

# EVMWD Water Supply Planning

## Inland Empire WaterReuse Chapter Meeting

August 16, 2022

# Agenda

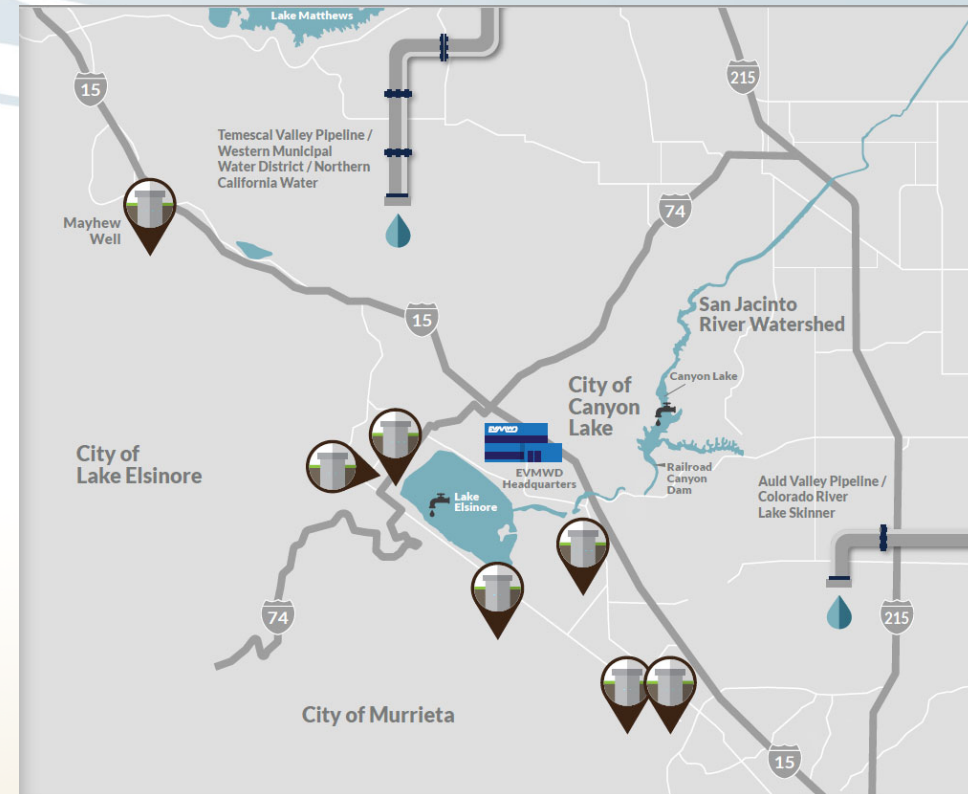
1. EVMWD Water Demand and Supply Facts
2. Integrated Resources Plan
3. Indirect Potable Reuse
4. Maximum Benefit Analysis
5. Upper Temescal Valley Salt Nutrient Management Plan (UTV SNMP)
6. Summary and Future Planning

# Overview of Water System

- EVMWD Service Area
  - Comprised of the Cities of Lake Elsinore, Canyon Lake, Wildomar, and Murrieta, and unincorporated Riverside County and Orange County.
  - Provides water, wastewater, and recycled water services.
  - Two service area: Elsinore and Temescal
  - 44,560 potable water connections

POPULATION SERVED	2020	2025	2030	2035	2040	2045
EVMWD	163,984	176,657	190,310	205,018	220,863	237,932

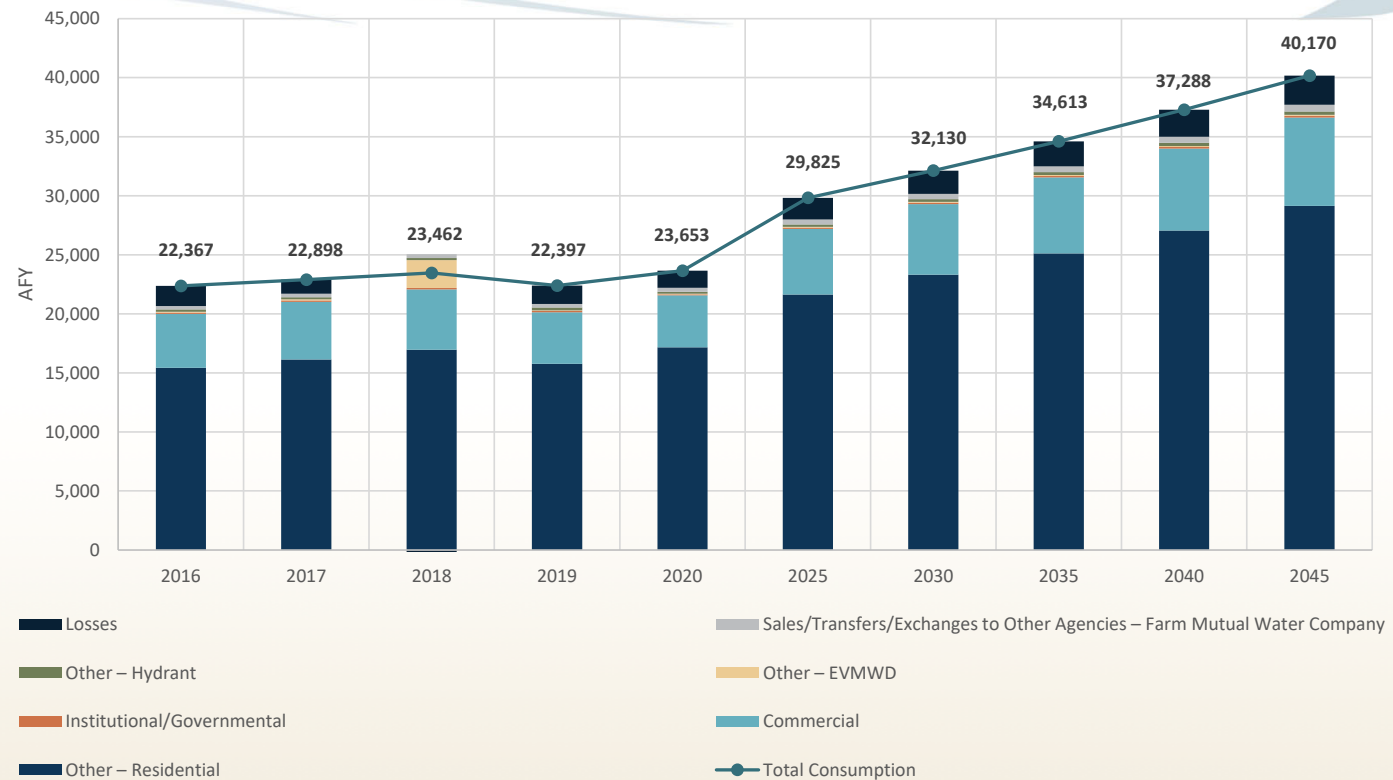
**Notes:** Based on DWR's online population tool. Adjusting the tool to use the 2010 persons per connections values. Assumed an annual growth rate of 1.5%.



# Water Use Characterization

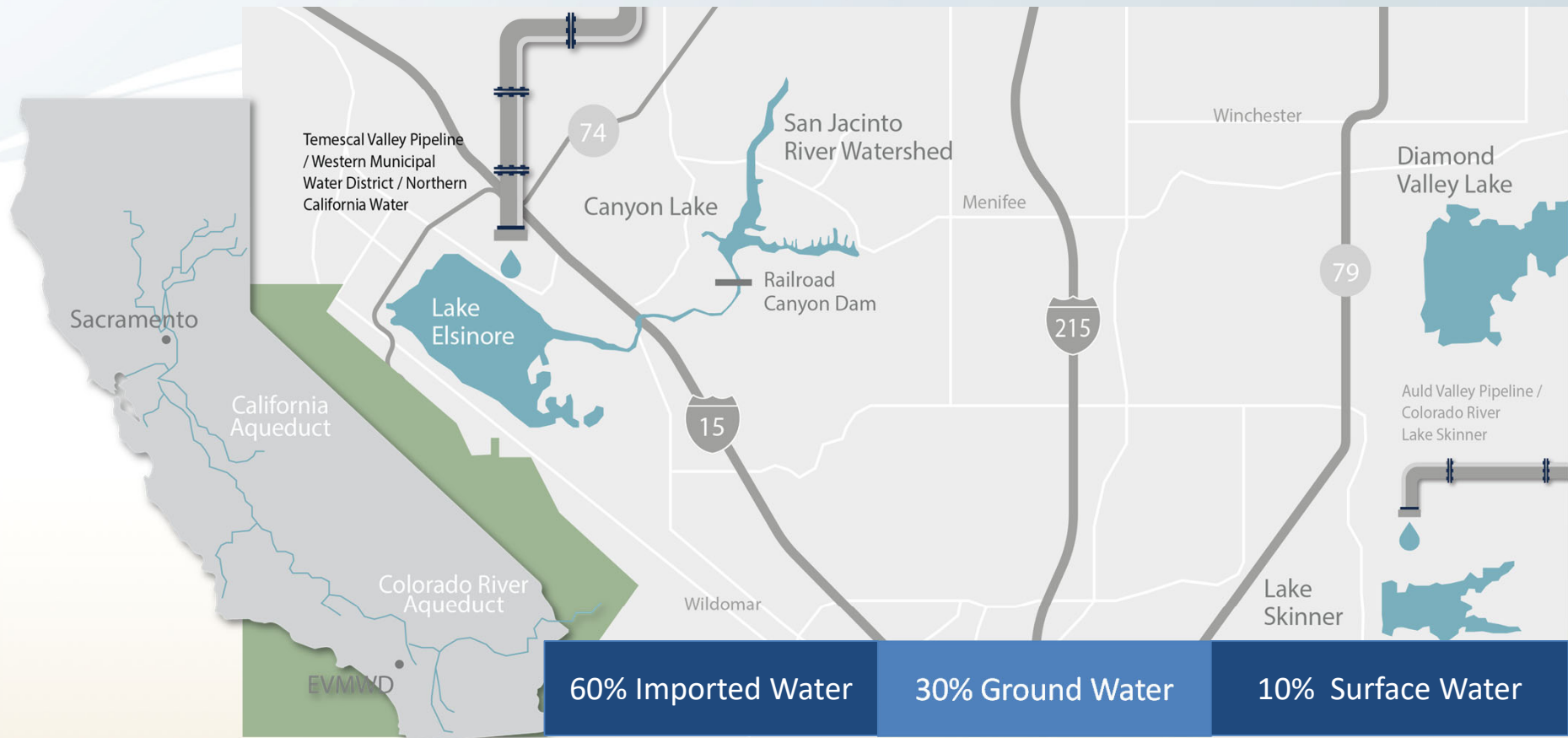
Past, Current, and Projected Water Use

- EVMWD Water Uses (Average)
  - Residential ~ 74%
  - Commercial ~ 20%
  - Sales to Other Agency: less than 1.3%
  - Losses~3.2%
  - Other uses less than 1.5%

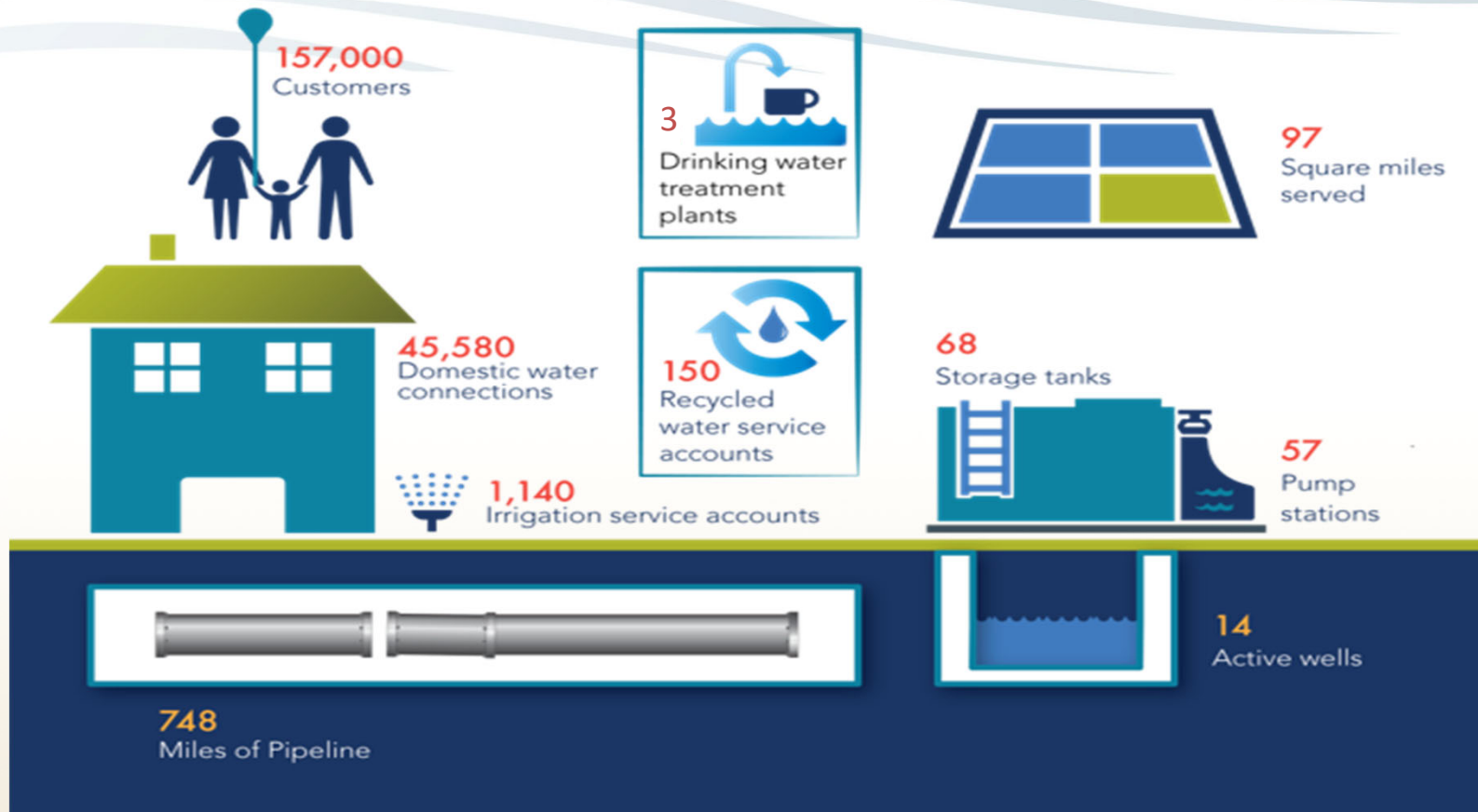




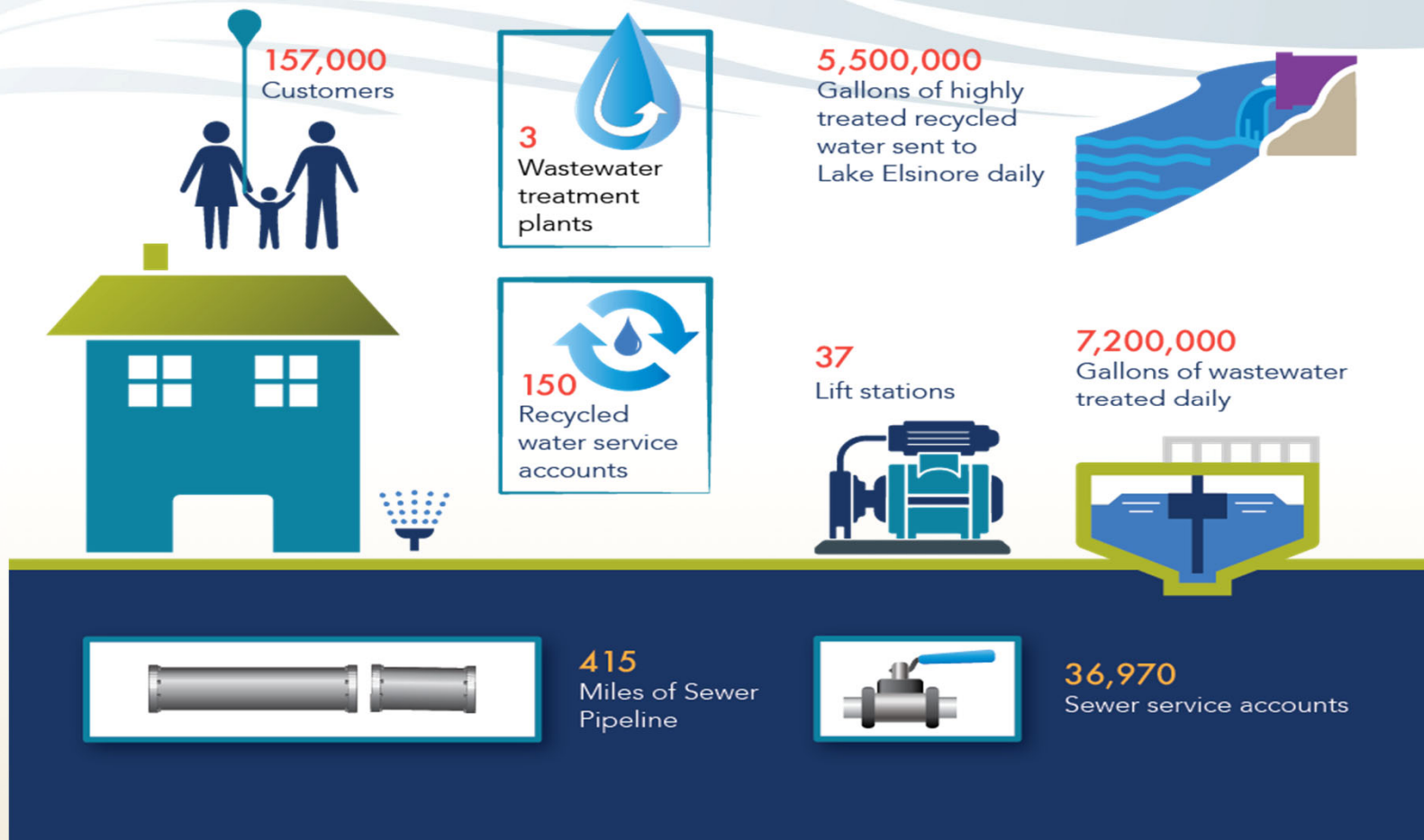
# Water Supplies



# About EVMWD – Water System

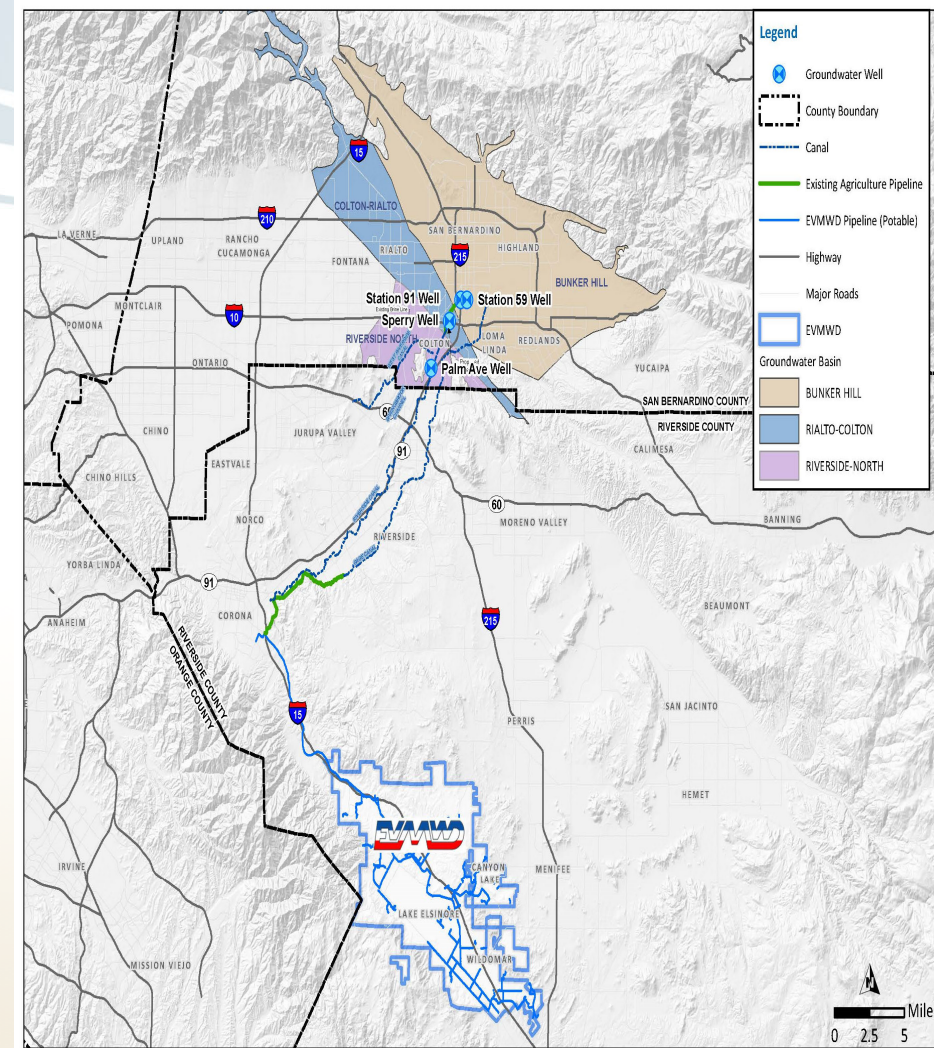


# About EVMWD – Wastewater System



# Other Assets and Water Rights

- Surface Water
- Groundwater – Storage and Diversion
- Meeks & Daley Water Company
  - Located in San Bernardino area
  - 4 Wells
  - Approx. 4,700 AF of water rights in Bunker Hill basin
  - Long term lease with WMWD
- Conjunctive Use Programs
  - MWD
  - SARCCUP

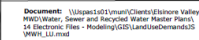




# Lake Management

- Lake Enhancement – Lake Elsinore
  - First in CA to use recycled water in a full-body recreational lake
  - Received Theodore Roosevelt Award for Excellence in Natural Resources Management
    - Recognized for leadership in managing limited natural resources
- Full body contact in Canyon Lake
  - Promoted special legislation
  - One of 3 drinking water reservoirs allowed in CA



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# 2017 Integrated Resources Plan (IRP)



## CREATE NEW WATER

*Identify, local, new water supply options beyond sources in EVMWD's existing supply portfolio.*



## INCREASE SUPPLY RELIABILITY

*Develop a water supply portfolio that offers the highest reliability under all hydrologic conditions.*



## DECREASE DEPENDENCE ON IMPORTED WATER

*Diversify the water supply portfolio to be less dependent on imported water.*



## PROMOTE REUSE

*Develop a plan that reuses 100 percent of the wastewater effluent generated by EVMWD.*



## IMPROVE WATER QUALITY

*Provide high quality water to customers within EVMWD's service area.*



## IMPROVE GROUNDWATER MANAGEMENT

*Protect and sustainably manage EVMWD's groundwater resources.*

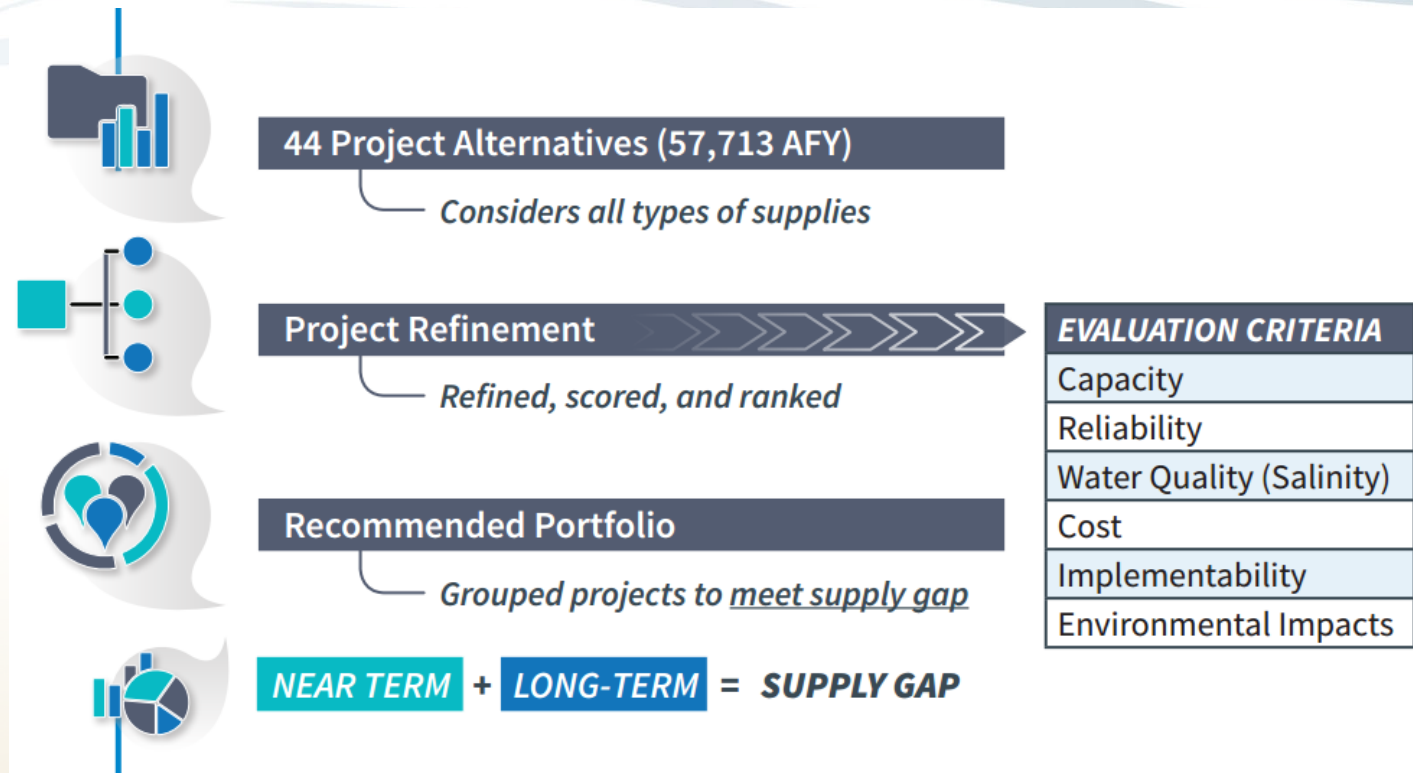


## PROMOTE CONSERVATION

*Continue and promote water conservation programs to reduce EVMWD's water footprint.*



# 2017 IRP Process

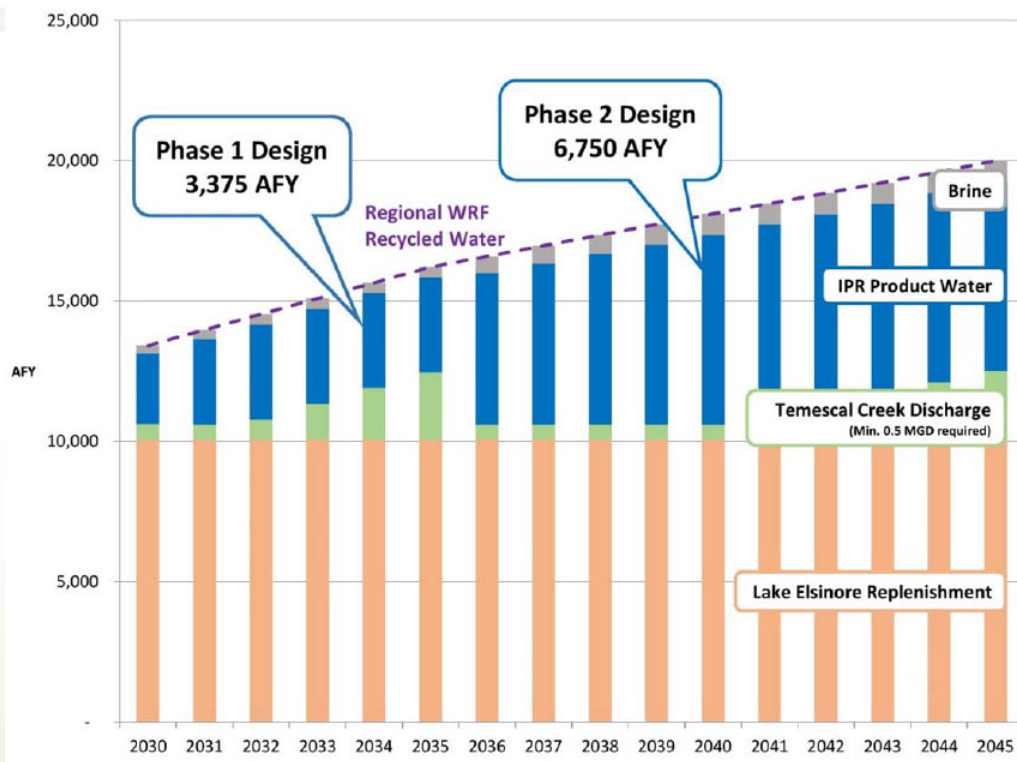




# IRP Implementation

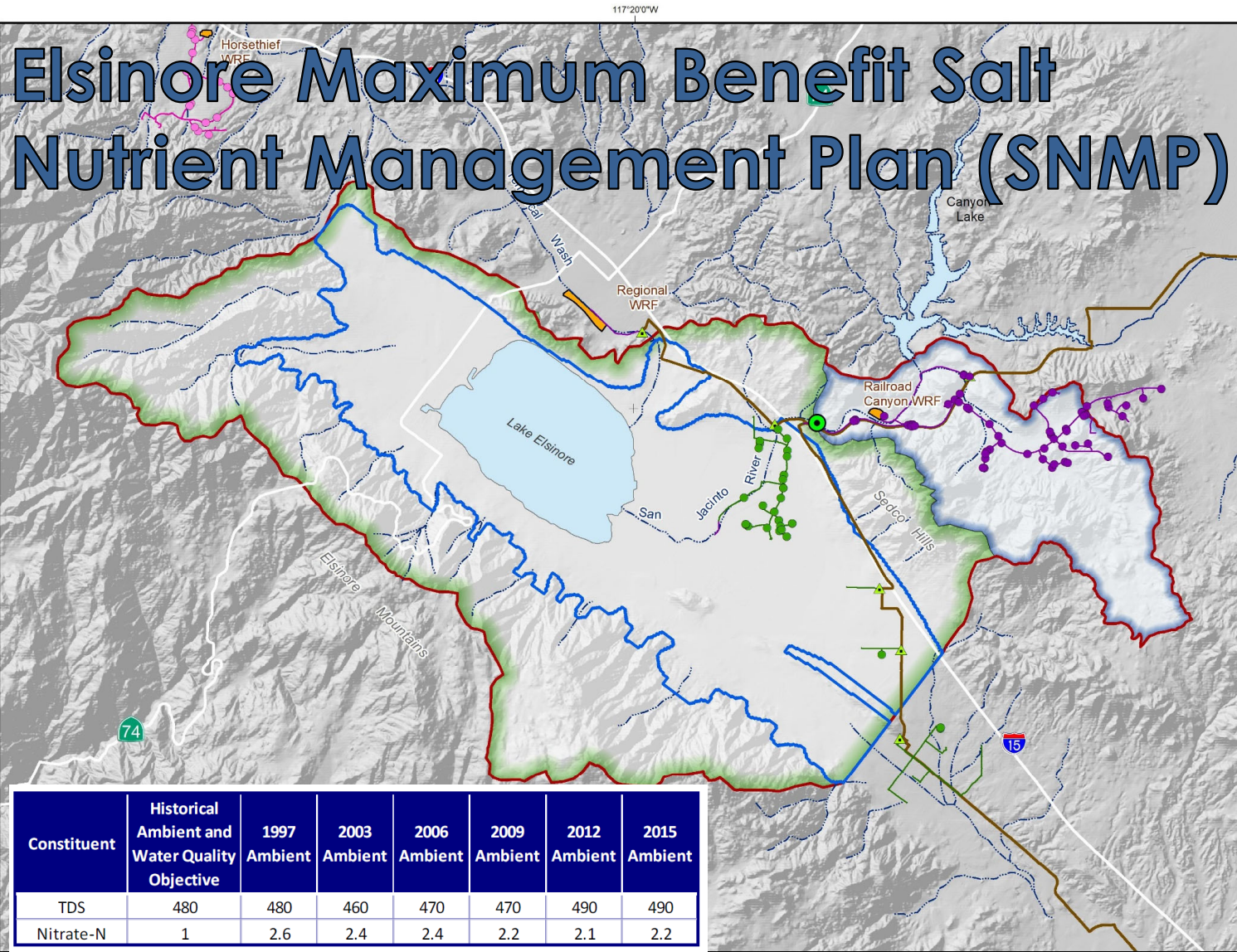
Project Name	Source	Implementation Year	Yield (AFY)
Wells	Groundwater	Ongoing	3,460
Canyon Lake WTP	Surface Water	2025	6,200
Indirect Potable Reuse	Reuse	2030	6,750

# Indirect Potable Reuse (IPR) – Feasibility Study

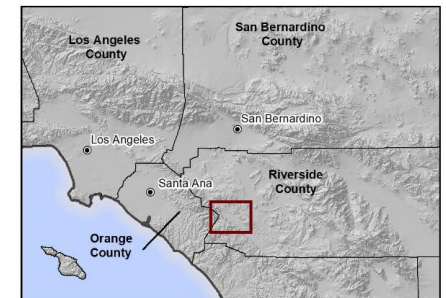


- 2016 Indirect Potable Reuse Feasibility Study
- Evaluates IPR using Regional WRF Recycled Water
- Elsinore Basin offers proven, dry-year storage opportunities
- Successful demonstration via MWD CUP Program

# Elsinore Maximum Benefit Salt Nutrient Management Plan (SNMP)



- Elsinore Basin Watershed
- Elsinore Sub-watershed
- Canyon Hills Sub-watershed
- Elsinore Valley Municipal Water District Recycled Water Service Areas**
- Railroad Canyon Recycled Water System**
  - Recycled Water Meter
  - Recycled Water Line
- Wildomar Recycled Water System**
  - Recycled Water Meter
  - ▲ Recycled Water Turnout
  - Recycled Water Line
- Horsethief Recycled Water System**
  - Recycled Water Meter
  - Recycled Water Line
- EMWD Recycled Water Line
- Water Reclamation Plant
- Elsinore Groundwater Model Boundary
- San Jacinto River USGS Station
- ~ Streams & Flood Control Channels
- Lakes and Reservoirs





# Maximum Benefit Approval and Commitments

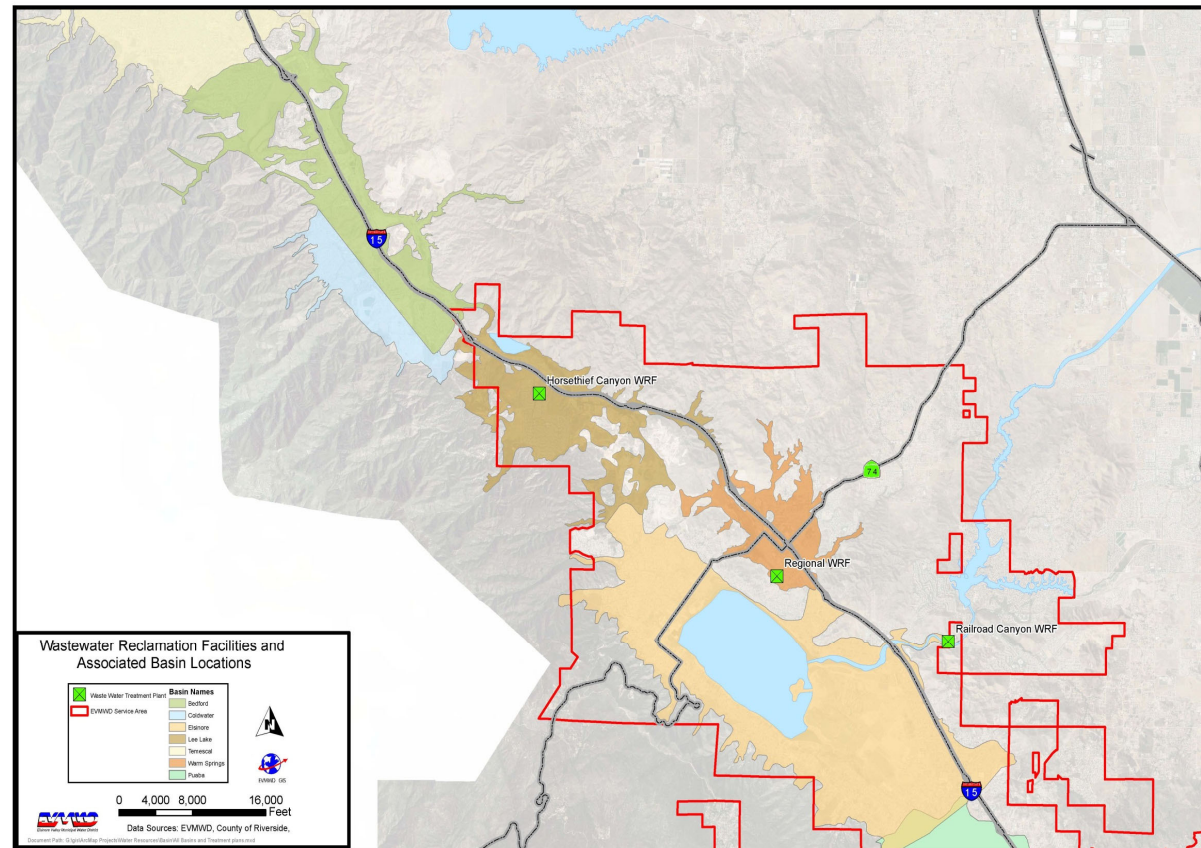
Constituent	Old Antidegradation Objective	New Antidegradation Objective	Current Ambient Quality
TDS (mg/L)	480	530	490
Nitrate (mg/L)	1	5	2.3

1. Guarantee the beneficial use of the Elsinore GMZ
2. Prioritize recycled water use to maintain Lake Elsinore
3. Salt offset obligation accounting
4. Implement Integrated Resources Plan
5. Complete construction and commence its salt offset project once the total recycled water production at its Regional WRF reaches 10 mgd
6. Monitoring and report (consistent with 2019 Recycled Water Policy)
7. Annual reporting of status/compliance with commitments



# Upper Temescal Valley Salt and Nutrient Management Plan (UTV SNMP)

- In partnership with Eastern Municipal Water District
- Permitting of recycled water discharge and reuse in the UTV
- Historical exceedance of permitted effluent discharge from WRF
- Limitations: Salt offset required
- No Basin Water Quality Objectives (WQO) or current ambient water quality (AWQ) for Nitrate and TDS
- Proposal: Offset historical exceedances of TDS discharge limitations by preparing an SNMP for the UTV



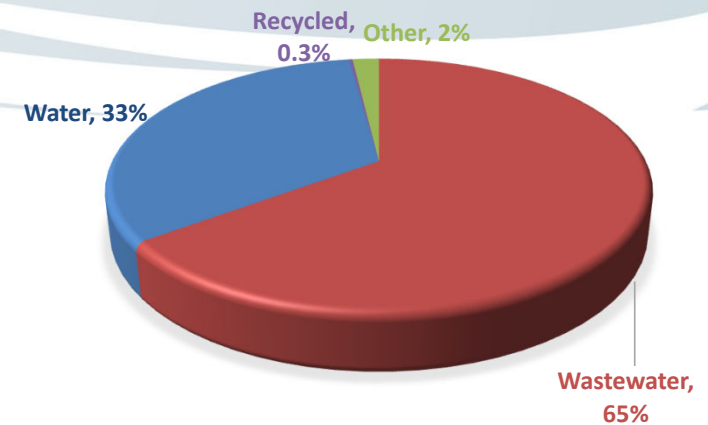
# Main Findings and Recommendations UTV-SNMP

Constituent	Antidegradation Objective	Current Ambient	Assimilative Capacity
TDS (mg/L)	820	750	70
Nitrate (mg/L)	7.9	4.7	3.2

- Salt and Nutrient Management Plan Actions:
- Implementation of SNMP Monitoring and Reporting Program
- Triennial reporting of water supply and discharge water quality
- Recomputation of current ambient water quality and projections (every six years)
- Participation in Task Force efforts (WLAM and AWQ Updates)
- Annual reporting of progress and activities of SNMP

# Major Projects – Next 5 Years

- **Wastewater System Projects - \$250M**
  - Regional Water Reclamation Facility Expansion - \$190M
  - Regional Lift Station & Associated Force Mains - \$60M
- **Water System Projects - \$150M**
  - Lee Lake Dam Upgrade - \$60M
  - Canyon Lake WTP Improvements- \$40M
  - Well Rehabilitation & Replacements & - \$10M
- **Other - \$5M**
  - Lake Elsinore Aeration System Improvements - \$5M
- **Total 5 Year CIP ~ \$500M**



# Summary and Next Steps

- EVMWD is proactively managing and enhancing water supply reliability, including recycled water
- IRP has been instrumental in increasing a more reliable water supply portfolio, and it is an ongoing effort
- IPR will increase water supply portfolio reliability, and commitment of Maximum Benefit SNMP project
- Successful implementation UTV SNMP to maximize use of Recycled water
  - Close coordination with regulatory agencies is the key to a successful reuse program



An aerial photograph of a residential area with a lake and mountains in the background. The text "THANK YOU" is overlaid in large white letters. The background shows a body of water, a residential area with houses and trees, and mountains in the distance. A stylized blue and white wave graphic is positioned above the text.

# THANK YOU