



# LA's Groundwater Cleanup Accelerates

February 22, 2023



Southern California  
Water Dialogue

# Southern California Water Dialogue

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*Executive Director*

*Southern California Watershed Alliance*

DEE ZINKE

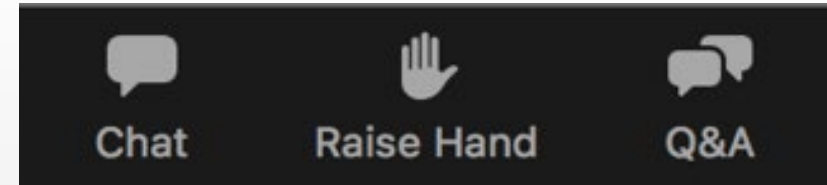
*Assistant General Manager - External Affairs*

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- CHARLEY WILSON  
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- **Technical Difficulties:** Use chat feature to let us know
- **Asking a Question:** Use Q/A feature, type in question, and click send. Questions addressed after presentation.
- **Poor Connection:** Move closer to your wireless router and turn off other services using bandwidth (e.g. Netflix)
- **Audio Muted:** Attendee audio on mute by default
- **Timetable :** Presentation runs apx 60 minutes followed by Q/A session



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Q&A

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Q&A

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Jack Barker 2:43:31 PM

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Eren Yaeger 2:42:44 PM

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Answer live

Type answer

# Agenda

- Announcements and Introduction of Speaker
- Topic overview – by Conner Everts
- Discussion
- Dialogue (Q/A) – Led by Conner Everts
- Concluding remarks

# Speakers



Evelyn Cortez-Davis, Director of Water Engineering and Technical Services, LADWP



Robert Katherman, Director, Water Replenishment District





## **San Fernando Groundwater Basin Remediation Program Overview for Southern California Water Dialogue**

Evelyn Cortez-Davis, P.E., BCEE  
February 22, 2023



# Agenda

- Program Overview
- Project Sites
- North Hollywood West
- North Hollywood Central
- Tujunga Wellfield Treatment
- Program Schedule and Cost





# San Fernando Groundwater Basin Remediation Program

## Project Sites

- North Hollywood West
- North Hollywood Central
- Tujunga

## Program Objectives

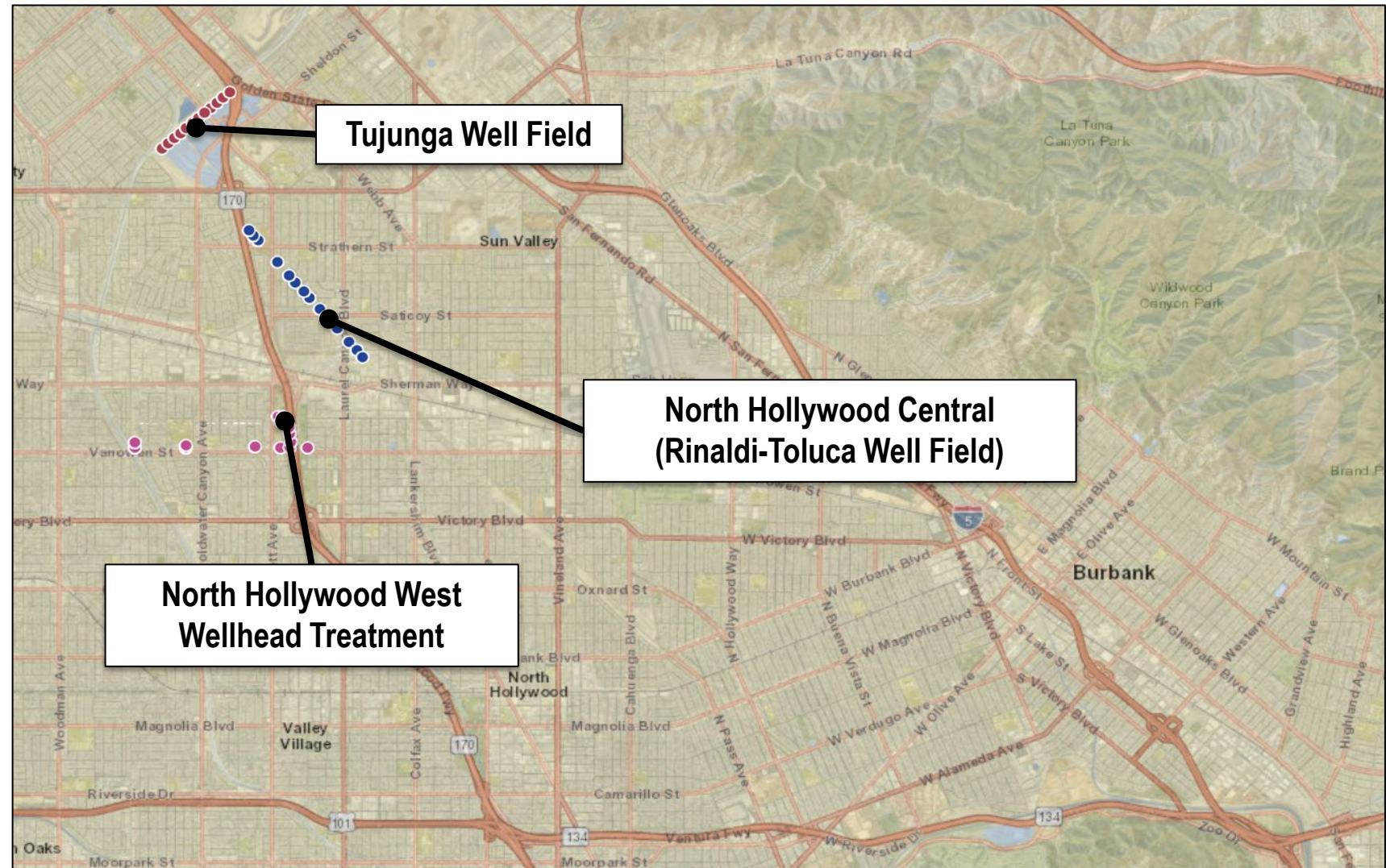
- Protect Public Health and Environment
- Limit Migration of Contaminants
- Remove Contaminants
- Restore beneficial use of the San Fernando Basin





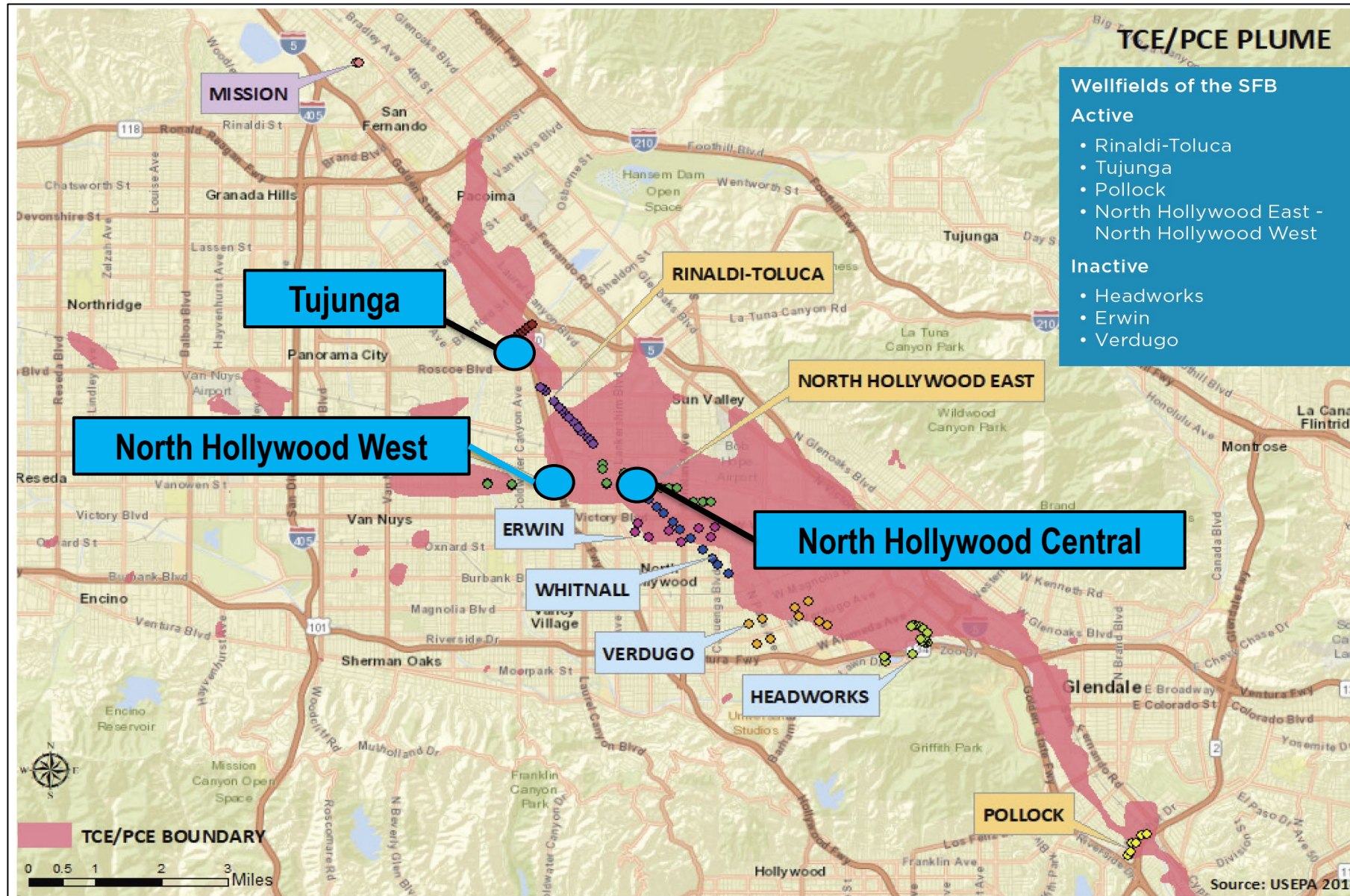
# What is LADWP doing and why is it important?

- Groundwater typically 10% of supply
- **115** total groundwater wells.
- **Only 41** reliable due to contamination.
- Restore to 21% of supply



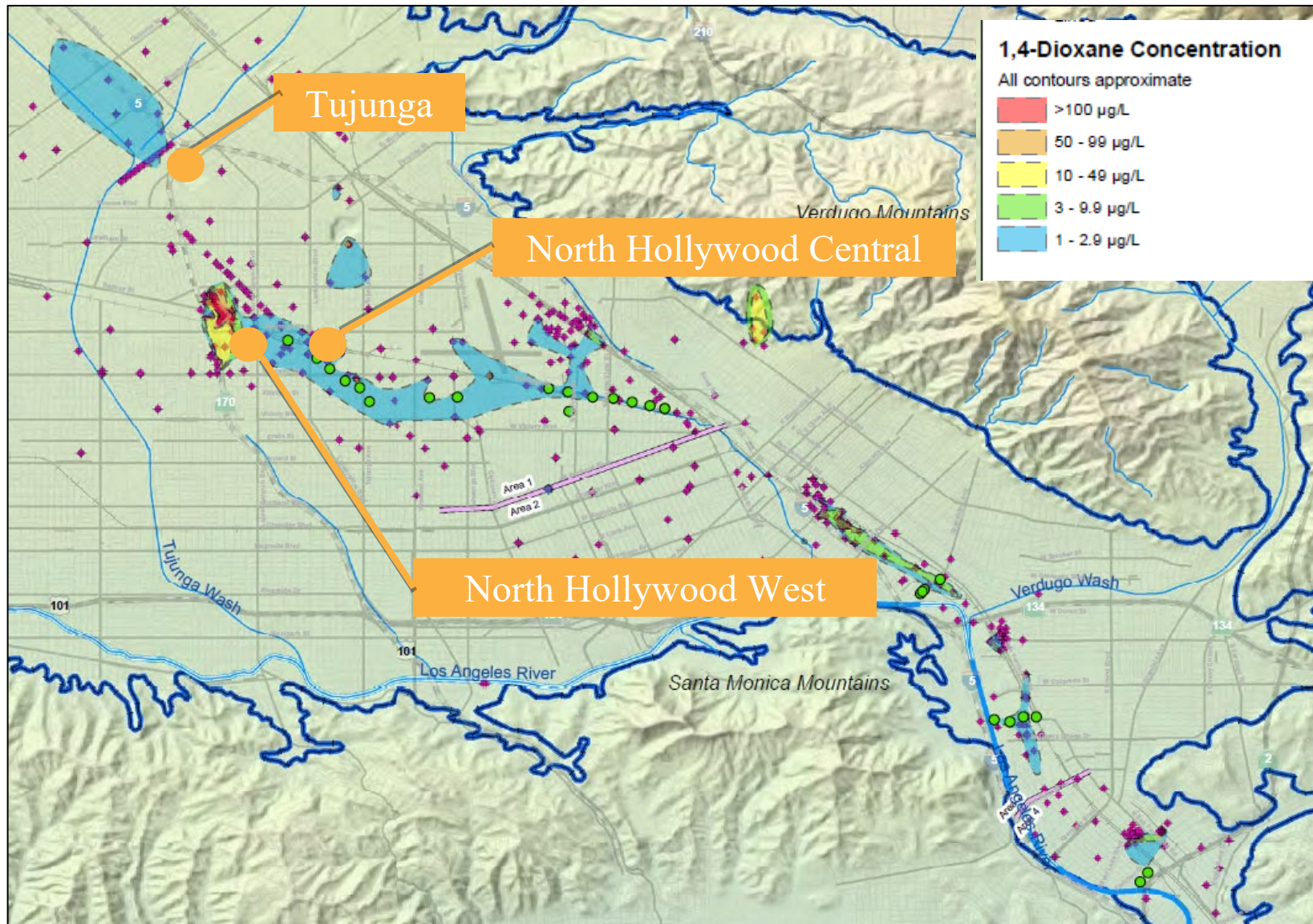


# What is the extent of contamination? VOC's





# What is the extent of contamination? 1,4-Dioxane

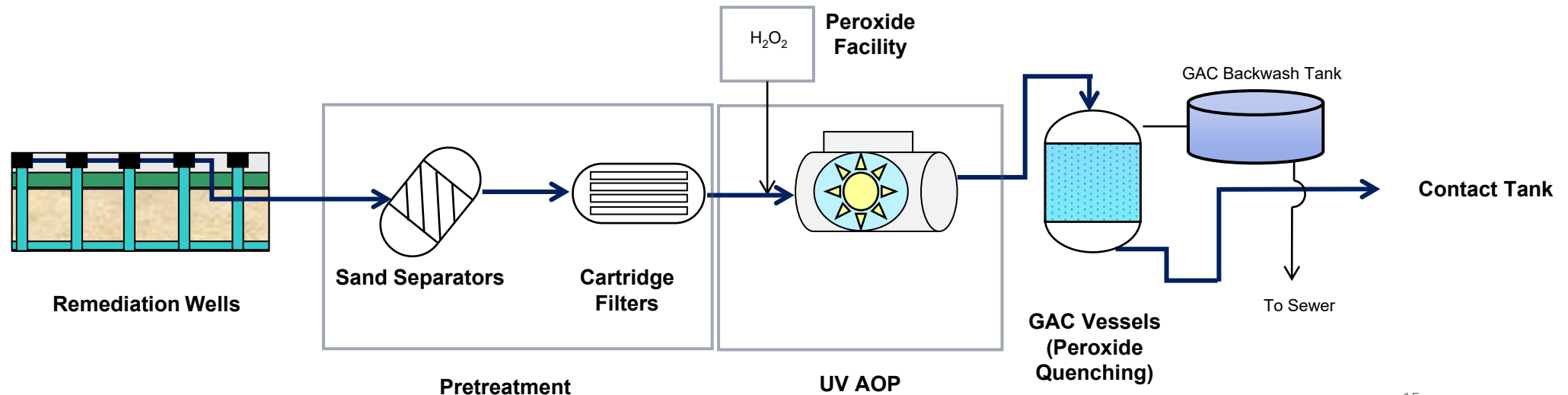


# Recommended Treatment Process

## Advanced Oxidation Process (AOP) with UV/H<sub>2</sub>O<sub>2</sub>



•OH + VOC/1,4-Dioxane → Oxidation byproducts



15

# Program Overview

- Remediation Wells Capacity at completion: 143.1 CFS or 104,041 AFY
  - North Hollywood West Wellhead Treatment Facility: 28.4 CFS or 21,000 AFY
  - North Hollywood Central Treatment Facility: 38.2 CFS or 27,656 AFY
  - Tujunga Wellfield Treatment Facility: 76.5 CFS or 55,385 AFY



# North Hollywood West



CARTRIDGE FILTERS & SAND SEPARATORS



ULTRA VIOLET ADVANCED OXIDATION PROCESS



GRANULAR ACTIVATED CARBON (GAC) VESSELS



HYDROGEN PEROXIDE BUILDING



# North Hollywood West (December 2022)





# North Hollywood West Upcoming Milestones

- 94% Construction Complete
- UV System Performance Testing:

**December 2022**

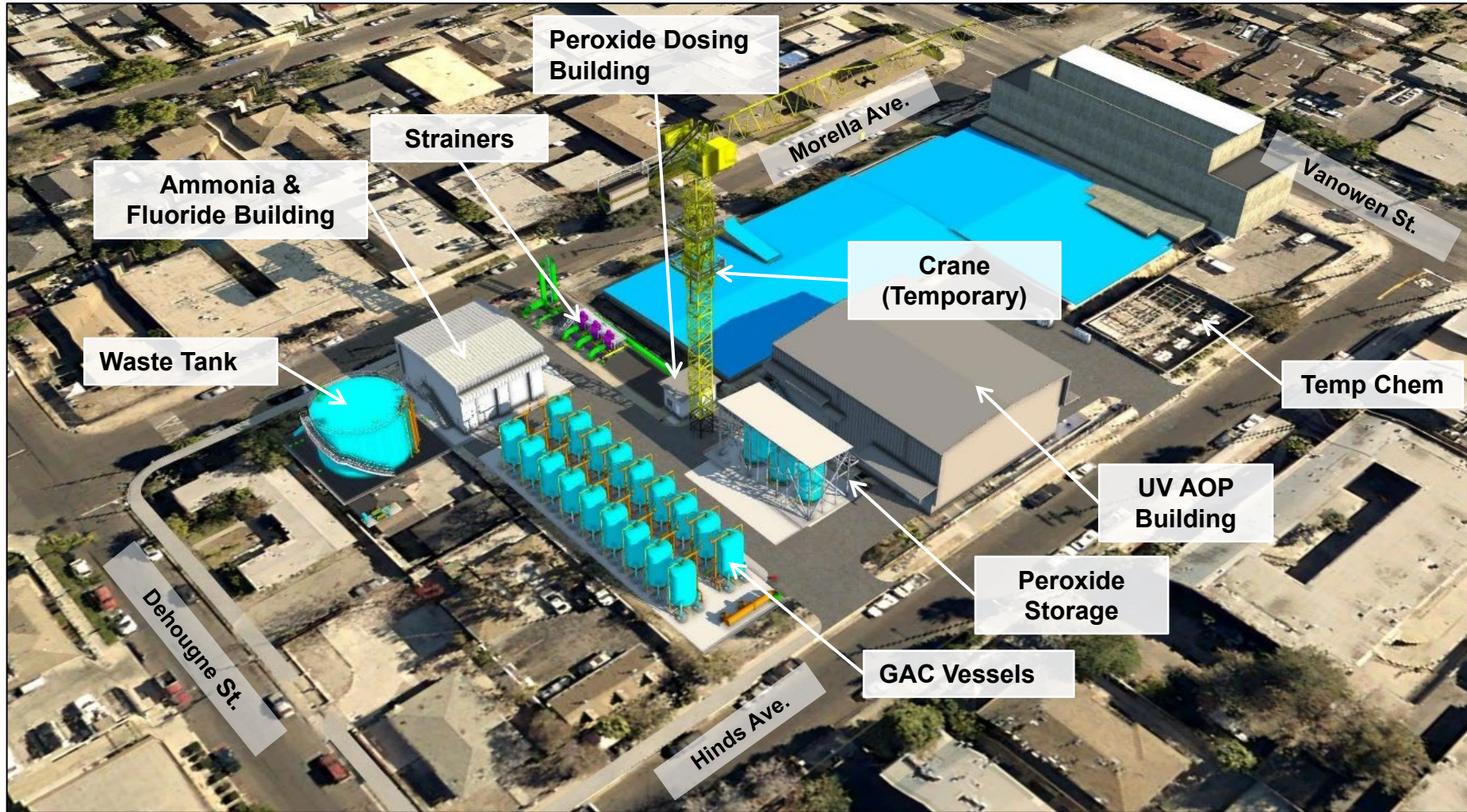
## Next Steps

- GAC Performance Testing: **April 2023**
- Division of Drinking Water (DDW)  
Commissioning: **May 2023**
- LADWP Commissioning: **September 2023**





# North Hollywood Central Treatment Facility





# North Hollywood Central Treatment Facility (December 2022)





# North Hollywood Central Treatment Facility

Strainers



Hydrogen Peroxide Tanks



Chemical Building



# North Hollywood Central Upcoming Milestones

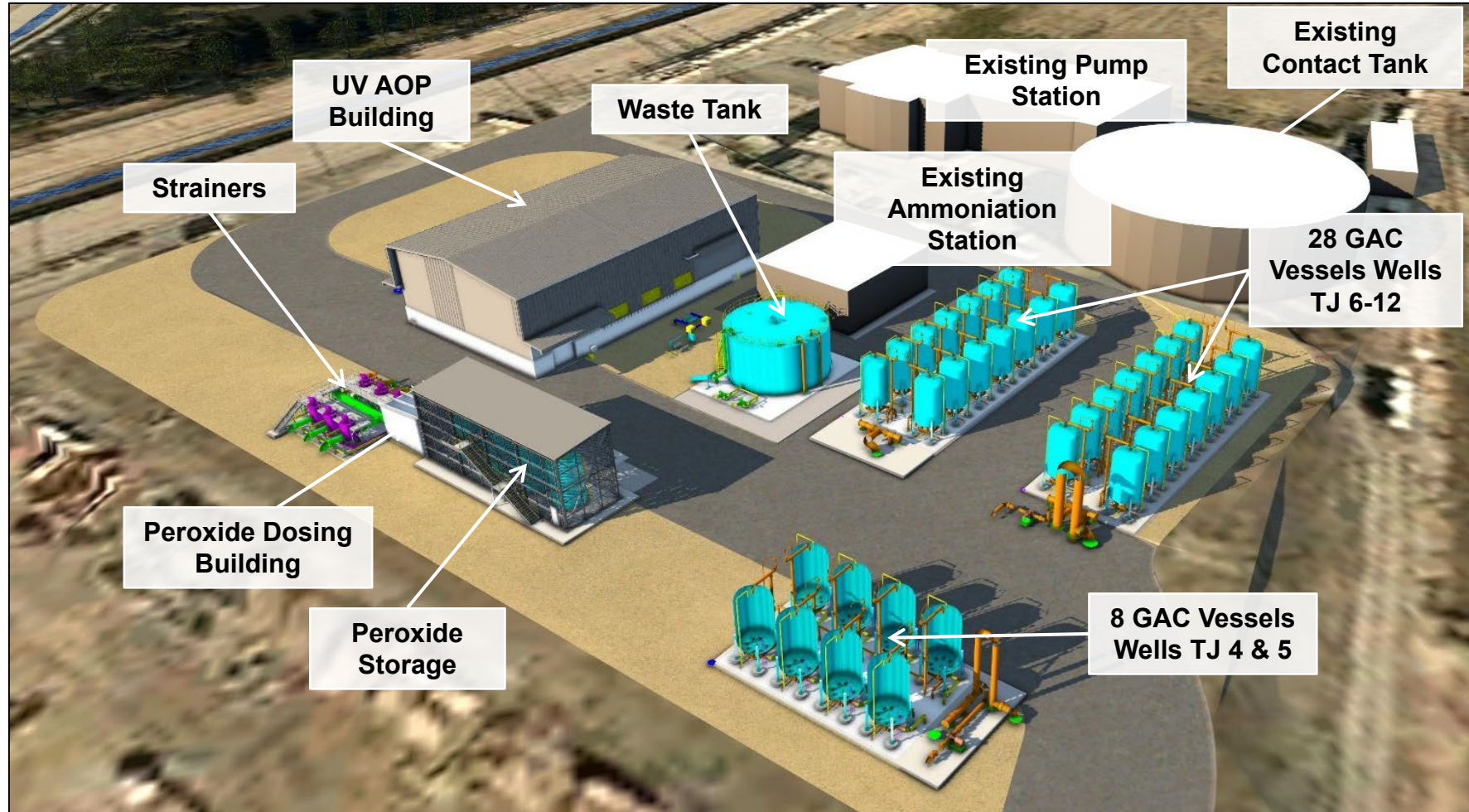
- Construction complete: **89%**

## Next Steps

- Performance Testing: **February 2023**
- Division of Drinking Water (DDW) Commissioning: **April/May 2023**
- LADWP Commissioning: **November 2023**



# Tujunga Well Field Treatment Facility





# Tujunga Well Field Treatment Facility (December 2022)





# Tujunga Well Field Treatment Facility

## UVAOP Facility



## Waste Tank



## GAC Vessels





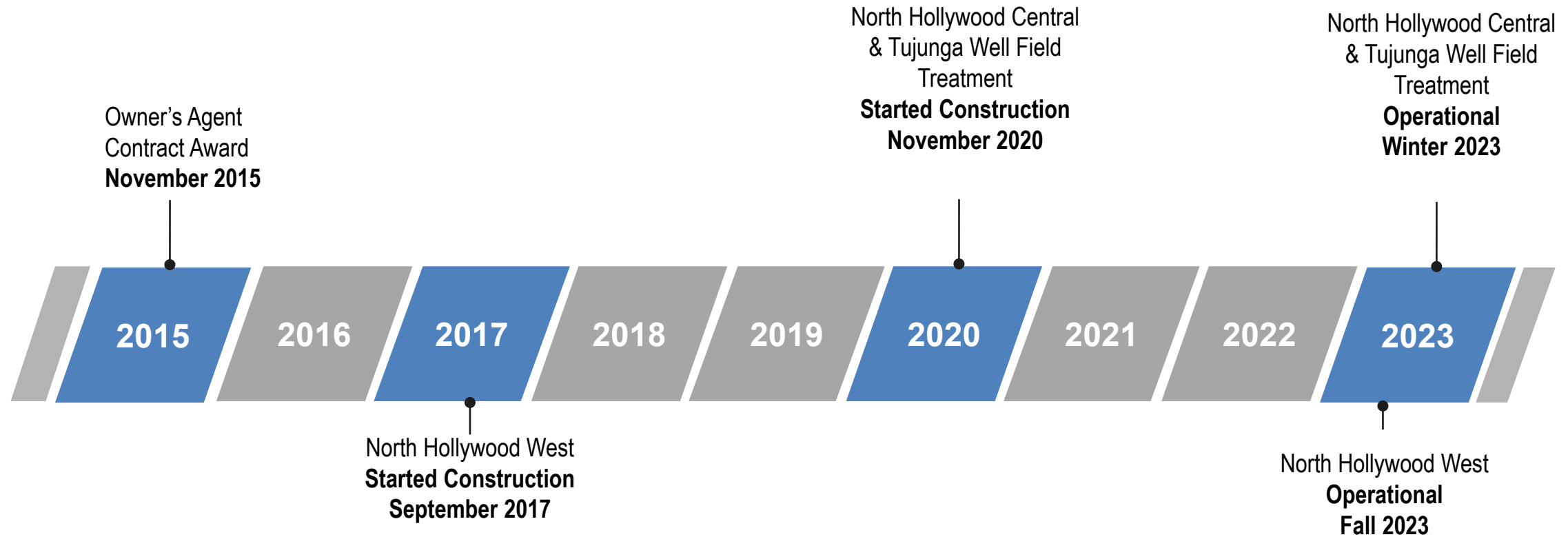
# Tujunga Upcoming Milestones

- Construction Complete: **88%**

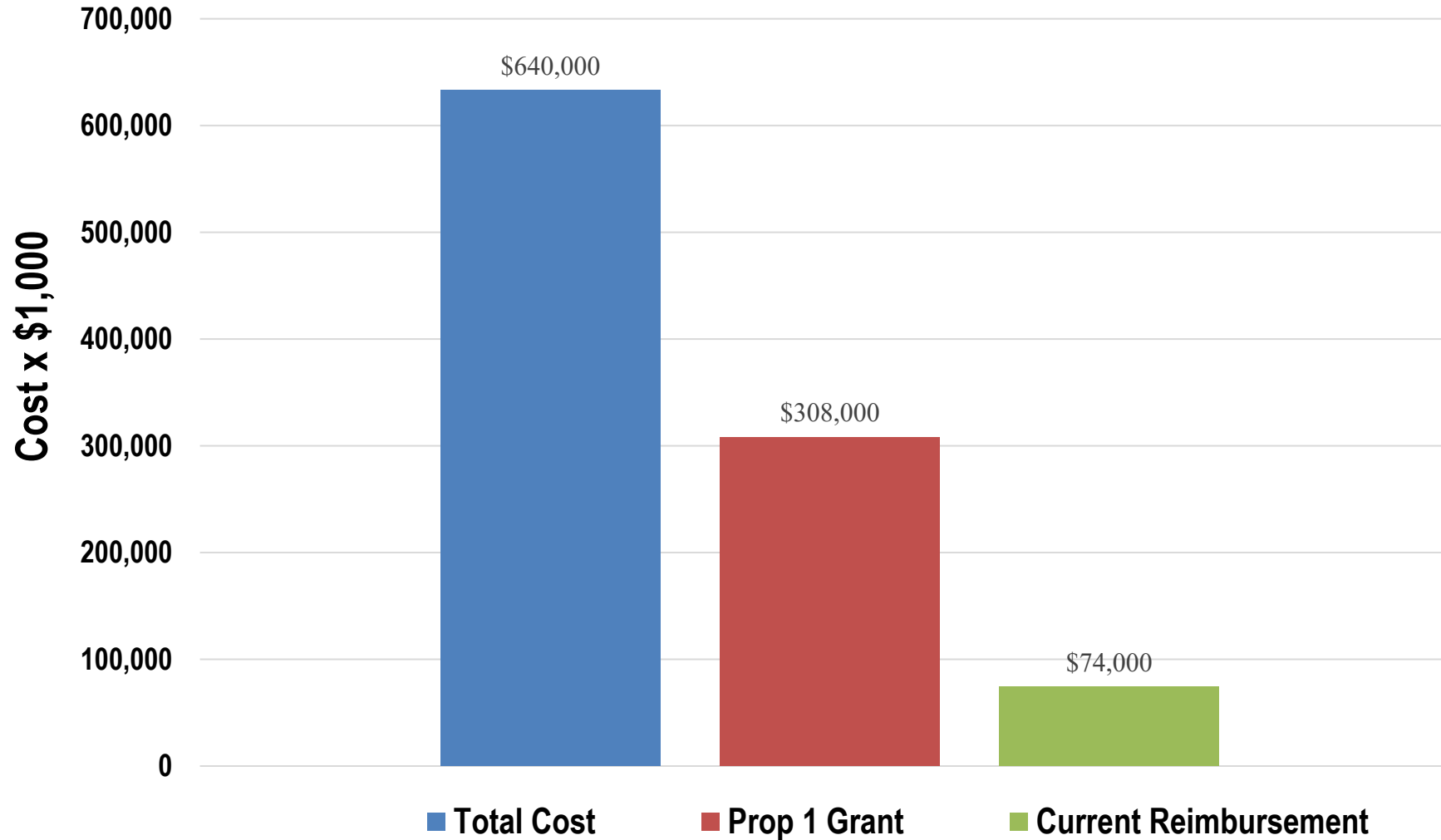
## Next Steps

- Performance Testing: **April/May 2023**
- Division of Drinking Water (DDW) Commissioning: **July 2023**
- LADWP Commissioning: **December 2023**

# Program Schedule

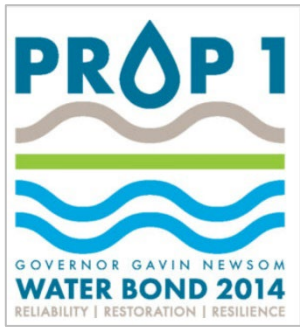


# Program Cost & Prop 1 Funding





# Acknowledgements



Division of Financial Assistance

Division of Drinking Water

Los Angeles RWQCB





# Thank You!







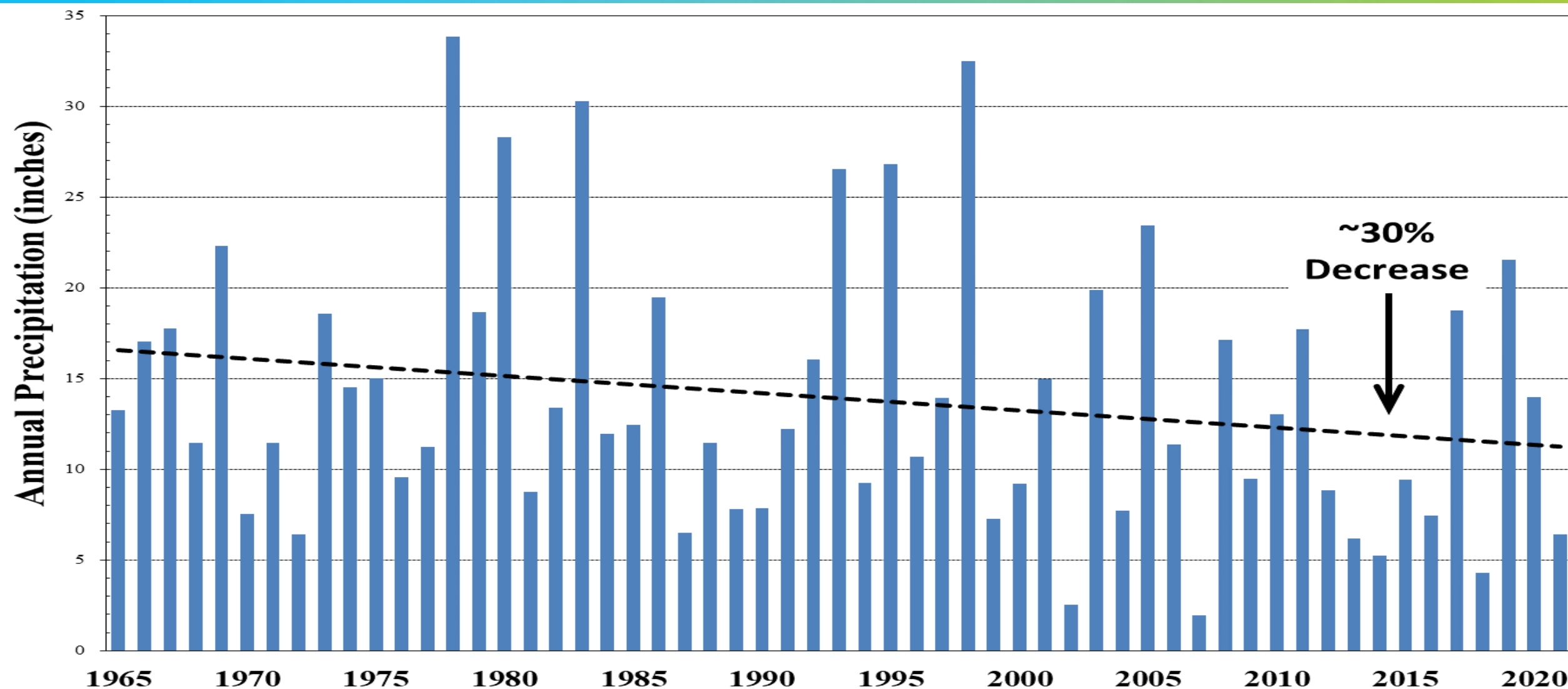
***Securing Our Water Future Today***

***February 22, 2023***

# Climate Change Impacts



# Decreasing Precipitation Past 55 Years



Regional precipitation shows a decreasing trend of ~30% since 1965

# **NEW RULES**

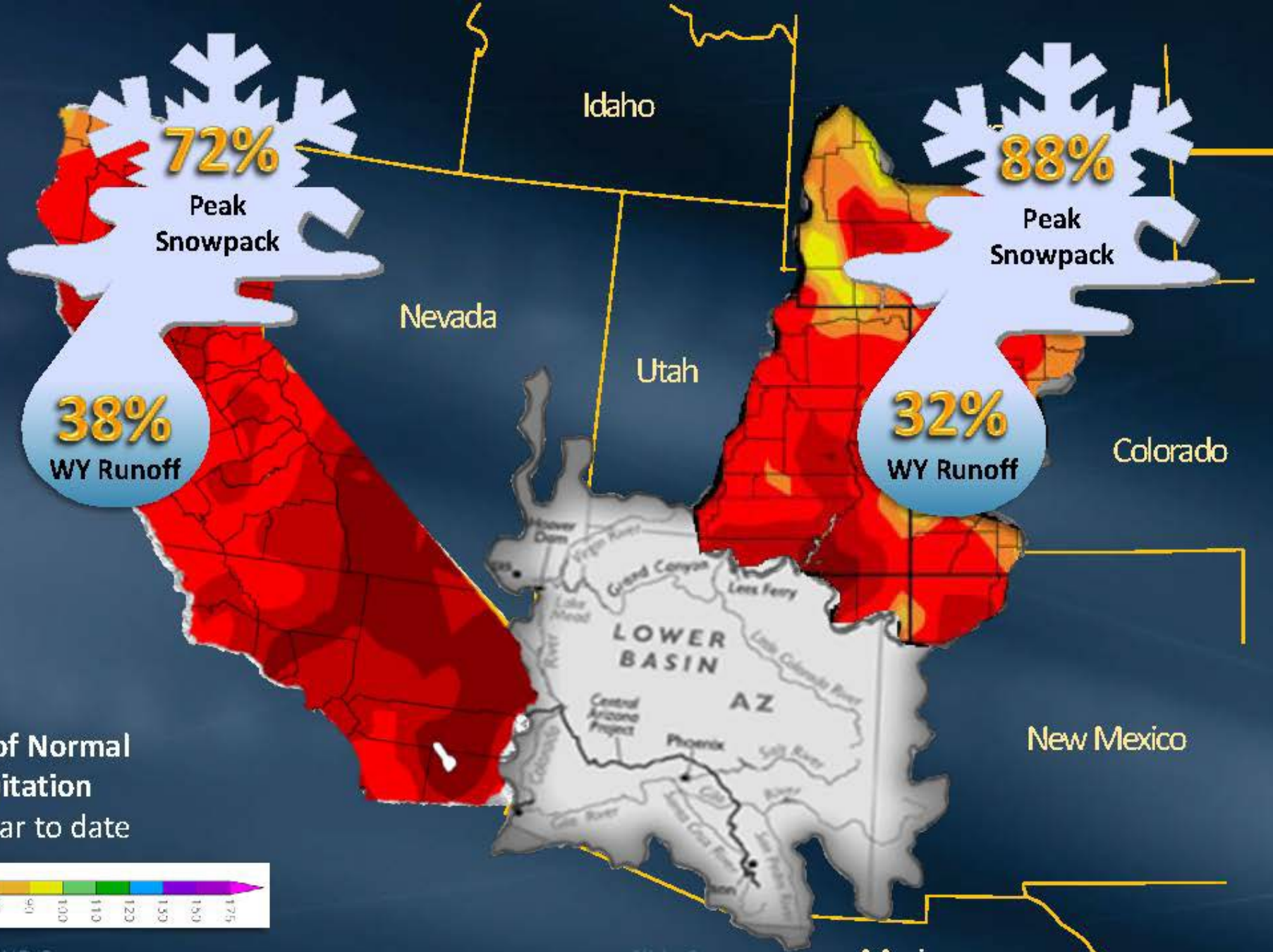
**Climate Change = Drought is the new normal**

**Mega-Drought: last 20 years driest in the last 1,000 years**

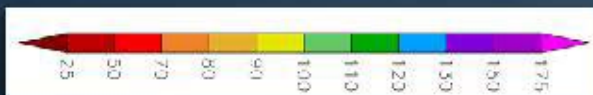
**Solution =**

- Short-term = Water conservation**
- Long-term solution = Reclaim/purify local wastewater**





Percent of Normal  
Precipitation  
Water Year to date

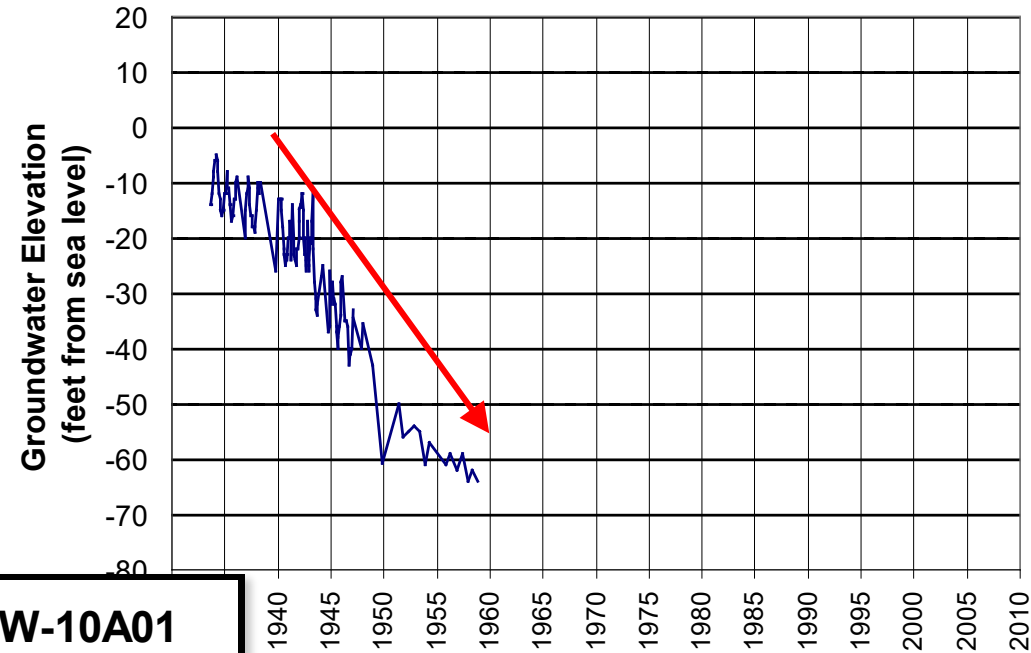


# **History of Water in the SouthBay**

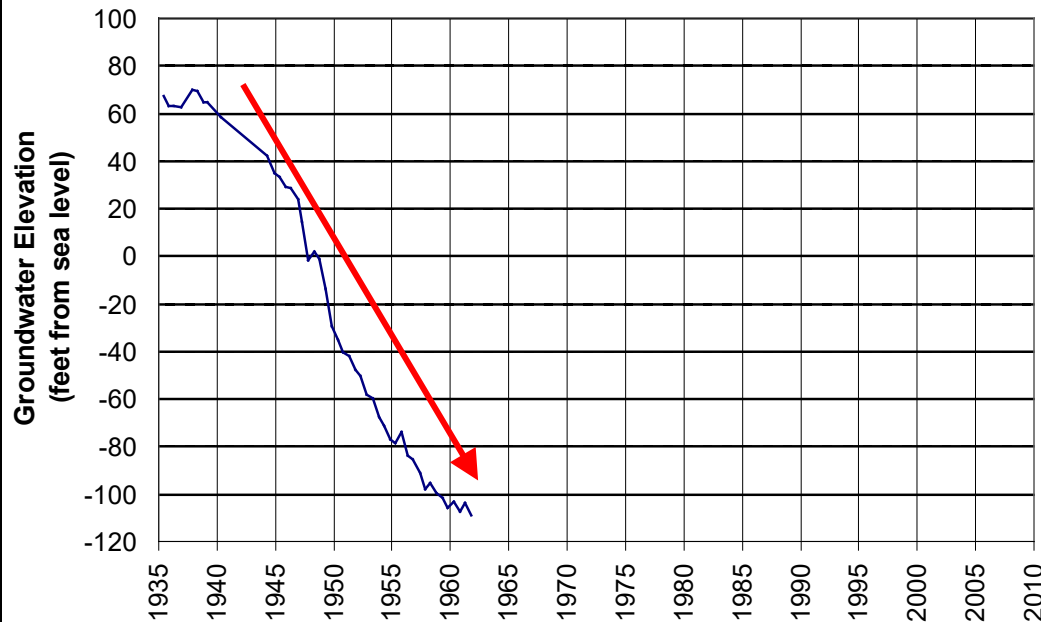


## 1900s-1950s OVERDRAFT

### West Basin Key Well 3S/14W-22L01

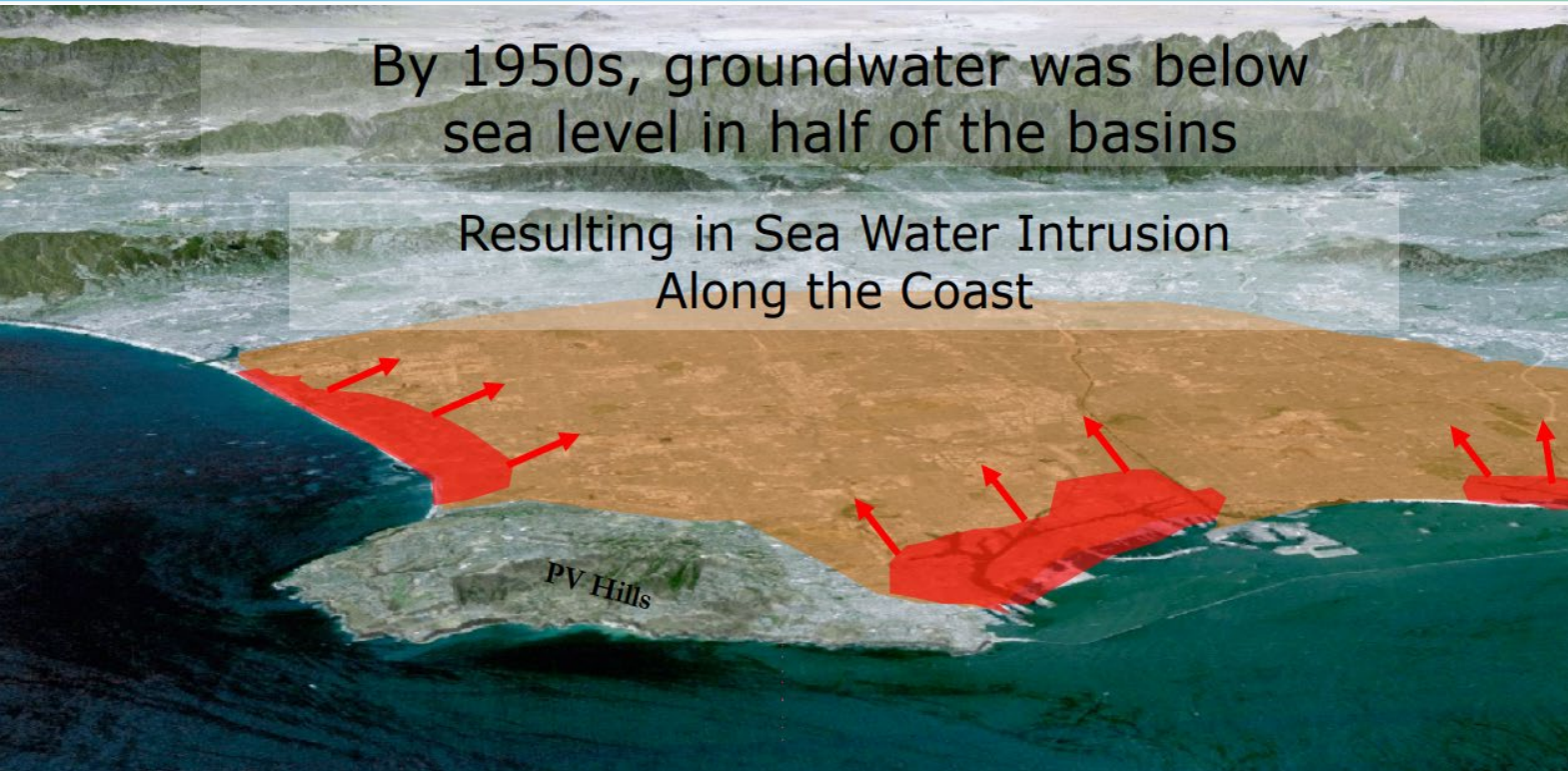


### Central Basin Key Well 2S/13W-10A01



- Plunging water levels
- Loss of groundwater supply
- Wells going dry
- Seawater intrusion

# WRD History



Established in 1959 by a vote of the people



Mission to improve groundwater levels



Free of imported water for groundwater replenishment



# Solutions

1. Public vote to create the West Basin MWD to buy imported water. (November 1947)
2. Court capped groundwater pumping to 281,835 acre feet per year. (1952-1961)
3. LA County Flood Control District built 16 miles of injection wells along the coast to inject freshwater and stop the seawater intrusion. (1953 – 1961)
4. 1959 WRD formed to pay for water to replenish aquifers and to protect groundwater quality.

# WRD Service Area



## LOCAL WATER DEMANDS



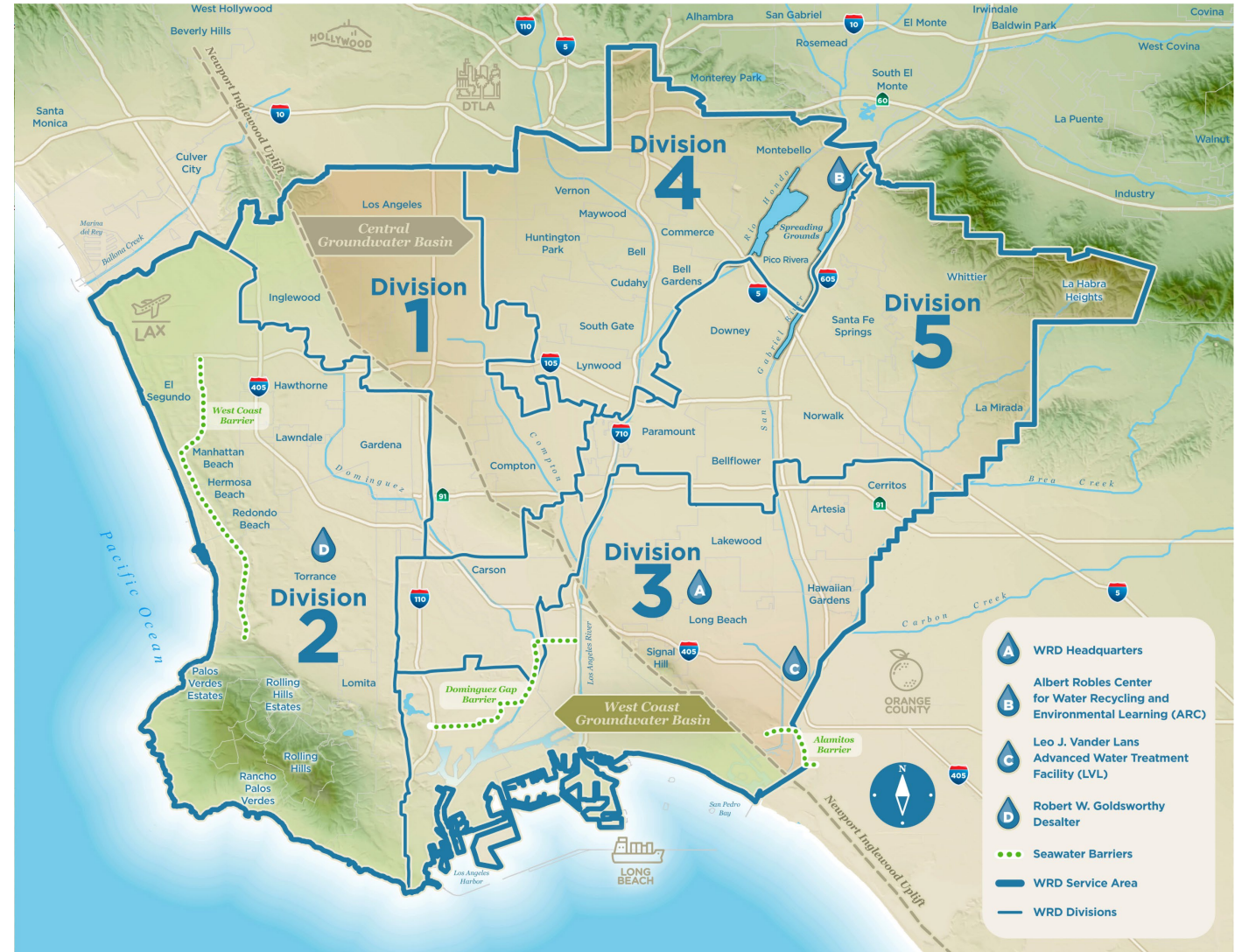
50% supplied from groundwater wells



50% supplied by imported water



WRD replenishes the groundwater basins that supply 50% of demand



WRD SERVES:  
420 sq. miles, 43 cities, 4 million residents



# BASIN REPLENISHMENT



**Stormwater**



**Recycled Water**



**Spreading Grounds**



**Injection Wells**





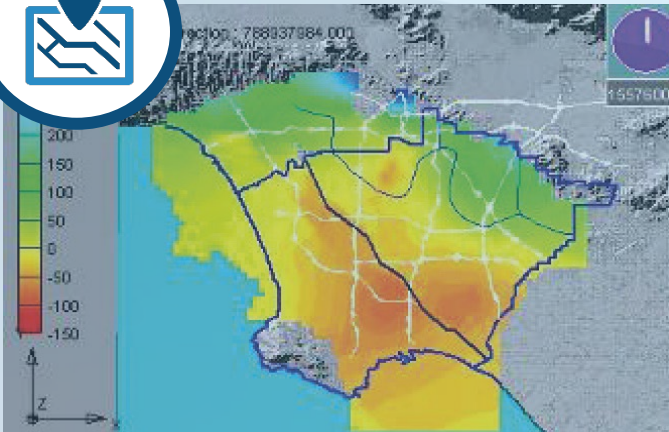
# BASIN MANAGEMENT



Monitoring



Cleanup

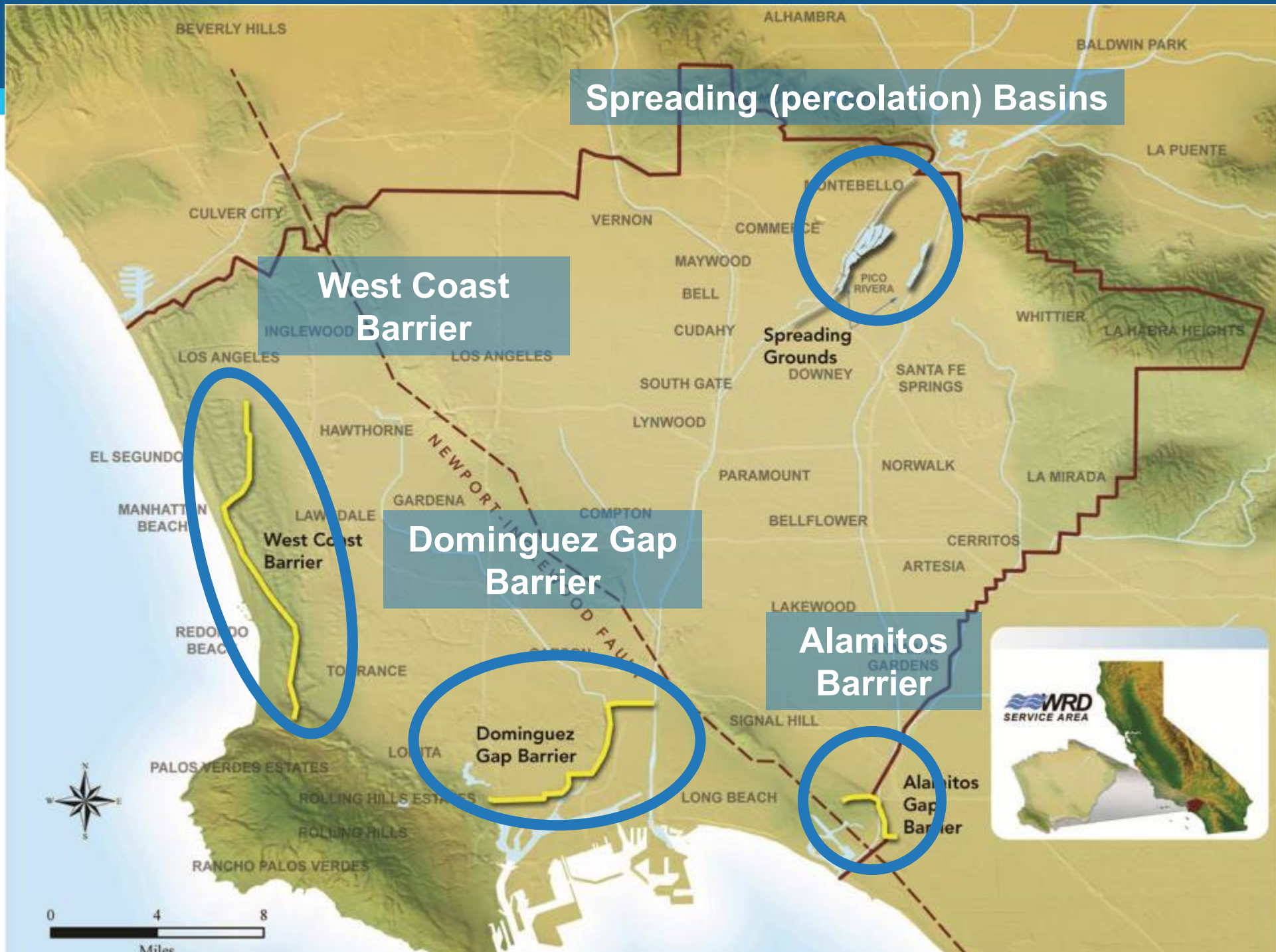


Basin Modeling



Regional Watermaster





Spreading (percolation) Basins

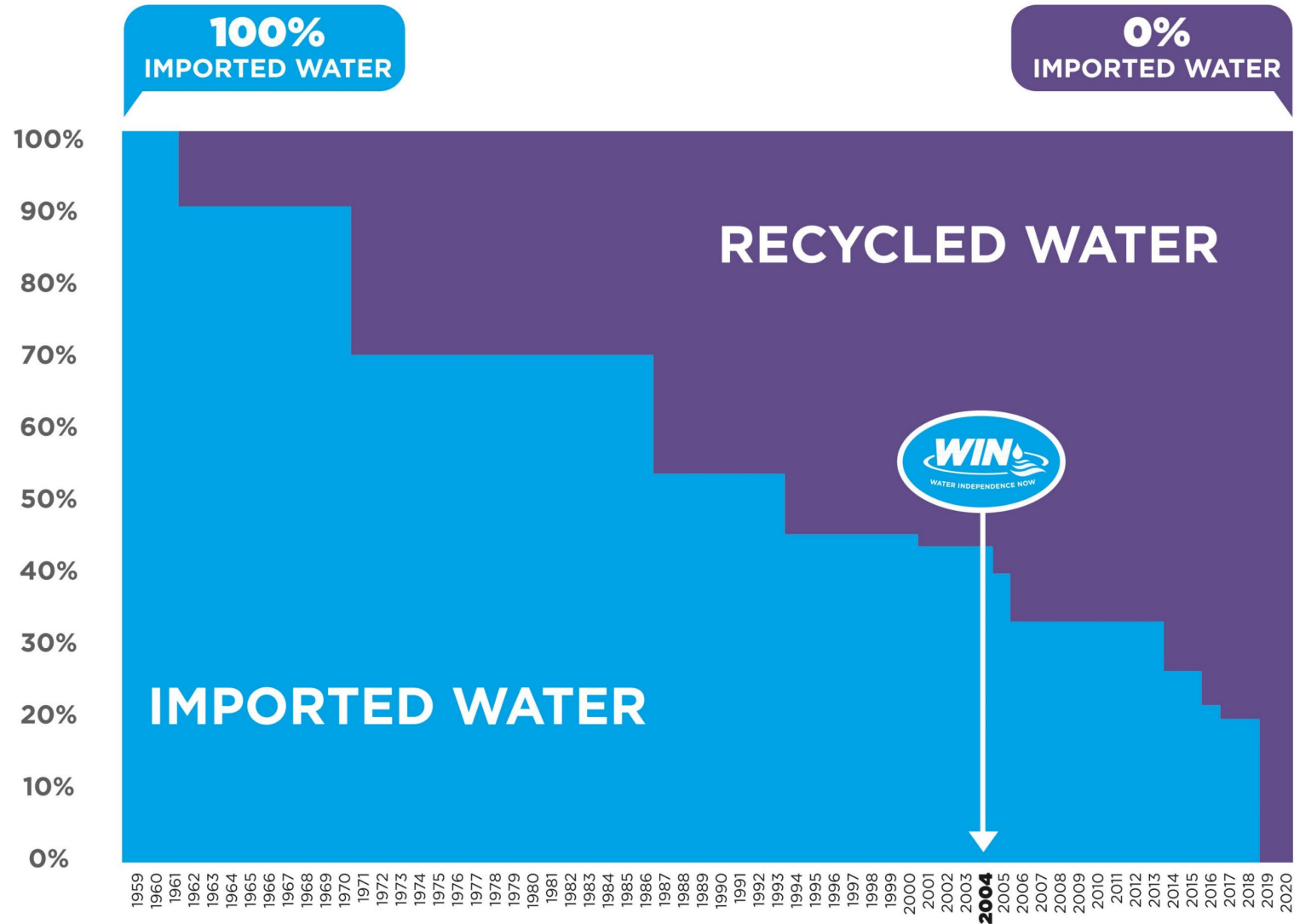
West Coast  
Barrier

Dominguez Gap  
Barrier

Alamitos  
Barrier



# Water Independence Now (WIN)





# Water Independence Now (WIN)



Collection of projects to eliminate remaining demand for imported water.

A key to developing independence from imported water is the development of local recycled water sources.

## Increased Recycled Water Usage



- Advanced Water Treatment Facility
- New Turnout Structure at Spreading Grounds

## Increased Stormwater Capture

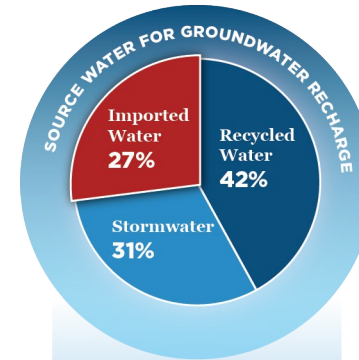


Whittier Narrows Conservation Pool Improvements



New Rubber Dams in San Gabriel River

## BEFORE WIN



## Increased Advanced Treated Water Production



Alamitos Seawater Barrier

- From WRD's Leo J. Vander Lans Advanced Water Treatment Facility

## Increased Advanced Treated Water Purchases



Dominguez Gap Seawater Barrier

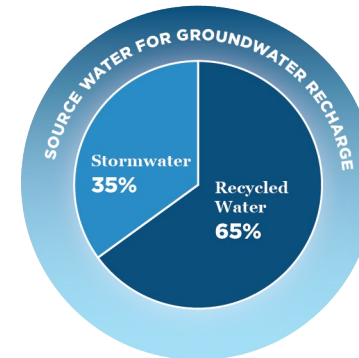
- From City Los Angeles Terminal Island Treatment Plant



West Coast Seawater

- From West Basin Municipal Water District Edward C. Little Water Recycling Facility

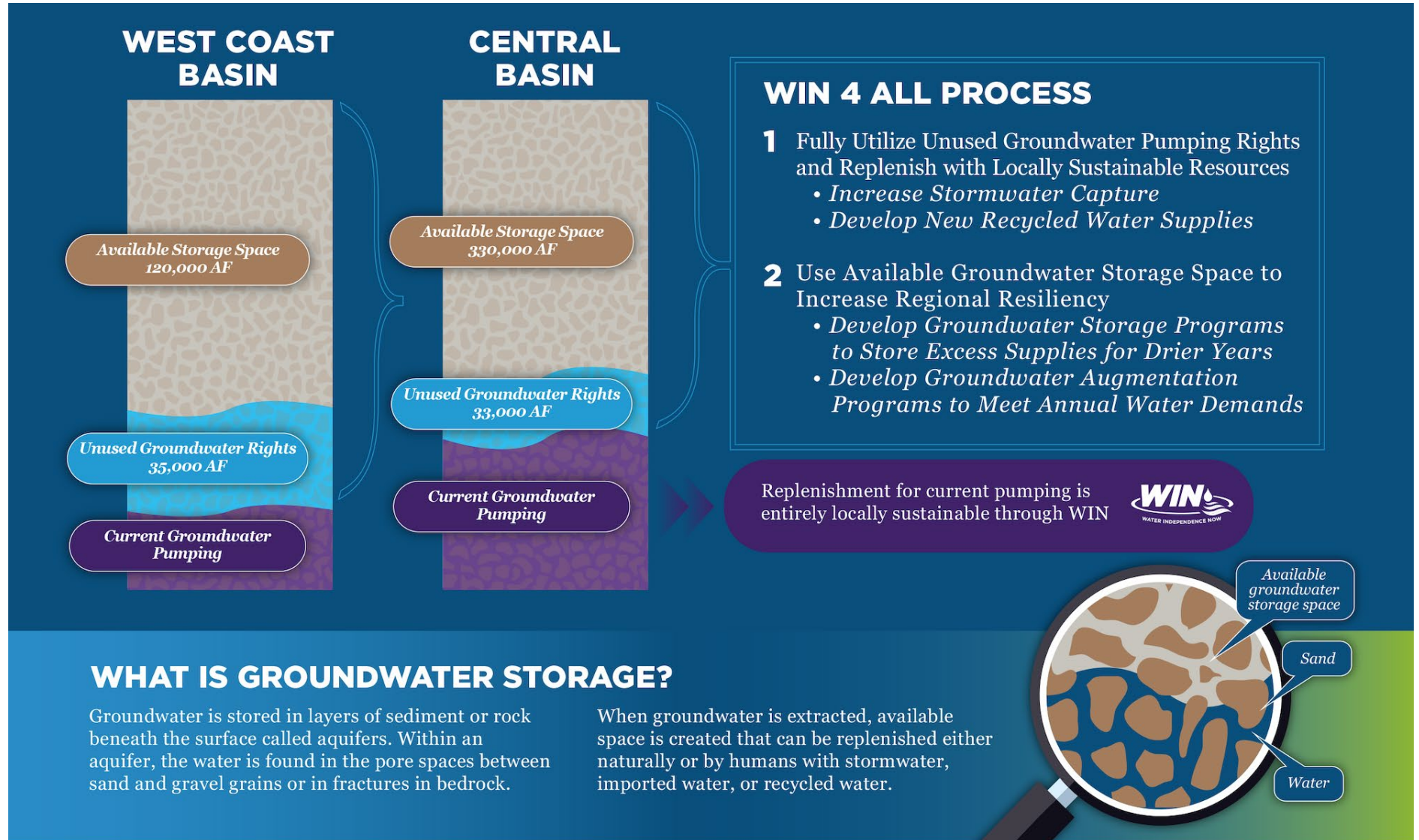
## AFTER WIN



# Water Independence for All (WIN 4 All)



Free of  
imported  
water in the  
region by  
2040





# Partnerships



WATER REPLENISHMENT DISTRICT



Central Basin  
Municipal Water District



Public Works  
LOS ANGELES COUNTY



Los Angeles



Department of Water & Power



LOS ANGELES COUNTY  
SANITATION DISTRICTS

Converting Waste Into Resources





# WRD's Desalting Experience in the West Coast Basin

## Torrance Desalter

Potable water for City of Torrance

- 2002 Design               = 2.5 MGD
- 2017 Expansion       + 2.5 MGD
- Total   = 5.0 MGD

Using Seawater Desalination Technology = MF/RO  
Same technology will be utilized in the Regional  
Brackish Water Reclamation Program



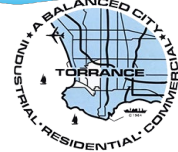


# Regional Brackish Water Reclamation Program

## A Collaborative Effort to Remediate a Brackish Groundwater Plume in the West Coast Basin

- ✓ Enables pumpers to utilize unused pumping rights
- ✓ Provides a new, locally sustainable potable water supply
- ✓ Program replenishment provides a beneficial use of available recycled water sources
- ✓ Remediation enables use of available groundwater storage space

### Partnerships



Los Angeles

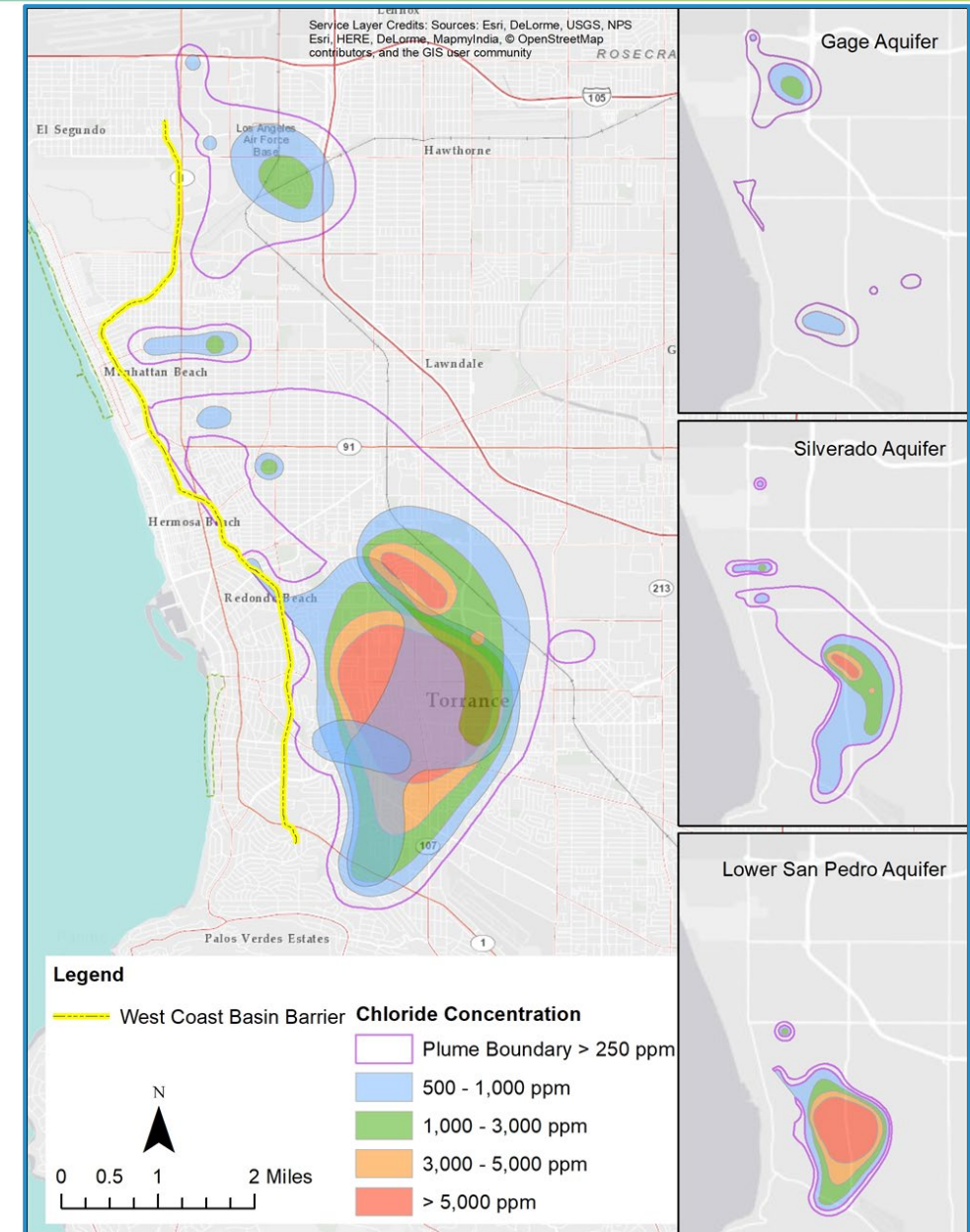


Department of Water & Power



Golden State  
Water Company

A Subsidiary of American States Water Company





# Thank you!



@WRDsocal



[www.WRD.org](http://www.WRD.org)



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Q&A

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Feel free to ask the host and panelists questions

Type your question here...



You can upvote  
by clicking  
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Q&A

Open (2)

Answered (0)

Dismissed (0)

Jack Barker 2:43:31 PM

×

Dismiss

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Eren Yaeger 2:42:44 PM

When are office hours?

👍

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Type answer

# Next Southern California Water Dialogue Webinar

Wednesday, March 22, 2023

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