

Location: Cyberspace
Address: Zoom Call
Purpose: Bi-Monthly Meeting
Date and Time: August 11, 2020 from 11:30 a.m. – 1:00 p.m.
Distribution: Los Angeles WaterReuse Association Chapter Members and Supporters

Below is a summary of the highlight from the August 2020, bimonthly member meeting of the Los Angeles Chapter of the WaterReuse Association.

The presentations from this meeting can be found at:
<http://www.watereuse.org/sections/california/losangeles/meetings>

1. **Host Presentation: Operation NEXT: L.A.'s Recycled Water Transformation** (*Rafael Villegas/LADWP*)

Rafael Villegas of LADWP is a civil engineer with over 20 years of experience in public infrastructure and water utilities. He is the Program Manager for LADWP's Operation NEXT Water Supply Program which is the largest program since the original design and construction of the LA Aqueduct. This Program will recycle 100% of the wastewater from the Hyperion Water Reclamation Plant (WRP) and supply one third of the City of LA's water supply. LADWP is the largest municipal utility in the United States serving water and power to 4 million residents daily and its annual supply of water is just under 450 MGD.

LA's water sources include imported water conveyed by the State Water Project, LA Aqueducts and Colorado River Aqueduct, and local resources from groundwater and stormwater as well as water recycling. These sources of water are strained due to long term drought, climate change, and population growth, therefore, LADWP has taken targeted efforts to develop local water supplies for more sustainable and reliable water resources for future generations through multiple studies incorporated into LADWP's 2020 Urban Water Management Plan. The studies have indicated that the City of LA's water supply portfolio can be greatly diversified to provide more local resources - imported water supplied by Metropolitan Water District of Southern California can be reduced from 59% to an estimated 9%, while combined groundwater and recycled water use can increase from 14% to an estimated 72% by 2035.

The Operation NEXT Water Supply Program has been referred to by Mayor Garcetti as the City's next "Mulholland moment," with an objective of 100% recycled water from the Hyperion WRP by 2035 in coordination with the City's Bureau of Sanitation (LASAN). Hyperion is the largest treatment plant west of the Mississippi River, at a horizontal property size equivalent to Disneyland, with an average flow of 260 MGD and a capacity of approximately 800 MGD. It is estimated that 174 MGD can be yielded for recycled water uses. The main challenges with the conversion of the Hyperion WRP is that the property is land-locked, and wastewater treatment processing must be maintained while converting the plant from a traditional activated sludge process to membrane bioreactor (MBR) technology to provide for advanced treatment. MBR involves a smaller footprint which is advantageous for a land-locked property like Hyperion.

Once the 174 MGD of advanced treated water is produced, it will need to be conveyed to locations to be put to use. Many different options were researched and studied for the implementation of the use of the recycled water including injection and extraction as well as direct potable reuse (DPR) applications. The West Coast Basin and Central Basin would be able to support injection and

extraction. LADWP is also partnering with the Water Replenishment District of Southern California (WRD) to remediate a saline plume in the West Coast Basin. LADWP's strategic priority is to convey recycled water to its LA Aqueduct Filtration Plant where 70% of the service area can be served utilizing only gravity flow but will need to be pumped over the San Gabriel Mountains at an elevation of 1,100 feet. Between the Central, West Coast and San Fernando Basins there is approximately 1 million AF of available storage for injecting recycled water to replenish groundwater sources. Another potential partnership may include a pipe connection from Hyperion to Metropolitan Water District's (MWD) backbone pipeline to its Regional Recycled Water Program where MWD is anticipating that its pipeline will align along the San Gabriel River.

How the Operation NEXT program will impact the water system is that it will fundamentally change how the system will operate in that it is utilizing an unconventional water source that will result in supplying a third of the City's demand. There is complex groundwater governance which creates for inter-jurisdictional planning. LADWP extends its gratitude to LASAN, WRD and MWD for the collaboration and aligning of goals between the recycled water programs' partners that will result in benefits for the entire region.

The implementation strategy includes the development of the program management framework which would provide for cohesive oversight where teams are being built based on resource needs such as Public Outreach and Environmental and Regulatory Approval. The ongoing efforts include engaging potential partners, DPR regulations, a Financial Plan to incorporate more funding sources, and a Programmatic EIR.

2. **Technical Topic: What it Takes to Drink it Again: The Potential Energy Impacts of DPR in Los Angeles** (*Nicholas Chow/UCLA Luskin Center for Innovation*)

Nicholas Chow is a water engineering project manager for the UCLA Luskin Center for Innovation. His current work centers around policy and economic analysis on infrastructure related to water engineering as well as infrastructure hazards such as earthquakes, droughts and interactions between water and energy systems. The UCLA Luskin Center for Innovation is a policy and economics research center and think-tank that is housed at UCLA. The research presented herein was conducted for the California Energy Commission, which is the equivalent in the energy sector to the State Water Resources Control Board, focused on the grid-wide impacts of energy.

Southern California's water systems are very vulnerable to droughts and earthquakes and recycled water helps mitigate this vulnerability by producing more local water resources. The focus of this presentation is DPR, treated water augmentation, and raw water augmentation. California's Assembly Bill 574 requires the State to develop regulations for DPR by 2023 and the Energy Commission recognizes that advanced water treatment for DPR and IPR is very energy intensive. Many water systems that cannot do IPR due to lack of storage may be interested in DPR. Of LA County's wastewater facilities, 53% are planning potable reuse, 24% are unassigned for reuse, and 23% are currently producing reuse water.

The first stage of the research included identifying the existing wastewater facilities within LA County and selecting the largest 16 which were then further analyzed by surveying each facility's treatment process, waste management process, and its daily and annual energy consumption. The facilities ranged from 450 to 1,200 kWhr/AF where the average for wastewater treatment, based on literature values, is between 600 and 1,000 kWhr/AF. The three facilities that consumed above 1,000 kWhr/AF were due to special projects at the facilities; they also did not have the ability to separately meter the energy consumption for their special projects and their standard wastewater treatment processes; others included needing to do uphill pumping or they were at the end of their new upgrade cycle right

before the installation of more energy efficient pumps. Within LA County, wastewater treatment facilities use roughly 500 GWh/year of energy.

The next step of the research was identifying the different treatment processes utilized if the wastewater facilities were to include advanced water treatment processes. These included both the four main treatment trains commonly used in Southern California facilities, as well as those used in Florida which do not utilize reverse osmosis (RO), thereby reducing energy use significantly as well as reducing brine management with the associated cost savings. Each treatment unit process was modeled individually. If the four different treatment trains were applied to all of the wastewater facilities within LA County, it is estimated that the energy consumption would increase by a factor of 3. Comparing raw water augmentation compared to treated water augmentation, raw water augmentation would require a large amount of uphill conveyance requiring pumping. Therefore, from the energy perspective, DPR via treated water augmentation is the most advantageous in that it consumes the least amount of energy. As for greenhouse gas or carbon emissions, imported water has a much lower emissions impact relative to other water resource alternatives, however, in the future, there will be lower emissions by the other treatment processes.

With the adoption of DPR, LA's water and energy portfolio could shift significantly with local energy use for treating wastewater increasing by up to a factor of 3. Using DPR to offset more energy intensive water supplies will result in a large net savings and provide local water, and when considering the volume of water reused, LA County could easily provide 30-56% of its demand locally. Acknowledgments were provided to research partners including the California Energy Commission, CASA, the U.S./China Clean Energy Research Center of Water-Energy Technologies, LA County Sanitation District, the U.S. Department of Energy, Las Virgenes Municipal Water District, San Diego County, West Basin Municipal Water District, LASAN and Trussell Technologies.

3. **Water Recycling Legislative/Regulatory Updates** (*Raymond Jay/MWD*)

California Legislation

The COVID-19 pandemic has compressed the legislative calendar and limited the legislation from which they have had to prioritize certain measures. Due to the economic outlook, future bonds and funding have been reduced or removed.

Climate Resiliency Bonds – needs 2/3 of the vote to be on the November 2020 ballot

- SB 996 (Portantino) – Establish CEC Drinking Water Program at SWRCB and expected reintroduction in 2021 since it was removed from consideration in 2020 due to COVID-19

California Water Resilience Portfolio

- Governor has adopted the Resilience Plan including funding for SWRCB non-potable reuse
- California FY20-21 CWSRF and DWSRF IUPs adopted
- California Budget impacted by COVID-19 where estimated \$6 billion surplus is a \$56 billion deficit
- Wastewater Change Petition, Draft Section 1211 Checklist is under review
- Recycled Water Volumetric Reporting to track and meet recycled water goals
- Title 24, 22, and 17 Handbook being developed and Draft Handbook to be released

- Public comment period for Plumbing code for use of change over devices to be public on July 14th

Federal update

House and Senate are negotiating a COVID-19 relief bill

FY 2020 Appropriations enacted:

- CWSRF = \$1.638B
- DWSRF = \$1.126B
- Title XVI = \$63M
- WINN = \$20M
- WIFIA = \$60M
- Aquifer Storage = \$10M
- Innovative Water = \$1M
- Stormwater Reuse = \$25M
- Research Program = \$6M
- Desalination = \$20M

FY Appropriations enacted where the FY 2021 initial Appropriations request were significantly reduced.

National Water Reuse Action Plan – EPA and stakeholders working on multiple implementation tasks.

- S. 3590 & S. 3591** – Water Resource Development Act – Drinking Water Infrastructure Act (Barrasso) & American’s Water Infrastructure Act (Barrasso) – no schedule for full Senate to vote.
- S. 3590** Drinking Water Infrastructure Act (Barrasso) – Will amend the Safe Drinking Water Act, provide funding to disadvantaged communities, establish a competing grant program to assist small, medium and large community water systems capital improvements and meet compliance challenges and includes \$300 million for groundwater clean-up. Requires EPA to set a drinking water standard for PFOA and PFOS within two years.
- S. 3591** American’s Water Infrastructure Act (Barrasso) – authorizes \$17 billion in new water infrastructure projects, reauthorizes and increases funding for CWSRF and WIFIA where the CWSRF increases funding from \$2 billion to \$3 billion per year from 2022 to 2024 and the WIFIA authorizes \$50 million per year from 2022 to 2024. A pilot program for alternative water source projects authorizes \$25 million per year from 2022 to 2024. This bill would create for a Water Reuse Interagency Working Group and provides funding for research on quagga mussel prevention and invasive species control in the Colorado River.
- HR 2** – Moving Forward Act (DeFazio)
Focused on Infrastructure and USACE – Passed in the House and sent to the Senate
- HR 1162** – Water Recycling Investment and Improvement Act (Napolitano)
Title XVI increase appropriation from \$50M to \$500M and federal funding ceiling from \$20M to \$30M – Delete funding priority for projects identified by U.S. Drought or as a disaster area for the past 4 years – Last Action 06/13/2019 Subcommittee Hearings
- S. 1932** – Drought Resiliency and Water Supply Infrastructure Act (Gardner)
Authorizes for Fiscal Years 2020 to 2024 \$640M for Surface and Groundwater Storage, \$100M for water recycling and reuse, and \$60M for desalination. Authorizes for Fiscal Years 2021 to 2025 \$150M and deauthorizes for water recycling projects – Last Action 07/18/2019 Subcommittee Hearings
- S. 4188** – Water for Tomorrow Act of 2020 (Harris)

S. 4189 – Water for Conservation and Farming Act (Wyden)

HR 5302 – Western Water Recycling and Drought Relief Act (McNerny)

Amend Title XVI to add projects to Congressional Approved List – Authorizes appropriations for 12 projects (11 for Northern California and 1 for HI) – Limit Federal cost shares to 25% – Last Action 12/13/2019 Introduced Legislation

HR 3723 – Desalination Development Act (Levin)

4. Regulatory Agency Update

a. Los Angeles Regional Water Quality Control Board (*Steven Webb*)

- Still working on MRP amendments to ensure that DPR permits consistent with the water quality policy CEC requirements.

b. LA County Department of Public Health (*Glenn van Eekhout*)

COVID-19 Health Order Kind Counsel from car dealerships to gyms for compliance

- SoFi Stadium in Inglewood still undergoing construction - July 16th included a baseline test for all fixtures inside the Stadium, July 30th inspected outside infrastructure including the cistern, and July 31st included a shutdown for two 12" domestic water mains. Special thanks to West Basin MWD and Tetra Tech for coordinating shutdowns.
- People mover at LAX undergoing construction. For dual plumbing and anything other than irrigation involves a separate plan-checks.
- Caution story: Santa Monica Mylar balloon released on August 2, 2020 and blew up a transformer where the domestic pipeline fused with the gas line where water was within their gas ranges.

c. State Water Board Division of Drinking Water Programs (*Saeed Hafeznezami*)

- DPR Regulations are moving forward where only one regulation package is being developed for all DPR scenarios; the latest framework document for DPR is available on the DDW website
- Cross-Connection Control Handbook is being drafted and will be out for public comment by the end of 2020 where it will replace Title 17 regulations and the non-potable reuse regulations will also be updated per the Cross-Connection Control Handbook
- Regulations for onsite treatment and reuse for non-potable end uses are being drafted and on schedule
- All Title 22 Engineering Reports for recycled water permits issued before January 1, 2001 need to be updated per the new recycled water policy

5. California State Section Update (*Evelyn Cortez-Davis*)

- Last WaterReuse CA Board of Trustees Meeting was held on August 7, 2020
- Los Angeles County Sanitation Districts SARS COVI-2 Testing
- Nominating Committee – Two Vacancies on WRCA Board
 - Norma Camacho – Valley Water, retired; term would have expired 2021
 - Alex Coate – EBMUD, retired; term would have expired 2023

- Joint Economic Stimulus Plan
 - No Climate Bond will be on November ballot - filing deadline was not met
 - WaterReuse submitted water reuse recommendations to the Governor in the process
- Budget AB 574 Expert Panel Funding
 - Funding not included in Governor's budget
 - Panel is needed to review DPR research project for regulation formation
 - MWD, LADWP, and Valley Water previously committed to funding panel
- CWSRF Financial Capacity Report and Programmatic Review
 - WRCA Action Plan – Streamline CWSRF application process
 - Support development of scope and estimate for funding programmatic review
- PFAS-PFOA Update
 - POTWs began receiving orders to conduct sampling and analysis of PFAS
 - Order focuses on 31 PFAS analytes
 - Sampling to begin no earlier than 4th Quarter 2020 (Oct.-Dec. 2020)
- CUWA: Enabling Widespread Water Reuse
 - CUWA preparing brief on *Enabling Widespread Water Reuse in California*
 - Approved contribution of \$5K toward completion of white paper
- CWEA Clean Water Magazine: November 2020 Issue
 - November 2020 publication to be a DPR Edition Magazine
 - WRCA will serve as a "Guest Co-Editor" and will have access to articles
- Congratulations to Robb Whitaker of the Water Replenishment District for his ACWA 2020 Excellence in Water Leadership Award!
- WaterReuse mourns the loss of Bahman Shiekh who served on the Board of Directors for WaterReuse of California and chaired almost every committee. He was honored twice with the Outstanding Service Award and President's Award of Appreciation.
- Save the Date for the WaterReuse Virtual Symposium – September 14-16, 2020
 - <https://watereuse.org/news-events/conferences/35th-annual-watereuse-symposium/>

6. Chapter Updates (*Judi Miller*)

The June 2020 Member Meeting Summary was approved. Announcements from the member committee included:

- Member montage (*Sam Landsman*)
 - *Our members are involved in lots of fun hobbies outside and inside during these interesting times which keep our mental health and morale up!*

Membership is at the national level of the WaterReuse Association. While most of our LA Chapter participants are members via their employer, participation in the Chapter is not

contingent on WaterReuse membership. However, certain activities (such as voting and holding leadership positions) are restricted to members only.

If you would like further information about your organization becoming a WaterReuse member, please contact Erin DiMenna, Director of Membership at edimenna@watereuse.org or 571.445.5505.

7. Membership Roundtable (*Jared Lee*)

The Membership Roundtable is an opportunity for agencies to share their accomplishments and challenges with, or seek input from, the LA Chapter WR members.

Seeking featured member agency for the next meeting in October: Great opportunity for agencies that would like to host but have had lack of space to allocate for all members in the past in-person meetings.

Agency Perspectives During COVID-19

LA County Sanitation – Suzanne Brown

- SARS COVI-2 Virus wastewater treatment plants influent and effluent testing
- San Jose Creek Treatment Plant and Joint Water Pollution Control Plant results
- Have not detected the virus in any of the effluent samples

Las Virgenes Municipal Water District – Darrell Johnson

- Created for many changes during COVID-19 where instead of a 9-80 shift, have 12-80 shifts with two separate teams that are quarantined from the other team
- Office staff currently is 25% in office and 75% telecommute

Santa Clarita Valley Water District – Shadi Bader

- Social distancing efforts and distributing thousands of masks to other agencies as well
- Emergency Administrative Leave Policy for employees that contract COVID-19
- Cleaning regimens between shifts especially for Operators
- IT Department has been working hard to secure equipment against hacking
- Hybrid schedule involving in-office or field work and teleworking
- Transitioned many of staff meetings to virtual conference calls

City of Santa Monica – Corey Bracken

- City's Emergency Operation Center ensures consistency and PPE distribution across all departments including masks, gloves, and sanitizers
- Split operations into two shift teams with Day shift and Night shift so that one team can quarantine themselves from the other team in cases of COVID-19 contraction
- For in-office staff, largely working from home, or in-office to answer phone calls in a rotated schedule, and in-office staff's health is monitored via a form and temperature checks



8. Next Meetings

- October 13, 2020 – Virtual Meeting
- December 8, 2020 – TBD

9. **Adjournment** 1:00 p.m.

Los Angeles Chapter Officers for 2019/2021

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Judi Miller, Secretary/Treasurer	213-228-8236
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