



# Pure Water Silicon Valley DPR Demonstration Facility Project

Presented by: Medi Sinaki, P.E., Senior Engineer at Recycled and Purified Water Unit and Kristen Yasukawa, Civic Engagement Manager

# Santa Clara Valley Water District (Valley Water)

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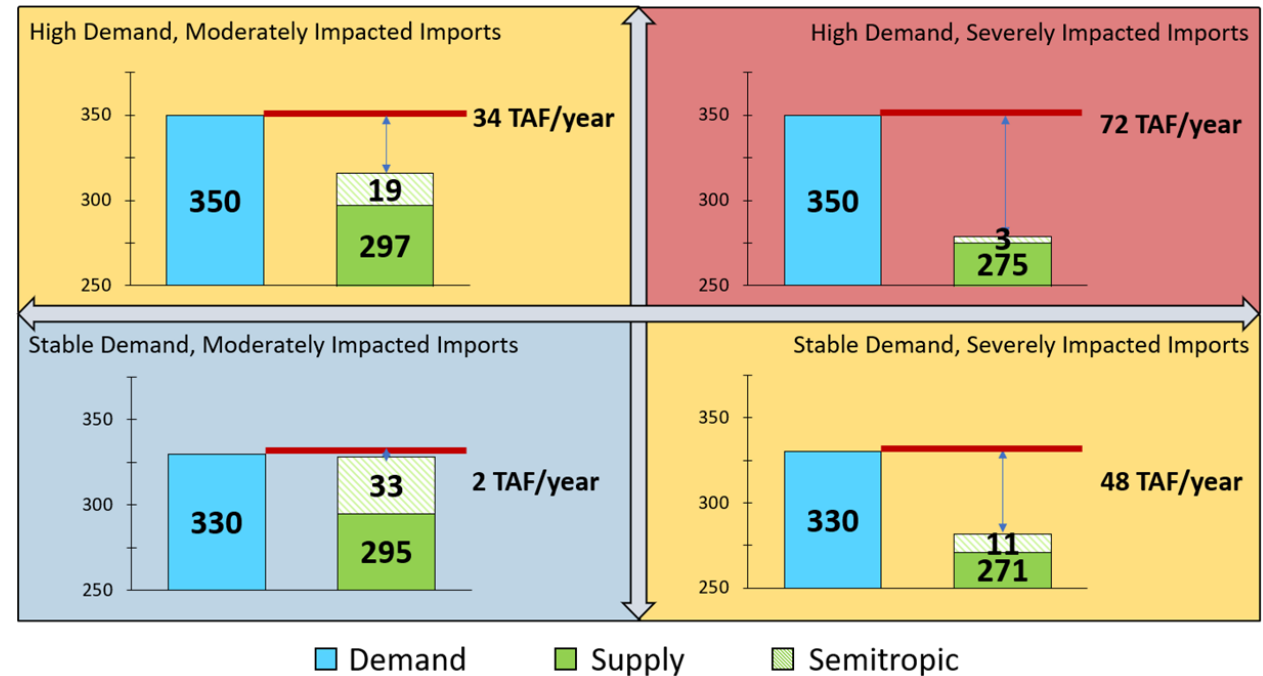


# Water Supply Master Planning & Potable Reuse: Meeting Challenges for a Sustainable Future

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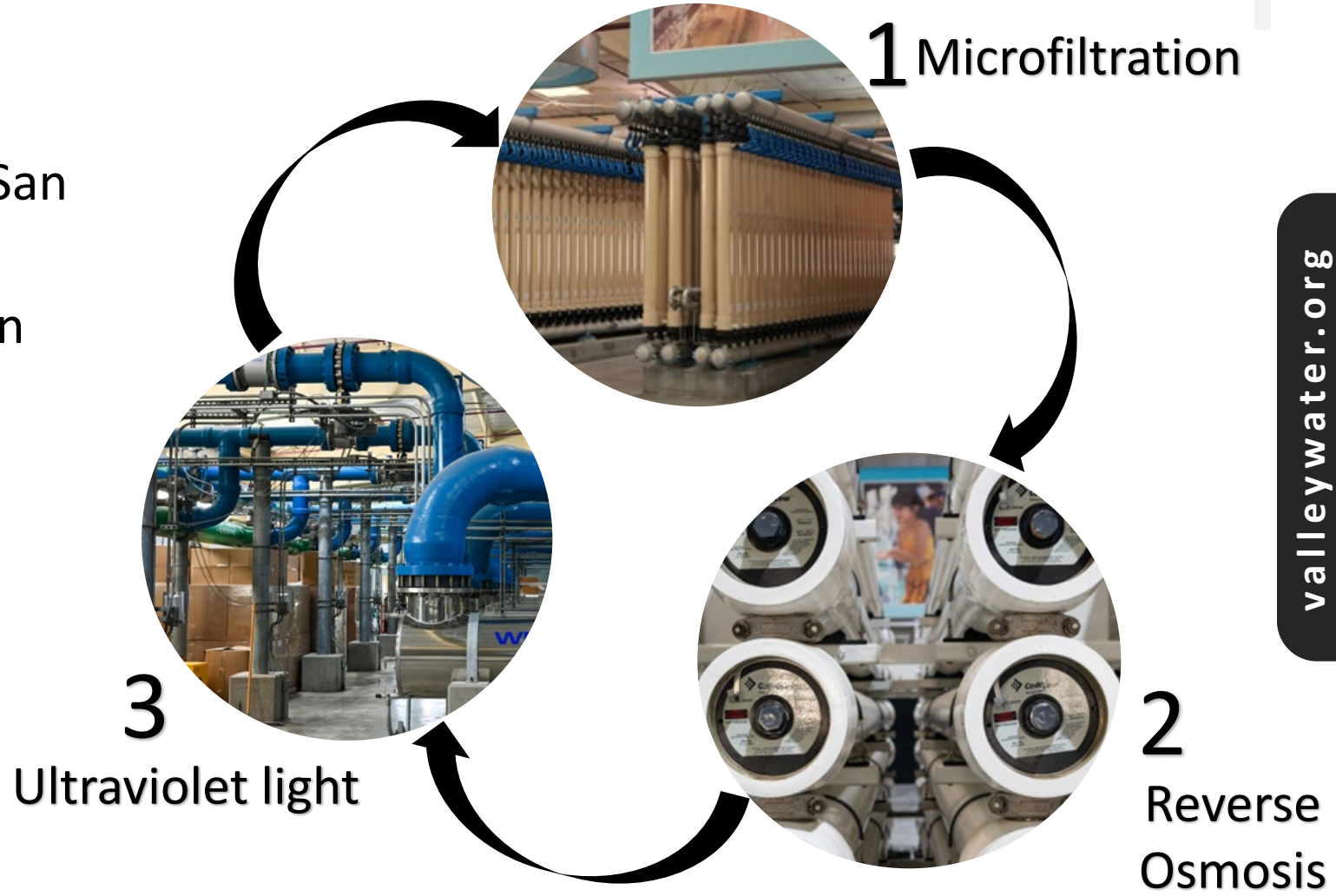
- Developing a locally controlled and resilient water supply
- 24,000 AFY by 2035 – focus on a project in San José

## Annual Shortage in a Six-year Drought in 2050



# Silicon Valley Advanced Water Purification Center (SVAWPC)

- Partnership between the Cities of San José and Santa Clara
- Largest advanced water purification plant in Northern California
- Treats up to 8 MGD of secondary effluent
- Improves water quality for 1,000 recycled water users





# Pure Water Silicon Valley (PWSV) Project Overview

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- Collaboration with the Cities of San José and Santa Clara by receiving treated wastewater
- Series of advanced treatment steps based on the promulgated DPR Regulations

PWSV Project will be implemented in two phases:

- Pilot/Demonstration Facility and Learning Center (2025-2030)
- Full-Scale Facility (2028-2035)



DPR Facility Location

# Essential Elements of Collaboration

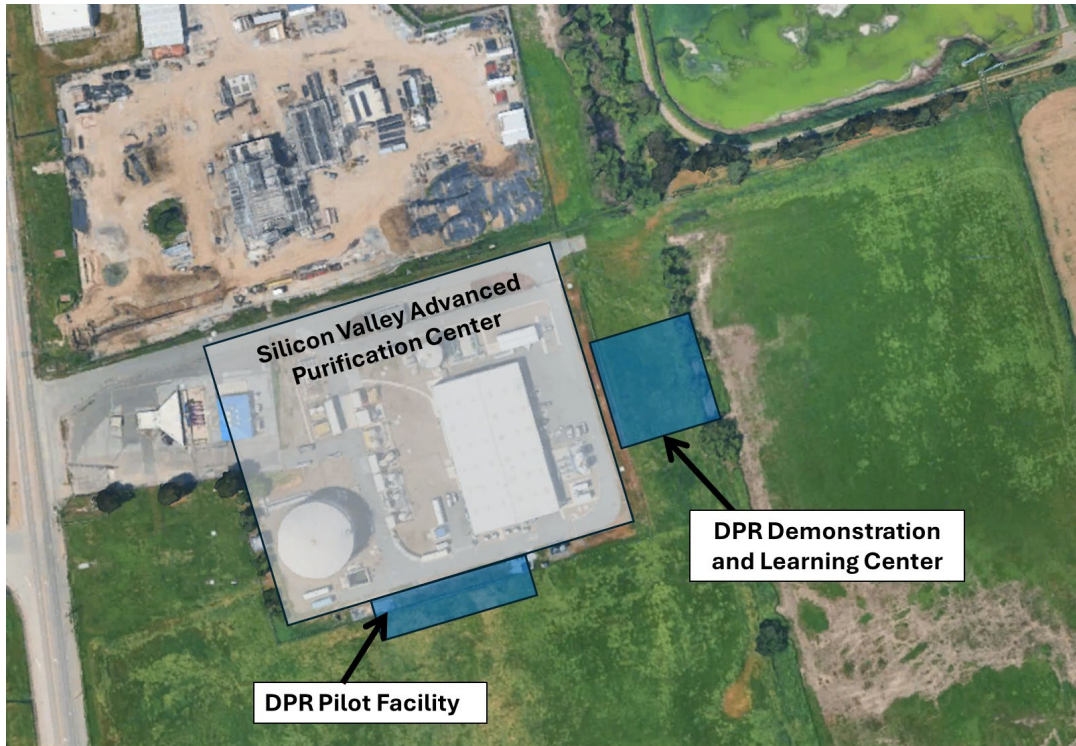
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- Joint advisory and technical planning groups
- Partnership in building Silicon Valley Advanced Water Purification Center
- Letter of Intent to collaborate on the expansion of recycled and purified water
- Planning for the Pure Water Silicon Valley
- Charter process- framework for the development of terms of the agreements
- Various Agreements for Wastewater, O&M, Land Lease, RO Concentrate Discharge, etc.



# DPR Pilot/Demo Facility (2025-2030)

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DPR Pilot/Demo. Facility Location

Valley Water Board has emphasized on expedited project delivery

- Temporary DPR Pilot Facility (~200 gpm)
  - Location: SVAWPC
- DPR Demonstration Facility and Learning Center

# Role of DPR Pilot Facility

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**Collecting real-time data on a smaller scale**



**Adjustments and optimizations before full-scale implementation**



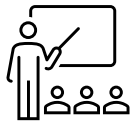
**Cost-effective design**



**Operator training**



**Compliance with all the permitting and regulatory requirements**

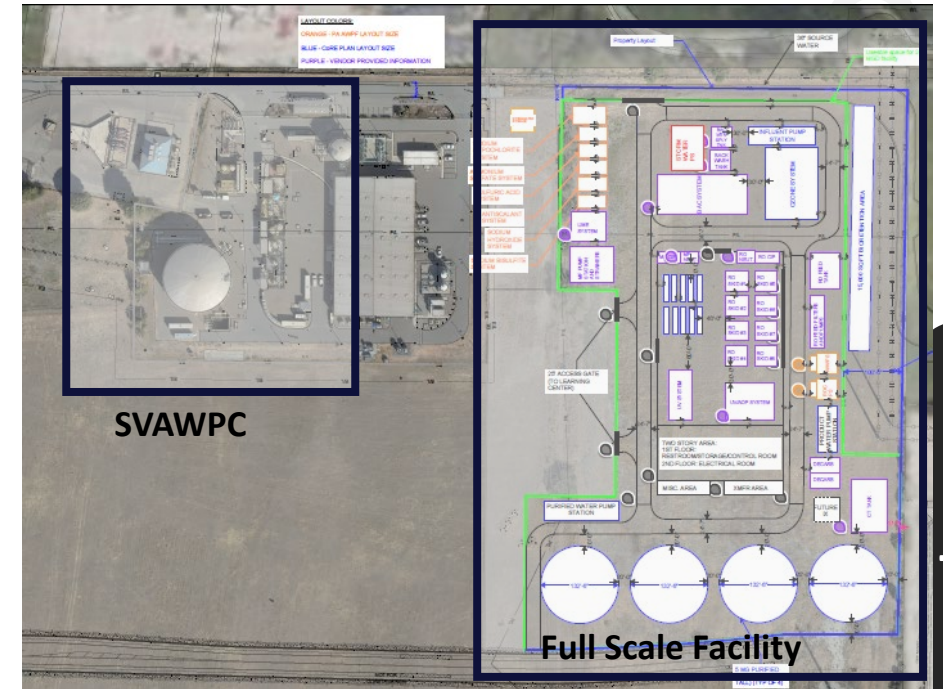


**Robust public outreach**

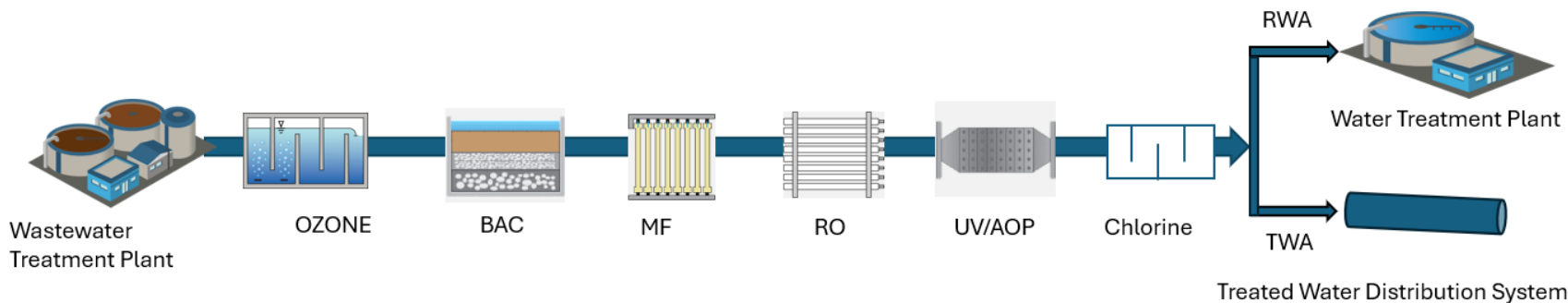


# Full-Scale Facility (2028-2035)

- Design, construction, and permitting of a DPR Full-Scale Facility
- Adjacent to the existing SVAWPC
- Capable of producing up to 24,000 AFY
- Infrastructure for water delivery to the distribution system (RWA or TWA)



**Direct Potable Reuse Facility**



# Innovative Approaches for ROC Management

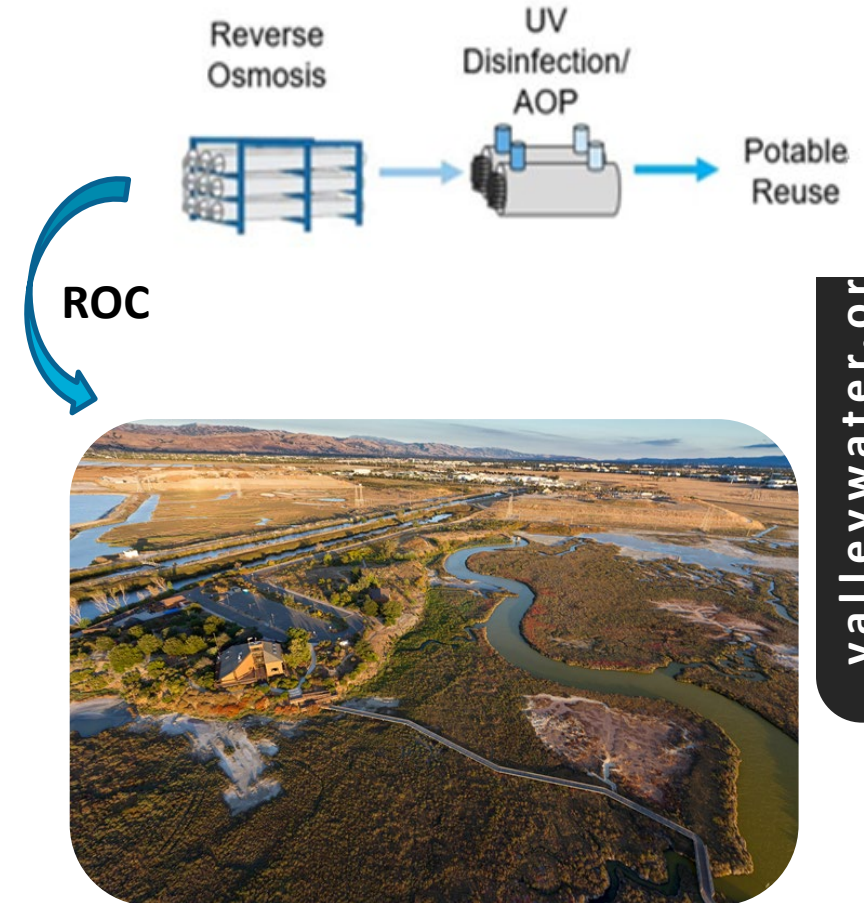
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## ROC management challenges in the SF Bay Area:

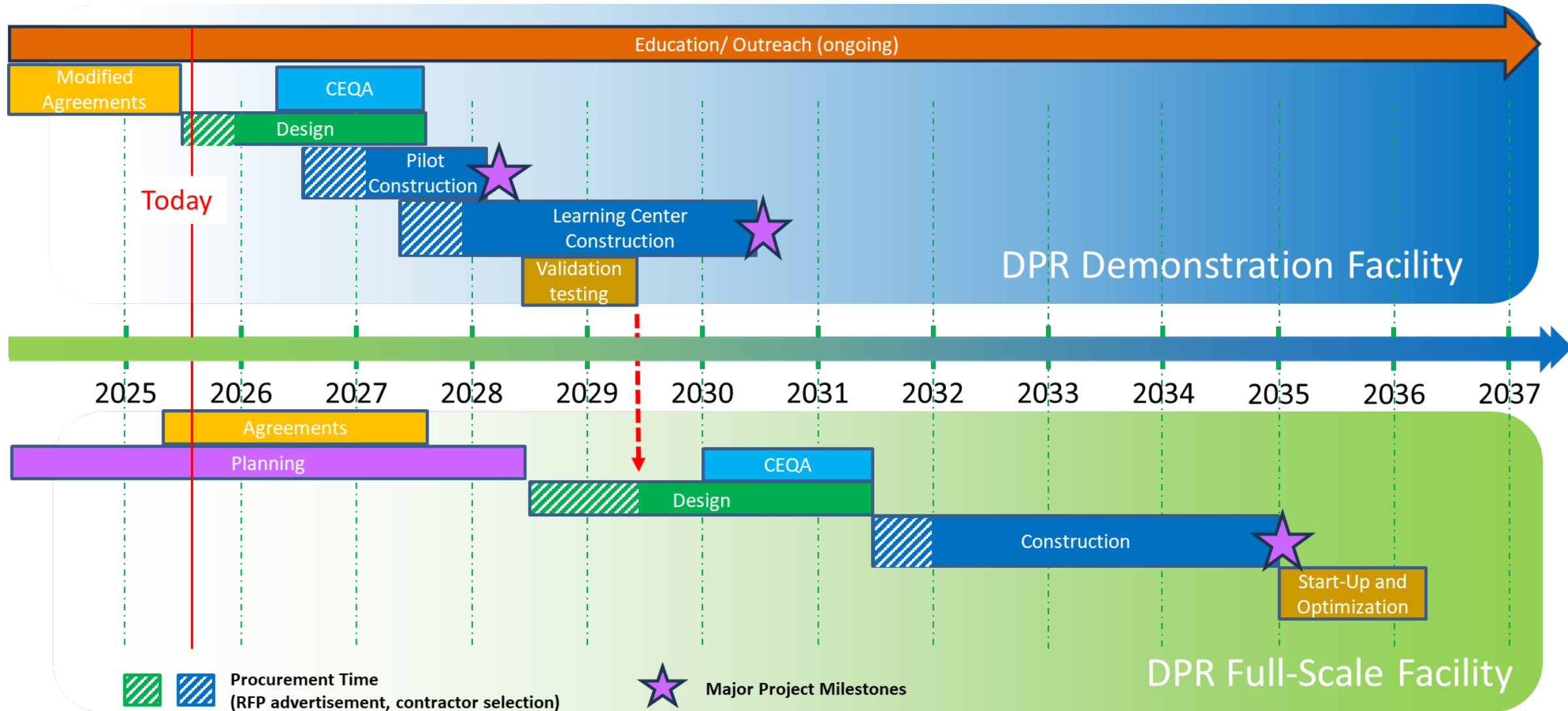
- Lacking access to deep ocean outfalls
- Elevated nutrients and trace metals - challenges of meeting NPDES permit

## ROC management strategies:

- Integrating RO concentrate discharge into wastewater treatment processes
- Blending/dilution with treated wastewater
- Nature-Based Solutions



# Pure Water Silicon Valley Project Timeline





# Purified Water Public Outreach



Presented by Kristen Yasukawa, Civic Engagement Manager



# Purified Water Public Outreach

*To educate, promote awareness, and build support for advanced purified water for drinking.*

**Since 2011, staff has implemented ongoing public outreach strategies based on:**



Industry research, best practices, and data;



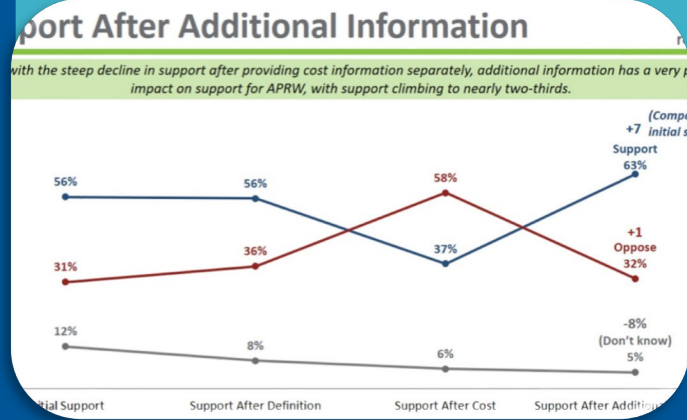
Interactive engagement opportunities; and



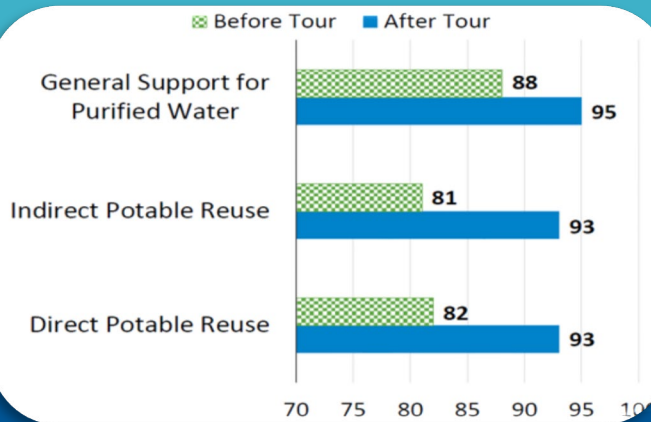
Influence-based stakeholder outreach

# Industry Research, Best Practices and Data

*Public perception poll – gauge support and key messages*



*Pre- and post-tour surveys*



*WaterReuse industry research and best practices*





# Interactive Engagement Opportunities

*Seeing is believing, and tasting is trusting!*

## Silicon Valley Advanced Water Purification Center Tours



## Bottled Demonstration Water Taste Tests





# Influence-based Stakeholder Outreach

*Partner Agencies and  
Water Retailers*



*Older Adult Outreach*



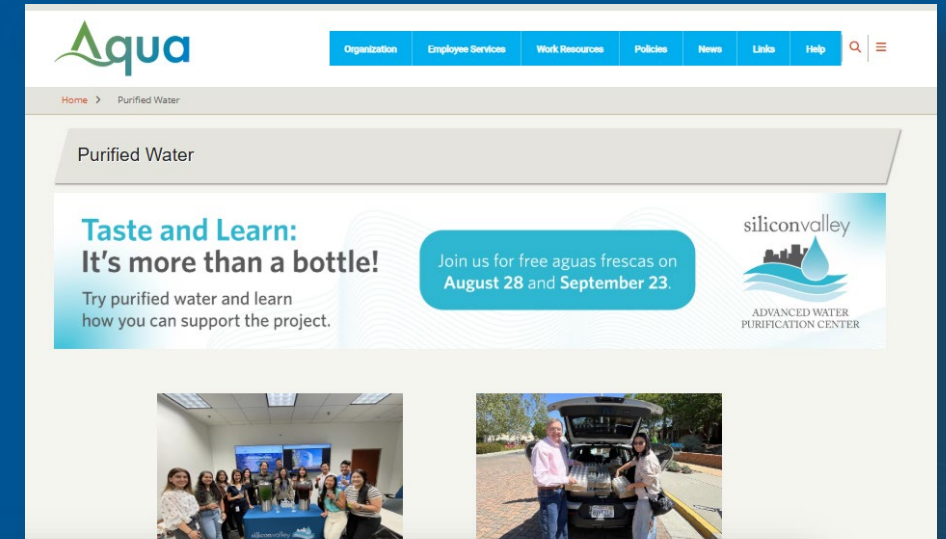
*VIP Tours and  
Engagement*





# Influence-based Stakeholder Outreach

## *Employee Engagement*



## News You Can Use



### PEOPLE/PROJECTS/PROGRAMS

- o **NEW** [Jeff Madden joins Valley Water as a Water Plant Operator](#)
- o **NEW** [Ari Mendosa joins Valley Water as a Maintenance Worker I](#)
- o **NEW** [Christian Orellana joins Valley Water as a Maintenance Worker I](#)
- o **NEW** [Passing of Retiree Robert \(Bob\) Peterson](#)
- o [Valley Water Night 2025 Recap and highlights!](#)
- o [Submit Your Photos for the 2026 Valley Water Calendar](#)



### CEO/ACEO/BOARD

- o **NEW** [Watch the August 14, 2025 Employee Town Hall](#)

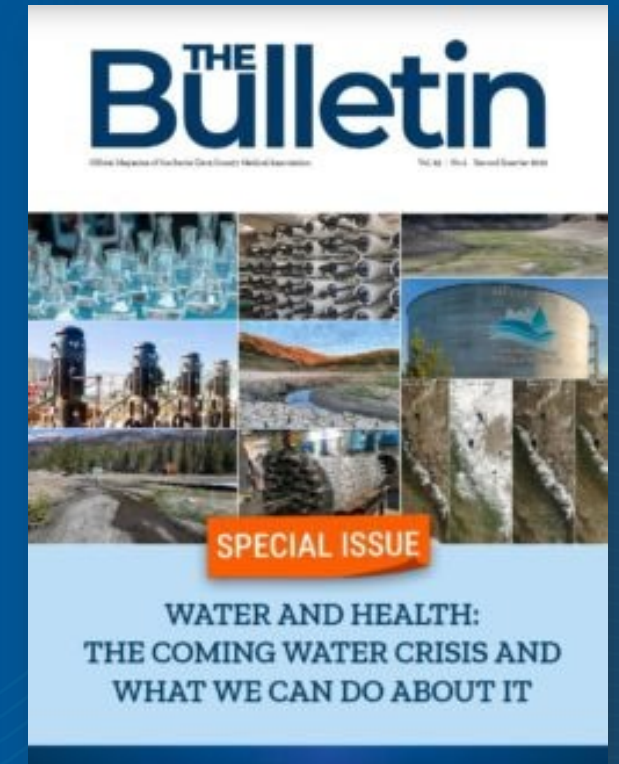
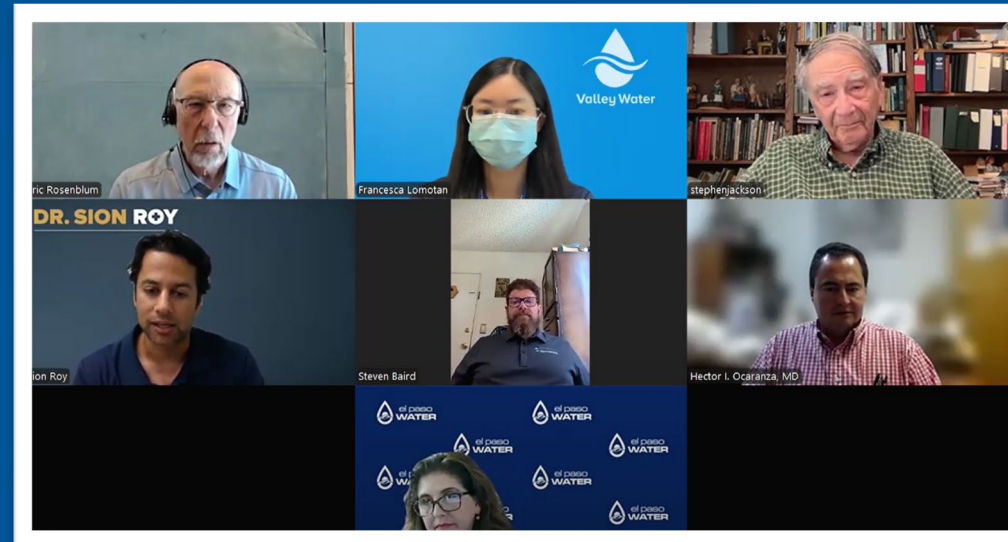


### PURIFIED WATER

- o **NEW** [Explore the new Purified Water intranet page for resources and updates](#)
- o **NEW** [Free Aguas Frescas on August 28 and September 23!](#)
- o **NEW** [Purified Water Bottle Request Form](#)

# Influence-based Stakeholder Outreach

## *Medical Community Outreach*





# Influence-based Stakeholder Outreach

## Media Relations

California eyes unusual source for future drinking water



RECYCLING WASTEWATER

NEW THIS MORNING

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KCRA  
As by Google

-2:39 CC

DPR Regulations Coverage - Dec. 2023



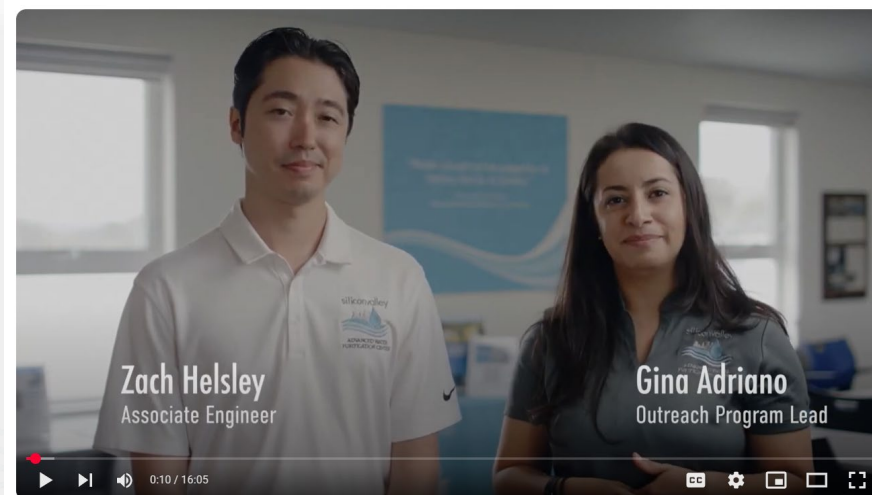
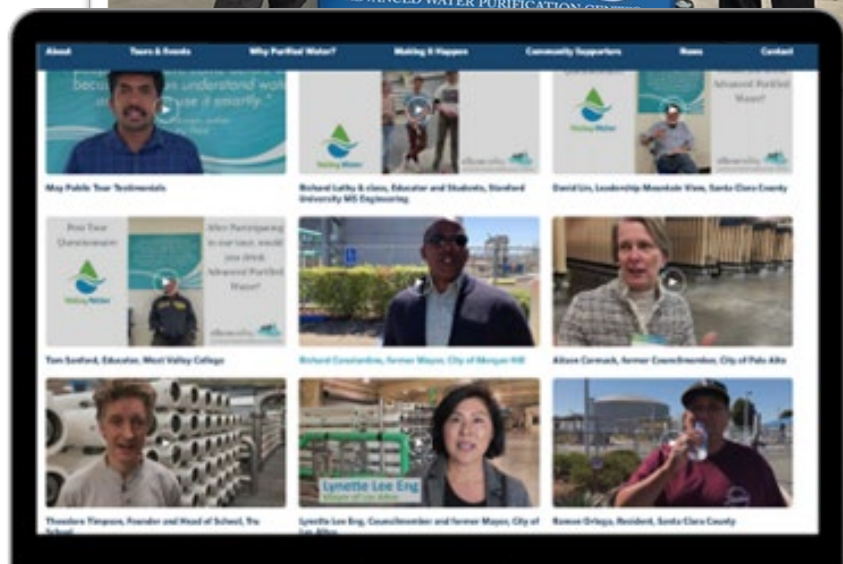
New York Times Kids by Water Ambassador - April 2024



SWAWPC 10<sup>th</sup> Anniversary Celebration - Aug. 2024



# Outreach Tactics



Silicon Valley Advanced Water Purification Center Self-Guided Tour



## Agua Purificada

Por un futuro sostenible

Ubicado en San José, el Centro de Purificación Avanzada del Agua de Silicon Valley (SVAWPC) es la planta avanzada de purificación de agua más grande del norte de California. Desde su apertura en 2014, ayuda a expandir la reutilización del agua en el condado de Santa Clara. En colaboración con los socios del proyecto, Valley Water ha estado explorando oportunidades y fuentes adicionales de agua purificada y agua reciclada para garantizar un suministro confiable de agua limpia y potable para nuestro futuro.

**PUREWATER4U.ORG**



### NƯỚC TINH

Góp phần giữ vững tương lai

Có địa chỉ tại San José, Silicon Valley Advanced Water Purification Center (SVAWPC) là cơ sở lọc nước tiên tiến nhất hiện nay ở Santa Clara. Hợp tác với các đối tác địa phương, Valley Water đã đang khám phá các nguồn cung cấp nước sạch cũng như các cơ hội đảm bảo chúng ta có nước đáng tin cậy, sạch và an toàn cho tương lai.

**PUREWATER4U.ORG**



### ¿SABÍAS QUE... ?

Toda el agua del mundo es reciclable—Es un proceso natural. En Silicon Valley, aceleramos este proceso natural con tecnología innovadora.

Cerca de la mitad del agua que se utiliza en el condado de Santa Clara proviene de otras regiones, por lo que nuestro suministro de agua es más vulnerable durante las épocas de sequía.

Los procesos de purificación usan algunas de las tecnologías utilizadas también en la producción de alimentos y el embotellamiento de agua, con el objetivo de ofrecer agua aún más purificada a un costo menor.

La purificación de manera avanzada usa las mismas tecnologías que la desalación, pero tanto los costos como las emisiones de carbono son menores. La desalación requiere al menos 10 veces más de energía para producir agua de la misma calidad.

### Bạn có biết?

El SVAWPC puede producir hasta 8 millones de galones por día.

El agua purificada ya se utiliza para incrementar el suministro de agua potable en el condado de Santa Clara.

Valley Water busca aumentar la producción de agua purificada al brindar casi 400 millones de galones al año, suficiente para cubrir a 400 hogares más en el condado de Santa Clara.

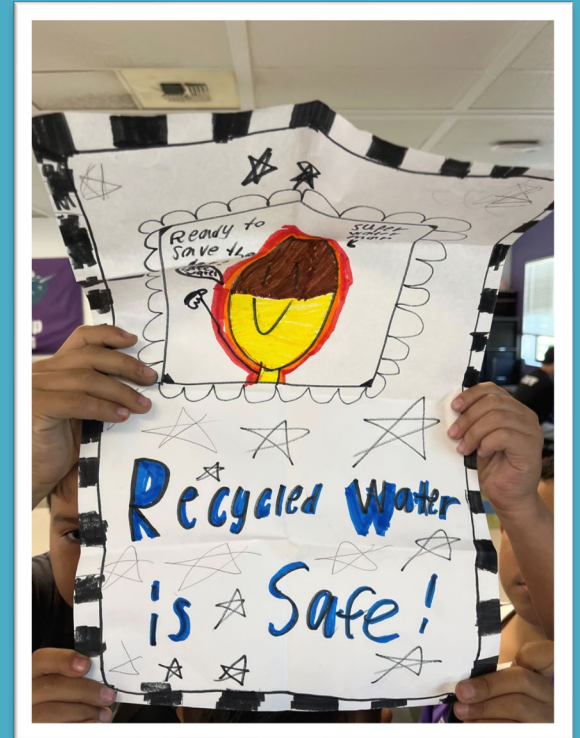




# Looking Ahead

*Building on successes and tailoring for DPR*

- Expand medical community partnerships
- Focused older adult and environmental organization outreach
- Expand youth outreach
- Leverage community advocates through Water Ambassadors





# Looking Ahead

## *Pure Water Silicon Valley*

- Pure Water Silicon Valley branding
- Develop Learning Center
- Pure Water Silicon Valley project communications and outreach



### Recycled and Purified Water Program



#### PURE WATER SILICON VALLEY

Valley Water aims to meet 10% of Santa Clara County's water demand through non-potable and potable reuse. This initiative enhances resilience to drought and climate change, while also reducing risks of land subsidence and saltwater intrusion. Valley Water has set a target of 24,000 acre-feet per year (AFY) of potable reuse by 2035 and 32,000 AFY by 2050, resulting in plans for a 24 millions gallon per day (MGD) facility by 2035.

Since 2014, Valley Water has successfully operated the



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**Questions?**





# Thank you

Presented by: Medi Sinaki, P.E., Senior Engineer and Kristen Yasukawa, Civic Engagement Manager at Recycled and Purified Water Unit