

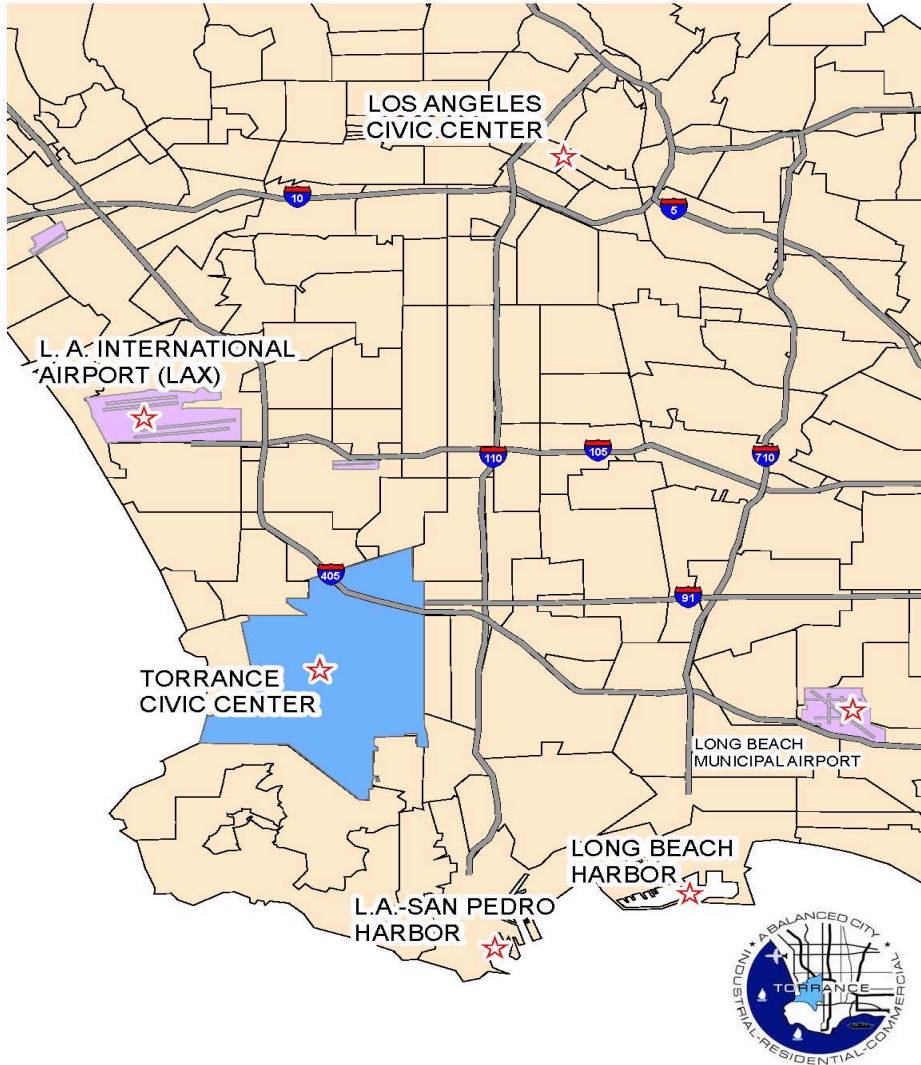


# Torrance Water Reliability, Sustainability and Resilience

SBCCOG General Assembly  
March 23, 2023



# City of Torrance and Vicinity



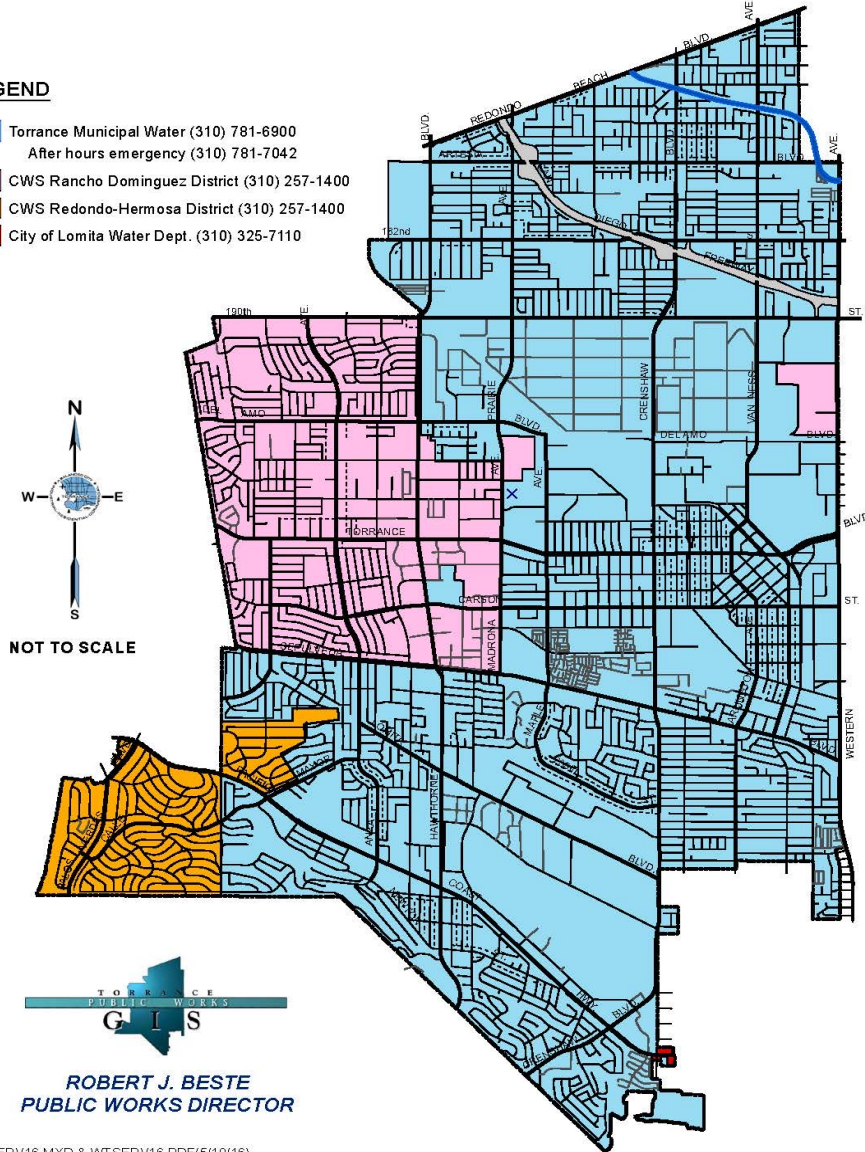
- ▶ Largest city in South Bay area - 147,000
- ▶ Founded in 1912, incorporated in 1921
- ▶ Commercial hub - daytime 1.5x of permanent population
- ▶ Water service by Torrance Municipal Water (TMW) and Calif. Water Service Company

# Torrance Municipal (TMW) Water

## CITY OF TORRANCE WATER PURVEYORS

### LEGEND

- Torrance Municipal Water (310) 781-6900  
After hours emergency (310) 781-7042
- CWS Rancho Dominguez District (310) 257-1400
- CWS Redondo-Hermosa District (310) 257-1400
- City of Lomita Water Dept. (310) 325-7110



- ▶ TMW serves 78% - 110,000 Population 26,800 Accounts
- ▶ California Water Service Co. serves remainder
- ▶ Torrance a founding MWD Member Agency
- ▶ TMW provides 22 MGD (25,000 AF/Yr.)
  - ▶ 19,000 AF potable, 6,000 AF recycled

# How We Measure H2O

## ▶ Produce/Purchase water in Acre-Feet (AF)

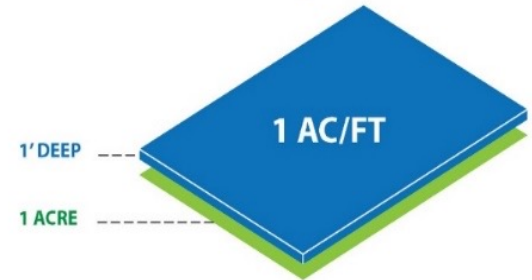
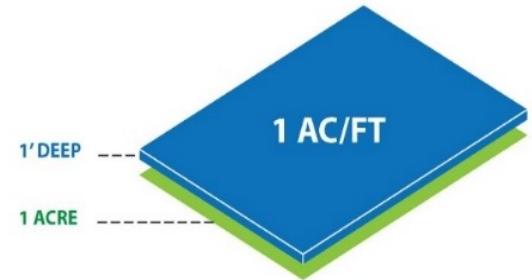
- ▶ 1 AF = 325,900 gallons
- ▶ Football field covered with 1 foot of water which equals annual use for 3 average families

## ▶ Sell water in 100 Cubic Feet (CCF)

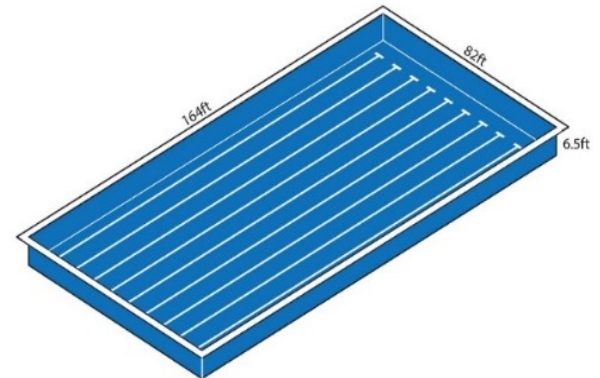
- ▶ 1 CCF = 748 gallons

## ▶ Average Single Family TMW = 11 CCF/mo.

- ▶ Gallons Per Capita per Day (GPCD)
- ▶ Water use efficiency target - below 100 GPCD



**2 Acre Feet (AF) = 1 Olympic Swimming Pool**  
(660,000 Gallons)



# Water Perspective of Reliability, Sustainability and Resilience

Reliability

- Durable and dependable water sources
- Multiple water options

Sustainability

- Long-term availability of water sources
- Diversified water portfolio

Resilience

- Flexibility to recover
- Adaptability to respond to unforeseen changes

# Water Sources for Southern California



# Feast or Famine Water Conditions



Early Spring 2022

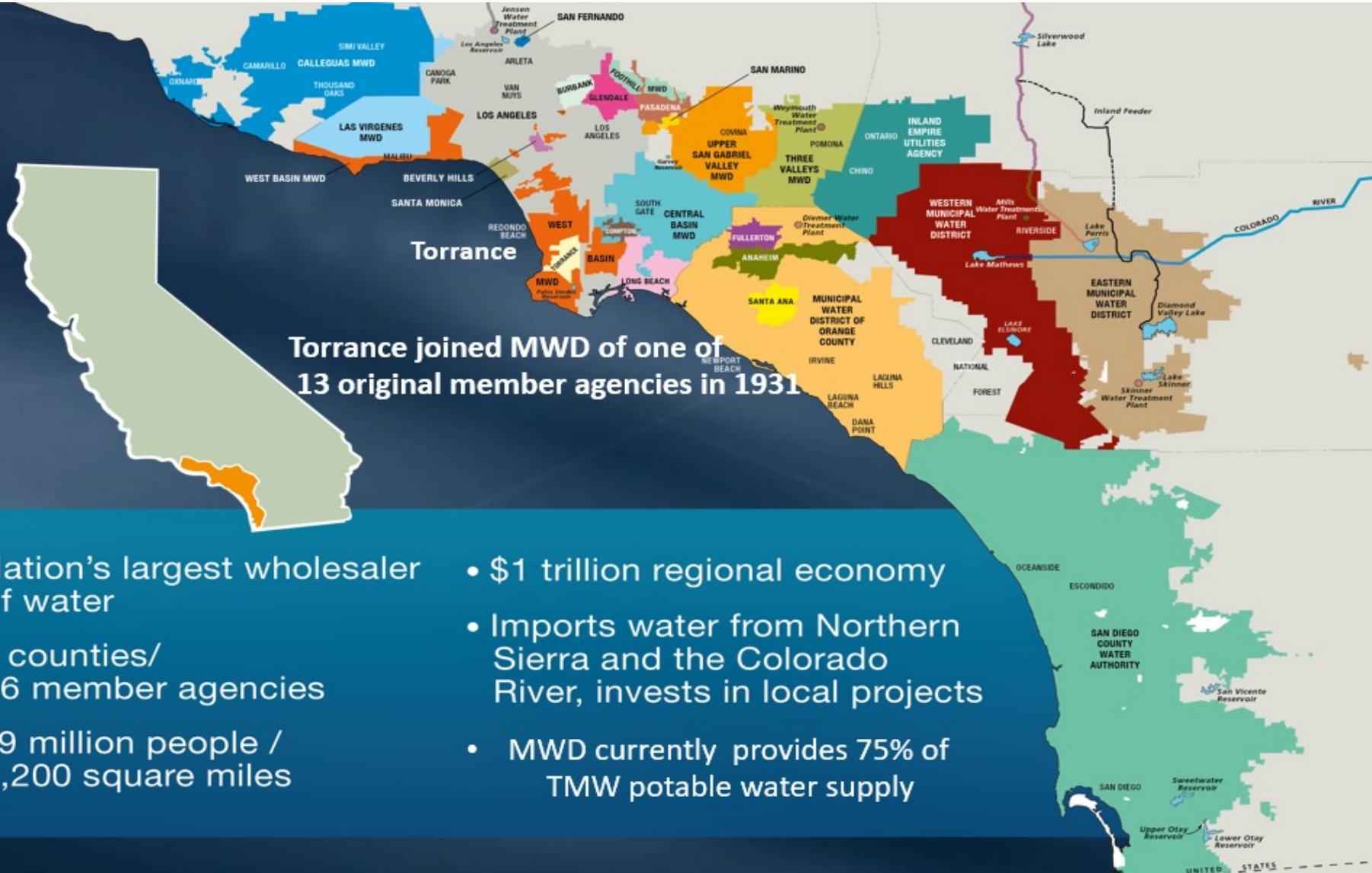


Winter 2023

- ▶ Ongoing impact of climate change
- ▶ High degree variability & volatility precipitation/snow
- ▶ 2020 to 2022 were driest 3 consecutive years
- ▶ Winter 2023 near record snowpacks in Sierra range
- ▶ Need adaptive resource solutions to mitigate future impacts

# Metropolitan Water District

## Regional Supplier of Imported Water for So. California



- Nation's largest wholesaler of water
- 6 counties/ 26 member agencies
- 19 million people / 5,200 square miles
- \$1 trillion regional economy
- Imports water from Northern Sierra and the Colorado River, invests in local projects
- MWD currently provides 75% of TMW potable water supply



# Torrance Water Mission Statement

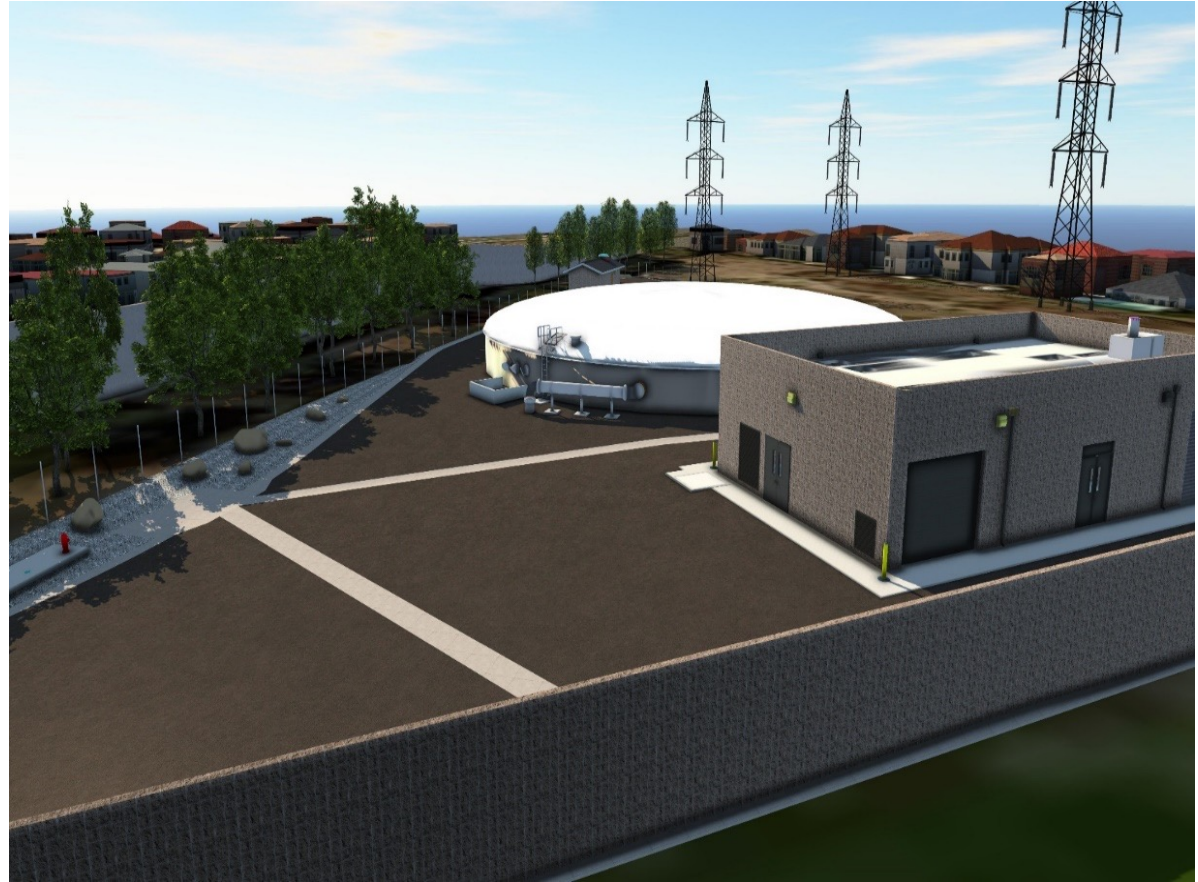


- ▶ Reliability, resilience and sustainability
- ▶ Infrastructure replacement and facility modernization
- ▶ Diversification of water portfolio – local sources
- ▶ Water rate stability and affordability
- ▶ Local and regional partnerships
- ▶ Stewardship of resources

# North Torrance Wellfield Project

## Operational Spring 2023

- ▶ 2 new potable water Wells
- ▶ Doubles local water supply
- ▶ Lower water cost, helps stabilize rates
- ▶ Reduces dependence on imported water



# Brackish Groundwater Plume in the South Bay

- ▶ Seawater intruded groundwater beginning in the 1930s
- ▶ Plume has expanded to 600,000 AF
- ▶ Destroyed many Wells
- ▶ Groundwater desalination facility for remediation



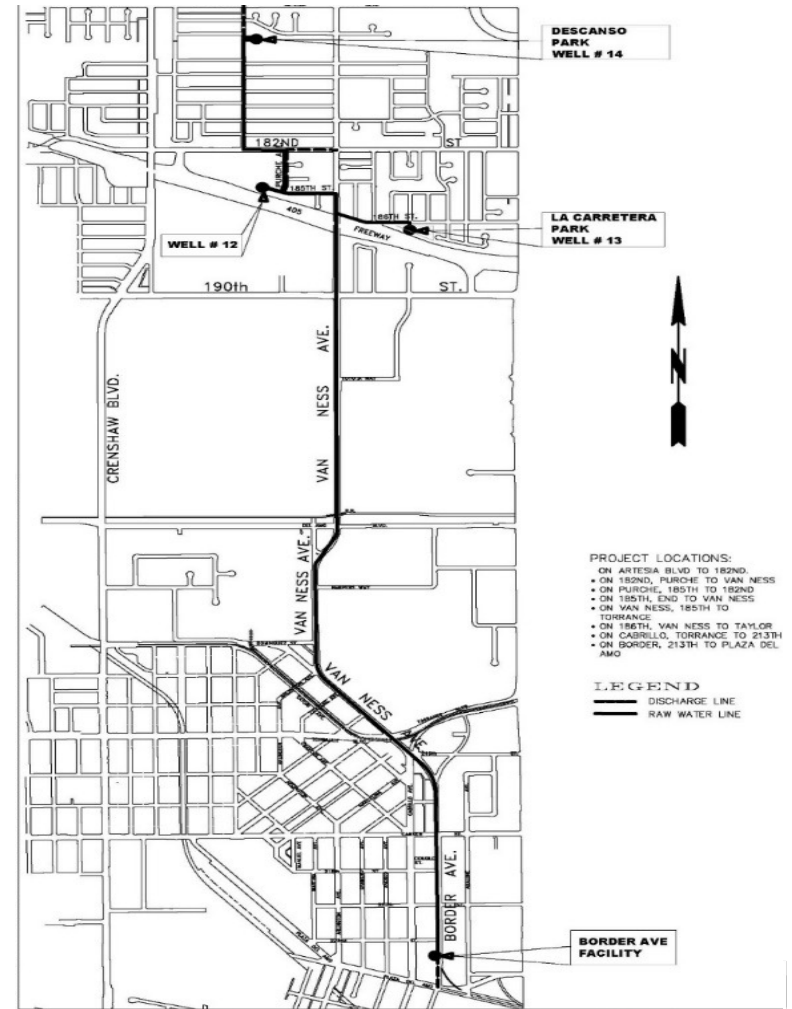
# Goldsworthy Groundwater Desalter in Torrance



- ▶ Owned and constructed by Water Replenishment District (WRD)
  - ▶ Partnership between City and WRD
    - Located at Torrance City Yard
    - Operated/maintained by City forces
  - ▶ Provides nearly 20% of TMW's potable water
  - ▶ Expansion as regional facility in the next 3 Years
- Uses Reverse Osmosis Desalination Technology (RO)

# Van Ness Wellfield Project

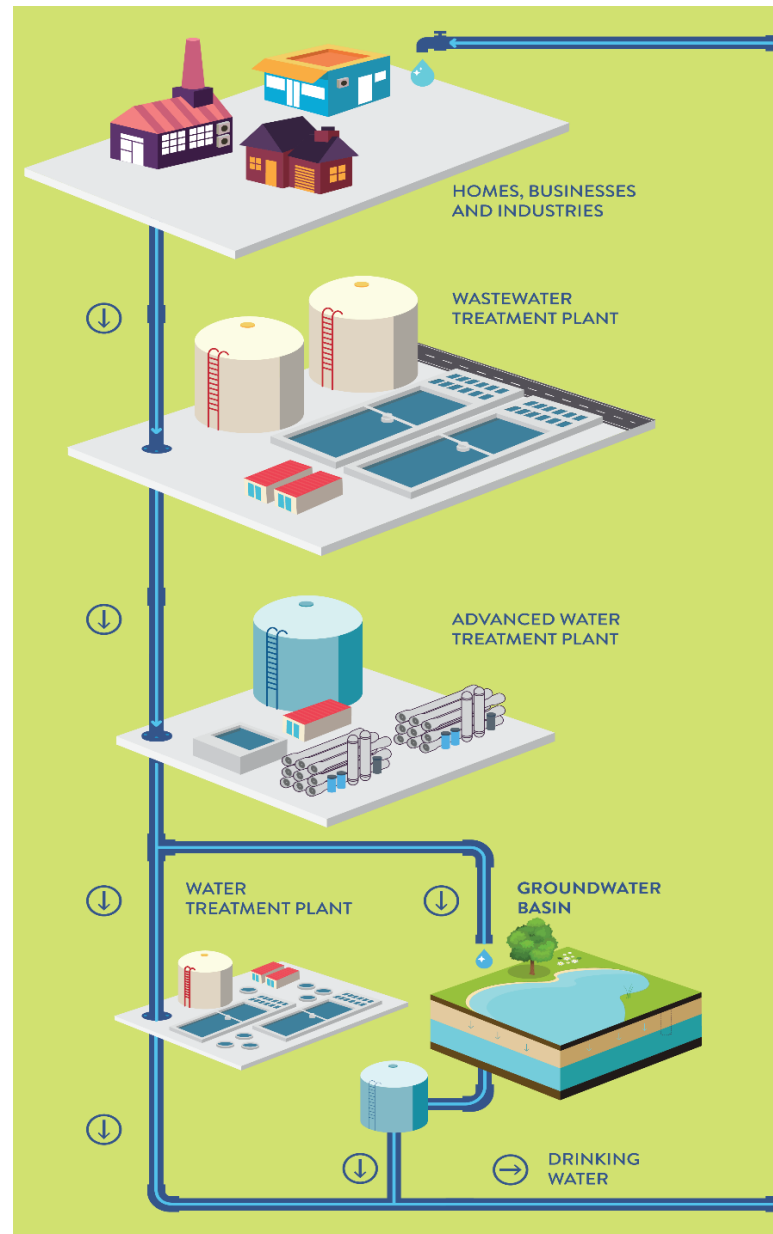
- ▶ Will increase TMW water supply by approximately 4,000 AFY of groundwater
- ▶ 3 new wells in North Torrance
- ▶ Re-purpose/rehab existing Border Avenue treatment plant
- ▶ Target completion: 2026



# The Future-Recycled Regional Pure Water Reuse Program

## Development of a new regional water source

- ▶ Highly advanced treated water from LA County Sanitation (LACSD) Wastewater Treatment Plant in Carson
- ▶ Partnership MWD & LACSD
- ▶ Replenish groundwater basins
- ▶ Provide water for industrial use
- ▶ Demonstration facility at LASCSD
- ▶ “Early Start Project” in South Bay and Long Beach as early as 2028
- ▶ Ultimate capacity 165,000 AF of new water



# Water Uses of Pure Water Project



Supply for industrial use



Replenish groundwater



Potential potable direct reuse in future

# Role of Utility Financial Stability



- ▶ Provides capital to replace aged infrastructure
- ▶ Funding for source diversification with local water projects
- ▶ Reserves to cover unforeseen emergencies/contingencies
- ▶ Rate stabilization and affordability
- ▶ Resources to take advantage of unique opportunities to enhance reliability



# Conservation + Water Source Diversification = Reliability

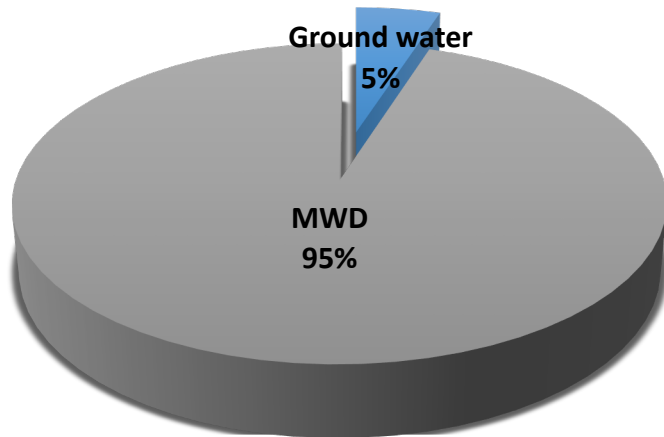


- ▶ Enhanced conservation programs
- ▶ 5 New groundwater wells - North Torrance & Van Ness Wellfield Projects
- ▶ Goldsworthy Desalter Expansion
- ▶ Additional local water projects
- ▶ Regional partnership and collaboration programs
- ▶ Investment needed in “Big” state/regional water supply, storage and conveyance projects

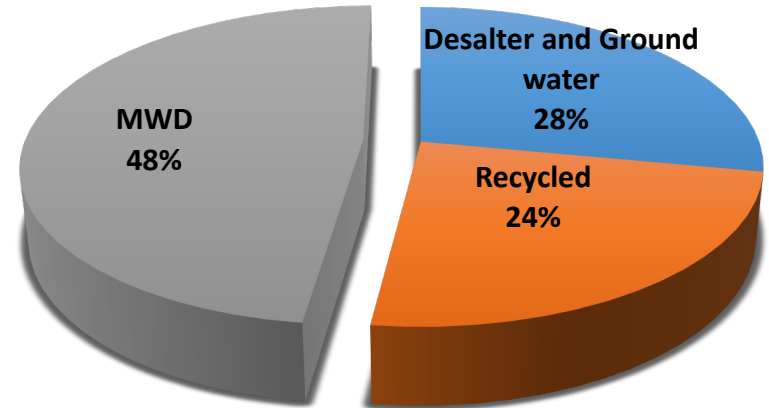


# TMW Water Source Mix Past, Present and Future

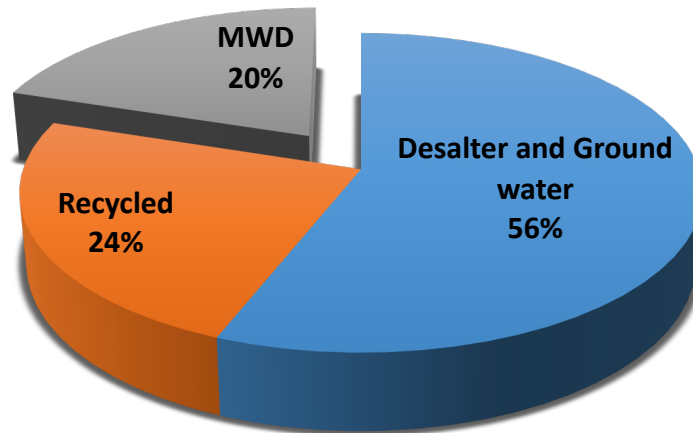
**1995**



**Present**



**Near Future**



□ Source Diversification  
key component to City's  
future water reliability

Thank you!

Questions

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