the largest potable water customer in the City of Long Beach. In 2019, Long Beach began studies to evaluate the feasibility to offset potable water uses in the Port of Long Beach with recycled water.

## LOS ANGELES DEPARTMENT OF WATER AND POWER

To meet Los Angeles Mayor Eric Garcetti's recently announced goal to recycle 100% of the City's wastewater for beneficial reuse, LADWP and LASAN are collaborating to deliver the Groundwater Replenishment Project and Operation NEXT Water Resiliency Program. Operation NEXT will transform the City's Hyperion Water Reclamation Plant, replenish groundwater aquifers, and create a tangible pathway to implement direct potable reuse to meet a third of the City's water demand.

LADWP has also partnered with Water Research Foundation and Trussell Technologies to study soil aquifer treatment using soil columns. Pathogen challenge testing demonstrated over 4 logs of cryptosporidium removal in a one month soil column, compared to 0 logs that would currently be granted by the regulations

## METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

### Regional Recycled Water Advanced Purification Center:

The 500,000-gallon-per-day demonstration facility takes cleaned wastewater from the Sanitation Districts' Joint Water Pollution Control Plant and purifies it using an innovative process that could significantly improve efficiencies and reduce costs in water recycling. Over the next 15 months, Metropolitan will put this treatment process through rigorous testing to ensure the process effectively removes impurities and the resulting water meets the highest quality standards. The testing and other analyses will help the agencies determine whether to grow the facility to a full-scale plant that could potentially produce up to 150 million gallons per day. Tours of the facility are being conducted now.

**Local Projects Program (LRP):** In 2019, Metropolitan approved six projects with a combined capacity of 47,000 AFY to be included in the LRP. Since inception in 1982, LRP includes 86 recycled water projects with a total capacity of 356,000 AFY. So far, Metropolitan has provided about \$500 million for production of approximately 3 million acre feet of recycled water through LRP.

**On-site Retrofit Program (OSRP):** In 2019, Metropolitan approved 59 sites with a combined use of 1,273 AF, which will receive about \$1.3 million under OSRP. To date, the OSRP has provided funding to replace 11,800 AFY of potable water with recycled water for 364 completed sites.

**Agencies Collaboration:** In 2019, Metropolitan continued its collaboration with WaterReuse, CUWA, ACWA, and legislation development to advance the use of recycled water. In addition, Metropolitan supported WaterReuse's activities and participated and made presentations at the WaterReuse conferences and local chapters.

## SANITATION DISTRICTS OF LOS ANGELES COUNTY

In recent years, the amount of the Sanitation Districts' effluent being beneficially reused has increased to roughly two-thirds of the available recycled water supply. This has been due not only to the increase in demand for recycled water but to the decrease in production from the water reclamation plants due to water conservation efforts. Therefore, the Sanitation Districts have branched out in its efforts to increase water recycling. Two, 4-million gallon flow equalization tanks at the San Jose Creek WRP are under construction and will be completed in early 2020, allowing for more daily production of recycled water from that facility that will be available for reuse. In October 2019, the Sanitation Districts, in conjunction with the Metropolitan Water District, celebrated the grand opening of the 0.5-MGD Regional Recycled Water Advanced Purification Center at its Joint Water Pollution Control Plant in Carson, a facility that had not been able to supply recycled water for beneficial use in the past. A full-scale facility could potentially produce up to 150 MGD of advanced treated recycled water.

## SANTA CLARITA VALLEY WATER AGENCY (SCV WATER)

SCV Water is in the process of expanding recycled water use in its service area. The Agency has recently completed design, advertised and received construction bids for two recycled water projects that would serve several schools, parks, and median landscaping. Construction is anticipated to start in February 2020 and be completed by Fall 2020. The total anticipated recycled water demand served by both projects is anticipated to be approximately 500 acre-ft per year.

## WATER REPLENISHMENT DISTRICT

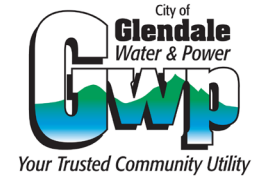
In 2019, the Water Replenishment District (WRD) unveiled the Albert Robles Center for Water Recycling and Environmental Learning and its state-of-the-art water recycling plant. This is the final piece of WRD's Water Independence Now (WIN) Program; a collection of projects that will allow WRD to manage the groundwater replenishment sources and provide a completely locally sustainable groundwater supply.

## WEST BASIN MWD

West Basin Municipal Water District completed their Recycled Water Pump Station Improvements Project in September of this year. The project, part of the District's ongoing Capital Improvement Program, demonstrates an investment in critical local infrastructure that helps provide the service area with drought-resilient, recycled water. In addition, their newly renovated Edward C. Little Water Recycling Facility Water Education Center was opened to the public in October. The commemorated the opening with an event consisting in a short speaking program and ceremonial ribbon cutting.



## Our Members



AECOM  
 Arcadis  
 Black & Veatch  
 Brown and Caldwell  
 Carollo Engineers  
 CDM Smith  
 City of Pasadena,  
 Department of Water and Power  
 DRP Engineering  
 ESA  
 Hazen and Sawyer

HDR  
 Jacobs  
 John Robinson Consulting  
 Katz & Associates  
 Kennedy/Jenks  
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 Los Angeles County  
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and Consulting  
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 Stantec  
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 Walnut Valley Water District  
 Well Aquatronics  
 West Yost Associated  
 Woodard & Curran