

Location: Zoom registration link

https://us02web.zoom.us/meeting/register/tZwkd-6tqjsiH9ztJm_6CN-heC5W3IEcOK7V

The mission of Los Angeles Chapter of the WateReuse Association is to increase the amount and safe beneficial uses of recycled water in and around Los Angeles County. Its objectives shall be to promote water reclamation and recycling as a sustainable supplemental source of water for the state; to work for the adoption of legislation and regulations that allow the safe use of recycled water; to facilitate the development of technology aimed at improving water recycling; to promote legislation that would increase funding for water recycling projects; to provide mutual assistance and support between and among Chapter members involved with water recycling projects; and to increase public awareness and understanding of related water problems and solutions.

- 1. Host presentation: Glendale Recycled Water Update 2021 (*Richard Ruyle*/ *Glendale Water & Power*)
- 2. Technical Topic: Orange County Water District's Groundwater Replenishment System Expansion to 130 MGD (Sandy Scott Roberts/OCWD)
- 3. Water Recycling Legislative/Regulatory Updates (Raymond Jay)
- 4. Regulatory Agency Update
 - a. Los Angeles Regional Water Quality Control Board (Steven Webb)
 - b. LA County Department of Public Health (Glenn Van Eekhout)
 - c. SWRCB Division of Drinking Water (Saeed Hafeznezami)
- 5. California State Section Update (Rafael Villegas)
- 6. Chapter Updates (Judi Miller)
 - a. Approval of February, 2021 Member Meeting Summary
 - b. Young Member Committee Update (Alex Waite)
- 7. Membership Roundtable (Jared Lee)
- 8. Next Meetings
 - June 8, 2021 virtual
 - August 10, 2021 virtual?
- 9. Adjournment 1:00 p.m.

Los Angeles Chapter Officers for 2019/2021

Fred Gerringer, President	626-319-1107	fgerringer@hazenandsawyer.com
Jared Lee, Vice President	626-379-8443	JLee@burbankca.gov
Judi Miller, Secretary/Treasurer	213-228-8236	judi.miller@jacobs.com
Rafael Villegas, Chapter Trustee	213-367-1289	rafael.villegas@ladwp.com
Raymond Jay, Past-President	213-217-5777	rjay@mwdh2o.com

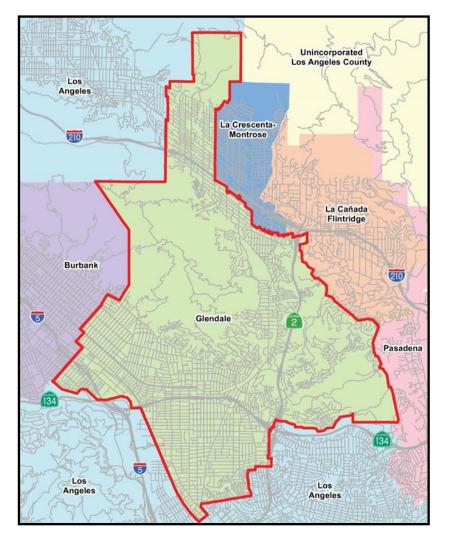


Glendale Water & Power

Water Sustainability Update

WaterReuse – Los Angeles April 13th, 2021

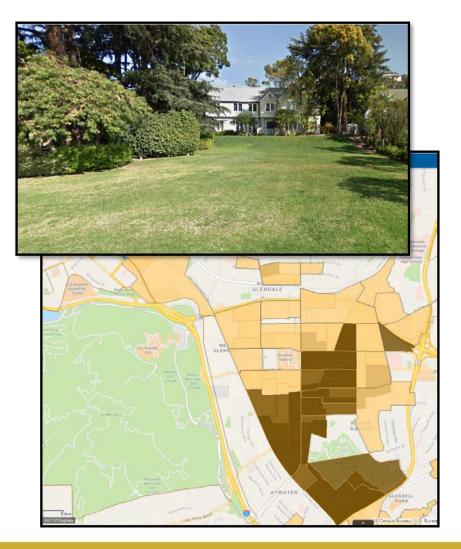
City of Glendale & Water



- Incorporated 1906
- Fourth largest City in LA County
- Approx. 200,000 Residents
- Approx. 33,000 water services
- One of Founding MWD Member Agencies in 1928
- Pumper in San Fernando Basin and Verdugo Basin – 30% to 40% local supply
- Co-owner of LA Glendale Water Reclamation Plant
- First recycled water use in 1978
- Currently over 7% of demand is local recycled water



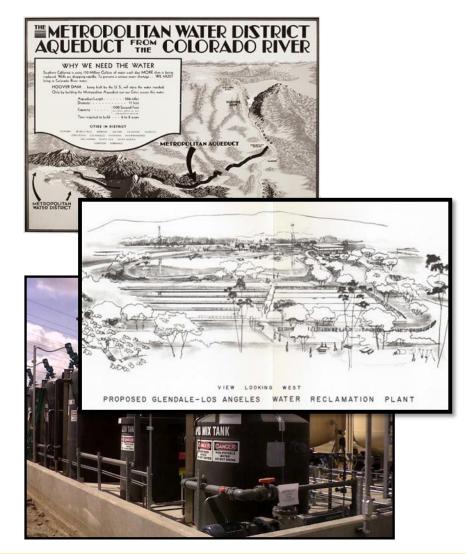
Customers



- 33,000 water services
- 89,000 electric services
- 48,000 multi-family units
- 22,000 single family units
- 73% of water sales to residential
- 82 recycled meters
 - Irrigation
 - Dual plumbing
 - Dust control
 - Industrial



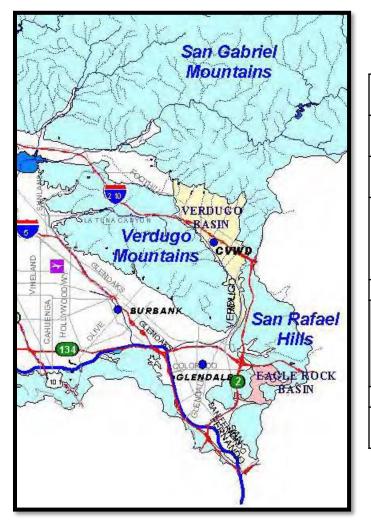
History of Innovation



- 1928 Glendale is one of the 13 Original Member Agencies
- 1968 Glendale and City of LA Partner on a Regional Water Reclamation Plant
- 1976 LA Glendale Water Reclamation Plant Completed
- 1992-2014: Glendale Invested Over \$20.3 million in Recycled Water System Expansions
- Cr6 removal research 2001 to 2013
- Full AMI Implementation 2012



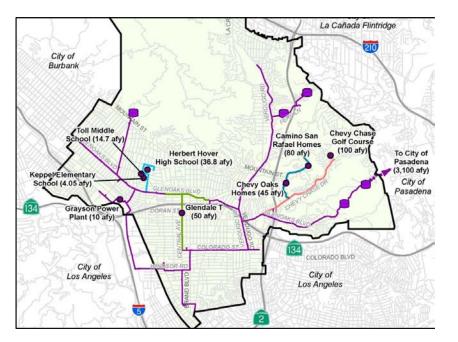
Glendale Sources of Supply



Water Source	Volume in ACFT	Percent of Total (%)	Notes
San Fernando Basin	7,569	31%	Limited to return flow credit and physical solution.
Verdugo Basin	881	4%	Limited by declining groundwater levels.
LAGWRP	1,712	7%	Limited to 50% of recycled production from the plant and Glendale's longstanding agreement with Pasadena.
Customer Water Demand (Potable & Recycled)	24,273	100%	Varies on customer needs, mainly affected by local weather. Declining due to conservation.
MWD	14,111	58%	Difference needed to meet Customer Demands.



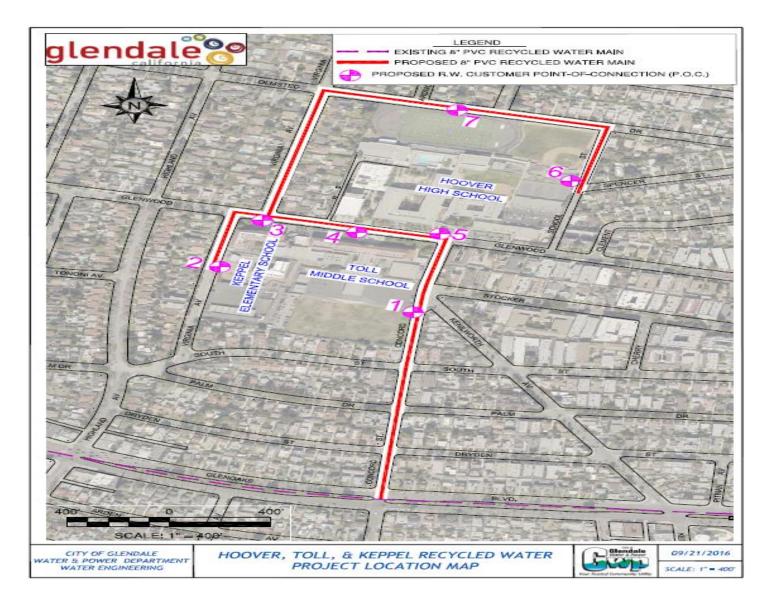
Recycled System



- Source LAGWRP
- 1211 Wastewater Change Petition order issues from Division of Water Rights for Expansion and use in Pasadena and Glendale
- Joint GWP LADWP system from LAGWRP to first pressure zone
- Peak delivery 2,000 ACFT prior to 2015 water supply shortage



Lessons Learned – RW Expansion



A Long History

- One mile of 8" pipe, \$1,000,000 +
- Conceptual phase until now: 10 years +
- Prop 84 matching grant
- Staff turnover
- No LOA or MOU finalized with customers
- Customer faced budgetary challenges for onsite retrofits
- Resulted in delay of final connections

Rate Update





- COSA 2018
- Current potable rates allocate "least expensive water" to Tier 1 - \$2.61/HCF, Tier 3 -\$3.99/HCF
- Adjusted recycled volumetric rate down to \$2.64/HCF from \$2.70 for commercial and \$2.81 for irrigation
 - Depreciation expense for recycled system main driver of rate reduction



Sustainability

Glendale Water & Power has provided the foundational services needed for residents to live and businesses to prosper for over 100 years. ... There are many ways to make a city sustainable. This includes using a city's resources for more than one use. ... Glendale Water & Power has been doing just that with water since 1978. The year 2018 was the 40th anniversary of recycled water use in the City of Glendale. In fact, GWP has been recycling water so long the process has even changed names from "reclaimed water" to "recycled water". What is recycled water? Simply put, it is water that has been used more than once. ... This reuse frees up enough potable water to serve 6,000 homes every year, and reduces the amount of water the City needs to import form the Colorado River or Bay Delta. ... Glendale Water & Power, 100 years of reliable and efficient service, and 40 years ahead of the curve on sustainability.



Q&A









The Groundwater Replenishment System Final Expansion Project

Presented for LA WateReuse Member Meeting

by Sandy Scott-Roberts, PE GWRS Program Manager

April 13, 2021

ORANGE COUNTY WATER DISTRICT (OCWD)

- Formed in 1933 by California Legislature

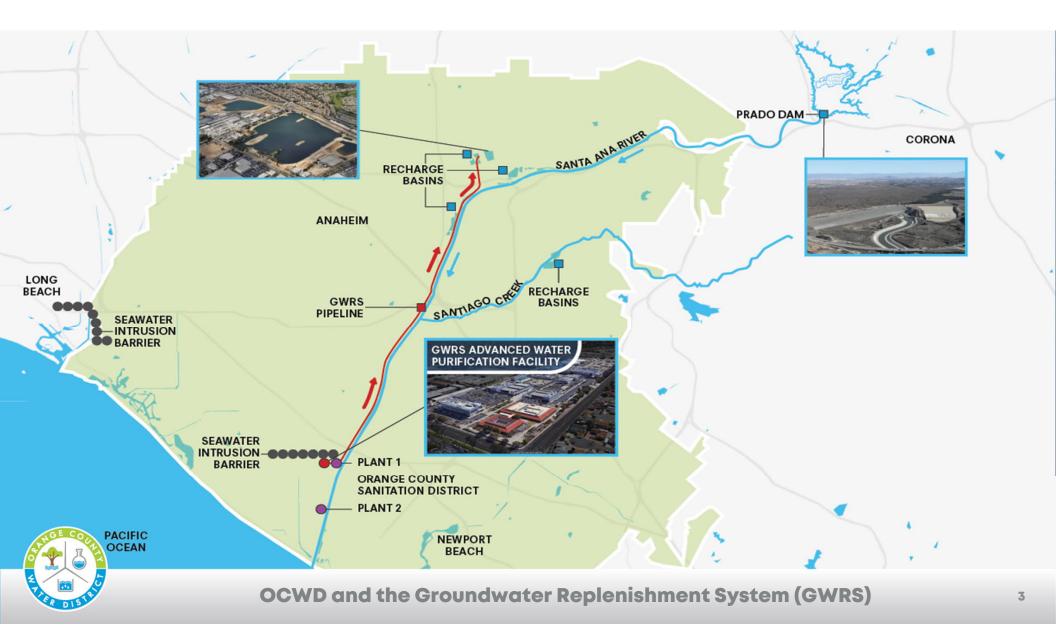
 Manage the OC Groundwater Basin
 Protect rights to Santa Ana River water

 Provide groundwater
- Provide groundwater
 - -19 municipal and special water districts
 - -2.5 million customers in north & central OC



• Basin provides 77% of the water supply for north & central OC





Current GWRS Facility:

- Produces <u>100 MGD</u> of purified water
- MF, RO, UV, Post Treatment
- Influent is from OCSD Plant No. 1
- Designed to accommodate a final expansion

Expanded GWRS Final Expansion Facility:

- Will produce <u>130 MGD</u> of purified water
- Influent will be from OC San Plant No. 1 and OC San Plant No. 2 (Huntington Beach)
- Includes Conveyance Facilities from OC Sab Plant No. 2
- Includes segregated non-reclaimable influent flows













- Original Project Partners for the GWRS System -OC San & OCWD
- OC San Plant No. 1 influent is activated sludge (80%) and trickling filter (20%) secondary treatment for GWRS
- Activated sludge uses nitrification/denitrification producing excellent water quality
- Plant No. 2 influent is trickling filter solids contactor secondary effluent
- Non-reclaimable flows like brine streams, solids handling effluents, and certain chemical streams are diverted away from GWRS

New P2 Influent Water Quality Will Affect Design of GWRSFE Facility

170 MGD Required Influent to produce 130 MGD

- Influent from P1: 120 MGD
- Influent from P2: 50 MGD

• P2 Water Quality Affects

- Higher Ammonia Increase MF/RO Fouling
 - Resulted in MF membrane Design Change
- Higher TDS Increases RO feed pressure
 - Resulted in RO Pump Design Change
- Increased Alkalinity Increase in sulfuric acid use

Constituent	Current GWRS Influent	Predicted GWRSFE Influent
Suspended Solids	5 mg/L	7.1 mg/L
Turbidity	2 NtU	3.1 NtU
Ammonia	2.1 mg/L	8.5 mg/L
Boron	0.38 mg/L	0.57 mg/L
Silica (SiO2)	20.2 mg/L	22.6 mg/L
Total Dissolved Solids	1035 mg/L	1408 mg/L
Total Organic Carbon	9.2 mg/L	10.3 mg/L
Alkalinity	196 mg/L	234 mg/L



- Current RO System is a 100-MGD threestage process (78-48-24 array)
- 85% Recovery Rate
- GWRSFE Project Interstage Boosters are required to maintain the 85% recovery rate
- OCWD R&D Department conducted pilot studies on RO Concentrate Recovery Systems
 - Closed Circuit Reverse Osmosis
 - Forward Osmosis RO System
 - <u>Future:</u> Flow Reversal RO System
- Goal of ROC Recovery pilot work is to determine realistic recovery and cost for large scale system



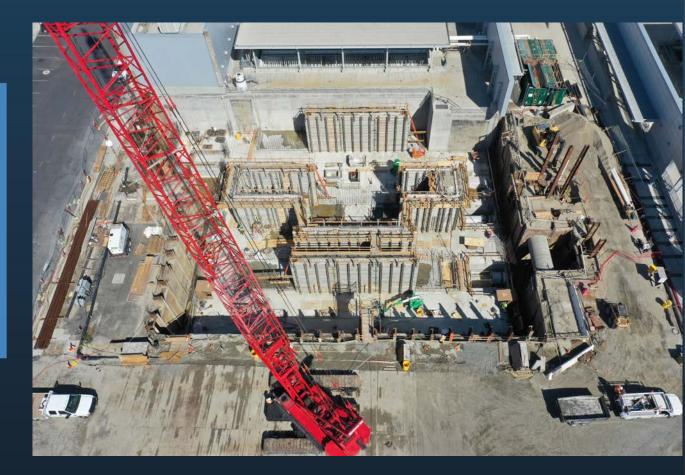
Reverse Osmosis System



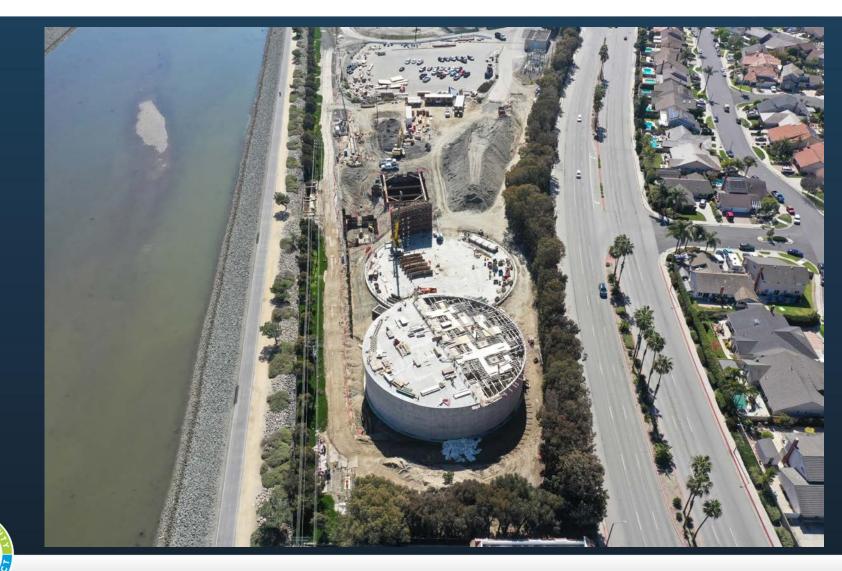
Groundwater Replenishment System – Treatment Plant

Construction Phase of the GWRSFE Project

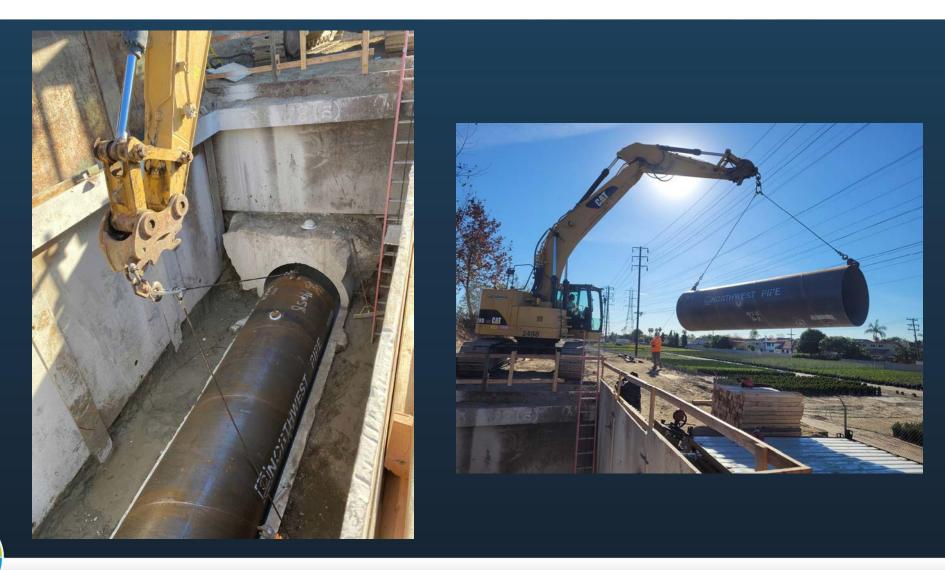
- Design Completed in February 2019
- Construction Awarded to Shimmick Construction Company Inc. (SCCI) in November 2019
- Construction Contract
 Amount: \$199.9 million
- Construction Completion: February 2023



Microfiltration Facility Expansion



OC San Plant No. 2 Conveyance Facilities





Pipeline Rehabilitation Project - Slipline

Questions?

Sandy Scott-Roberts, P.E. GWRS Program Manager, OCWD 714-378-3292 sscott@ocwd.com

18700 Ward Street
Fountain Valley, CA 92708
www.ocwd.com



WateReuse California Los Angeles Chapter Meeting

Solution WATEREUSE LOS ANGELES

April 13, 2021 Legislation & Regulation Update

Raymond Jay Metropolitan Water District of Southern California (213) 217-5777 or rjay@mwdh2o.com

2021 California Legislative Calendar

🧕 Jan. 1

Jan. 10

Apr. 30

May 7

June 4

June 15

🔮 Sept. 10

Feb. 19

0

0

0

0

0

.

- Statutes take effect
- Jan. 4 Legislature reconvenes
 - Governor submits budget to Legislature
 - Last day for bills to be introduced
 - Last day policy comm. to report fiscal bill
 - Last day fiscal comm. to report fiscal bills
 - Last day for bills to pass house of origin
 - Last day to pass budget
 - Last day for any bill to be passed
- Oct. 10 Last day for Governor to sign or veto bills
- See: <u>http://assembly.ca.gov/legislativedeadlines</u>

Climate Resiliency Bonds

- SB 45 (Portantino): Wildfire Prevention, Safe Drinking Water, Drought Preparation, and Flood Protection Bond Act of 2022
 - \$5.5 billion Bond; \$100 million for water recycling
 - WRCA requested \$ 1.5B for recycled water projects
 - Make funding for RW primarily grants
 - Coordinate amendments with CA Coastkeeper
 - Revise project priorities including energy efficiency

AB 1500 (Garcia): Safe Drinking Water, Wildfire, Drought, Flood Protection, and Workforce Development Bond Act of 2022

- \$6.7 billion Bond; \$300 million for water recycling
- https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB1500

AB 836 (Gabriel): CBSC: recycled water: nonpotable water systems

- Require dual plumbing for newly constructed nonresidential buildings by 2023 in an existing or planned recycled water service areas
- Require dual plumbing <u>and</u> provide for the collection, onsite treatment, and reuse of onsite rainwater, graywater, and foundation drainage in newly constructed nonresidential buildings over 10,000 sq. ft.
- Use recycled water for all nonpotable water demands
- Require SWRCB to establish a large onsite nonpotable water system by 2024 for local jurisdictions without a local onsite program and a fee schedule.
- Establish project-by-project waiver if SWRCB finds significant adverse impact on public health, downstream water rights, water quality, operation of sewer collection or treatment system or fish & wildlife.
- WRCA has an oppose and seek amendments position
- Letter is being finalized based on policy principle that alternative water supply sources and/or RW practices should remain at the local level

AB 1434 (Friedman): Urban water use objectives: indoor residential water use

- Lower indoor water use requirements
- Meeting scheduled on 4/15
- Request complete research before lowering std.
- Need to included stakeholder involvement
- WRCA and other associations oppose

Water Use Efficiency Implementation

- Water Conservation and Drought Planning
 - AB 1668 (Friedman, 2018)
 - SB 606 (Hertzberg, 2018)
- Establish water use efficiency objectives & reporting
- Initial indoor water use of 55 gallons per person per day decreases to 50 GPPD by 2030
- Potable reuse credit of 10-15% for new or existing facilities
- Follow Model Water Efficiency Landscape Ordinance for outdoor uses
- No penalties before Nov. 2027

Other Water Legislation

- SB 222 (Dodd): Water Affordability Assistance Program
- SB 223 (Dodd): Discontinuation of residential water service
- SB 230 (Portantino): SWRCB: Constituents of Emerging Concern Program
- AB 377 (Rivas): Water quality: impaired waters
- AB 1195 (Garcia): Southern Los Angeles County Human Right to Water Collaboration Act

Regulatory update

Direct Potable Reuse in California

- Adopt regulations by 2023
- Framework Addendum 3/22/21
- https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/direct_potable_reuse/dprframewka ddendum.pdf
- Workshop 4/14/21 11:00 1:00 PM

Cross Connection Control Handbook

Hearing April 27, Comments Due April 27

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/cccph/cccph_draft_feb2021.pdf

Water Use Efficiency Implementation
 Comments by 5/13/21

Federal Update

- American Recovery Plan Act
- STREAM Act (similar to S. 1932 from 2020)
 \$250 M for Recycled Water
- S.914 Drinking Water and Wastewater Infrastructure Act of 2021
- Recommend revision to alternative source project
- National Water Reuse Action Plan 4/29/21 workshop
- Water week 4/27-28/21

Questions?

If you have any questions, please contact:

Raymond Jay, Past President

SANGELES

c/o Metropolitan Water District of Southern California 700 N Alameda Street Los Angeles, CA 90054 (213) 217-5777 rjay@mwd.h2o.com

Regulatory Agency Updates

➤Los Angeles Regional Water Quality Control Board

- Steven Webb
- Los Angeles County Department of Public Health - Glenn Van Eekhout
- State Water Board Division of Drinking Water
 Saeed Hafeznezami



Last WateReuse CA Board of Trustees Meeting: February 5, 2021

• DPR Regulations, Review of SB45, AB1500, Biden's Infrastructure Bill

<u>36th Annual WateReuse Symposium</u>

• Streaming now through April 23, 2021





Draft DPR Criteria Panel Discussion

- April 14th 11am-1pm PST
- Draft DPR regulations released on March 22
- Register directly on WateReuse California (WRCA) website





<u>36th Annual WateReuse Symposium – Member Spotlight</u>





















<u>36th Annual WateReuse Awards</u>

2021 WateReuse Awards **EXCELLENCE IN ACTION**



West Basin Municipal Water District
SoFi Stadium and Hollywood Park

Members received the Excellence in Action Award for SoFi Stadium and Hollywood Park





<u>36th Annual WateReuse Awards</u>



2021 WateReuse Awards for Excellence & Annual Business Meeting Members received the Transformative Innovation Award for the Hyperion Membrane Bioreactor Pilot Facility Project









2021 WateReuse CA Conference is coming to LOS ANGELES! SAVE THE DATE: September 12-15, 2021



Chapter Updates (Judi Miller)

➢ February Meeting Summary

Volunteer OpportunitiesMeeting Summary preparation

Young Member Committee Update- Alex Waite

Membership Roundtable (Jared Lee)

Next Meetings

≻Tuesday, June 8, 2021 – Virtual

≻Tuesday, August 10, 2021 – Virtual?

