

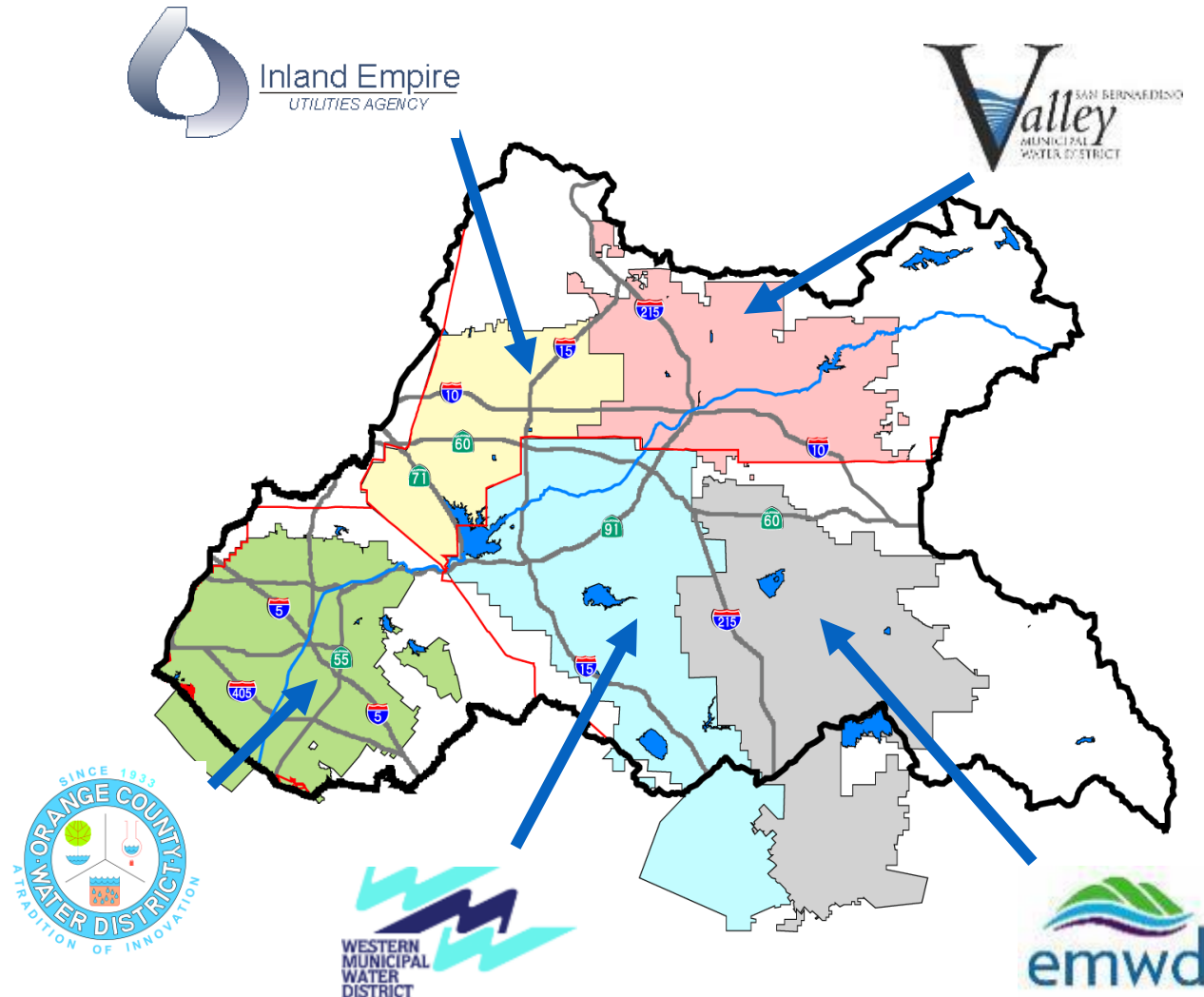


Inland Empire Brine Line and SAWPA Update

Jeff Mosher
General Manager:
Santa Ana Watershed Project Authority

WaterReuse California Inland Empire Chapter
December 15, 2021

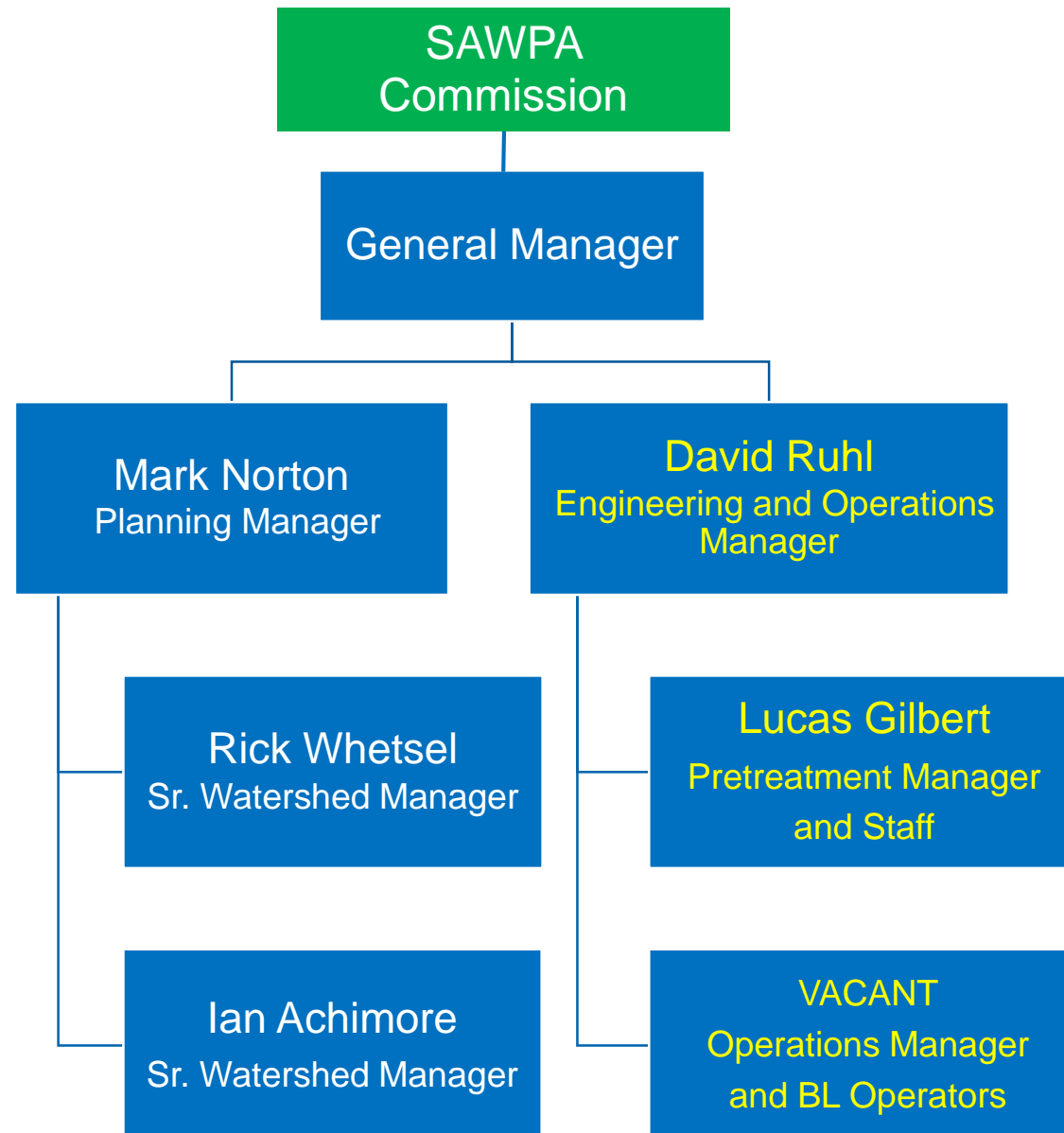
SAWPA: Joint Powers Authority with five Member Agencies



Stakeholders:

- 97 Water-related Agencies
- 4 Counties
- 63 Cities
- State, environmental, and regulatory agencies
- Federal agencies
- Other special districts
- Special interest groups

SAWPA Key Staff



Achieving SAWPA's Vision



Brine Line

- Export of salt from the watershed
- Achieve a salt balance
- Supports the economy



OWOW

- Supports Integrated Regional Water Management (IRWM)
- Brings together stakeholders
- Work collaboratively
- Find solutions to the water resource challenges



Roundtables

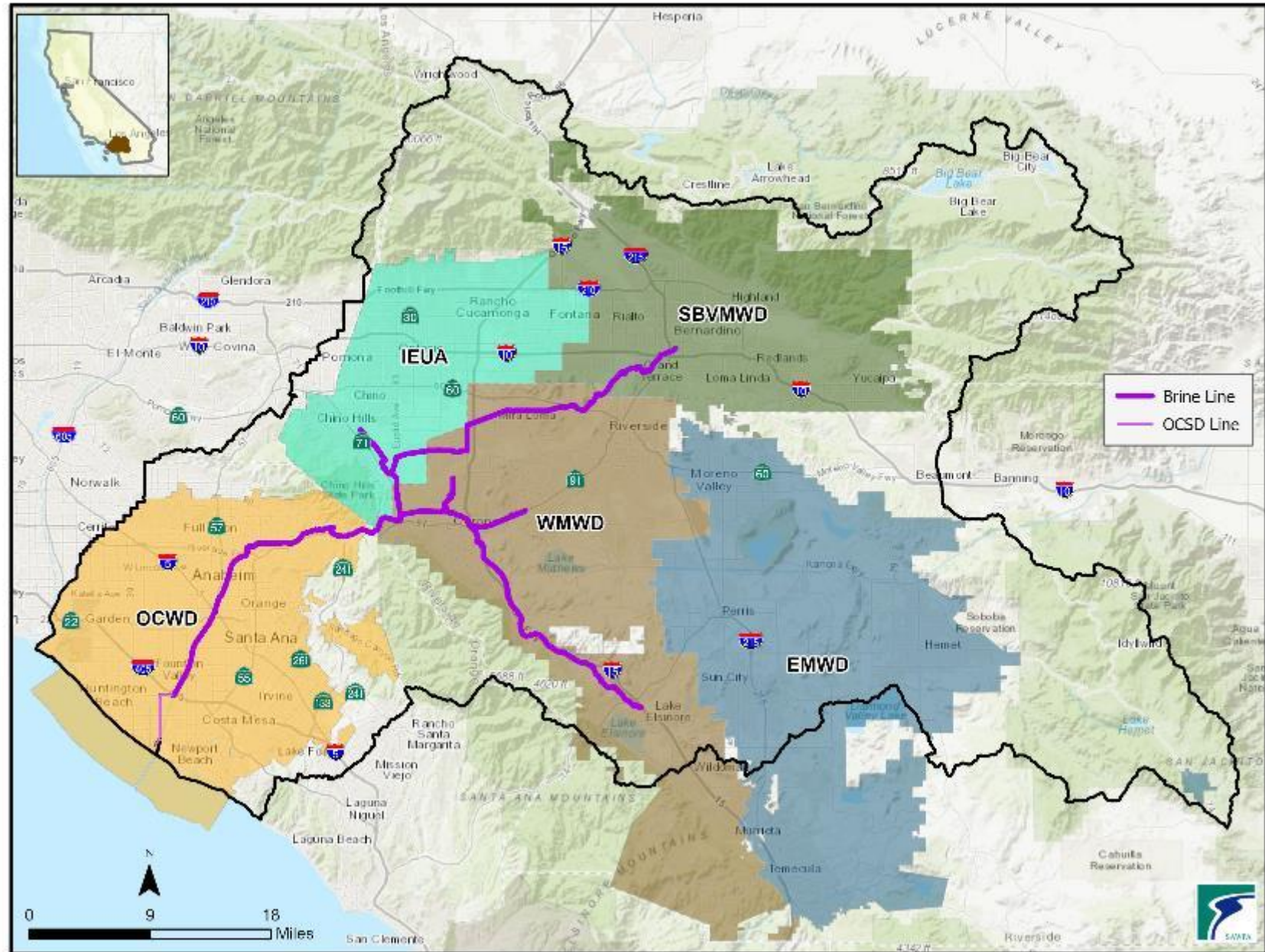
- Forums for agencies and organizations
- Address problems through planning and innovation
- SAWPA serves as the administrator/facilitator

Inland Empire Brine Line

(SAWPA contact: David Ruhl)

Inland Empire Brine Line

- 93 miles
- ~12 MGD (30 MGD capacity)
- Removes ~500,000 lbs of salt per day
- Direct dischargers (31)
- Indirect (trucked disposal)
- Brine and high saline wastewater
 - Desalters
 - Industry/Commercial
- OC San – Partner
 - Conveyance, treatment, and ocean discharge



Project:Mark_NortonWABrineLineMapWABrineLineMap.aprx LoMABrineLine SW-3024

Benefits of Brine Line

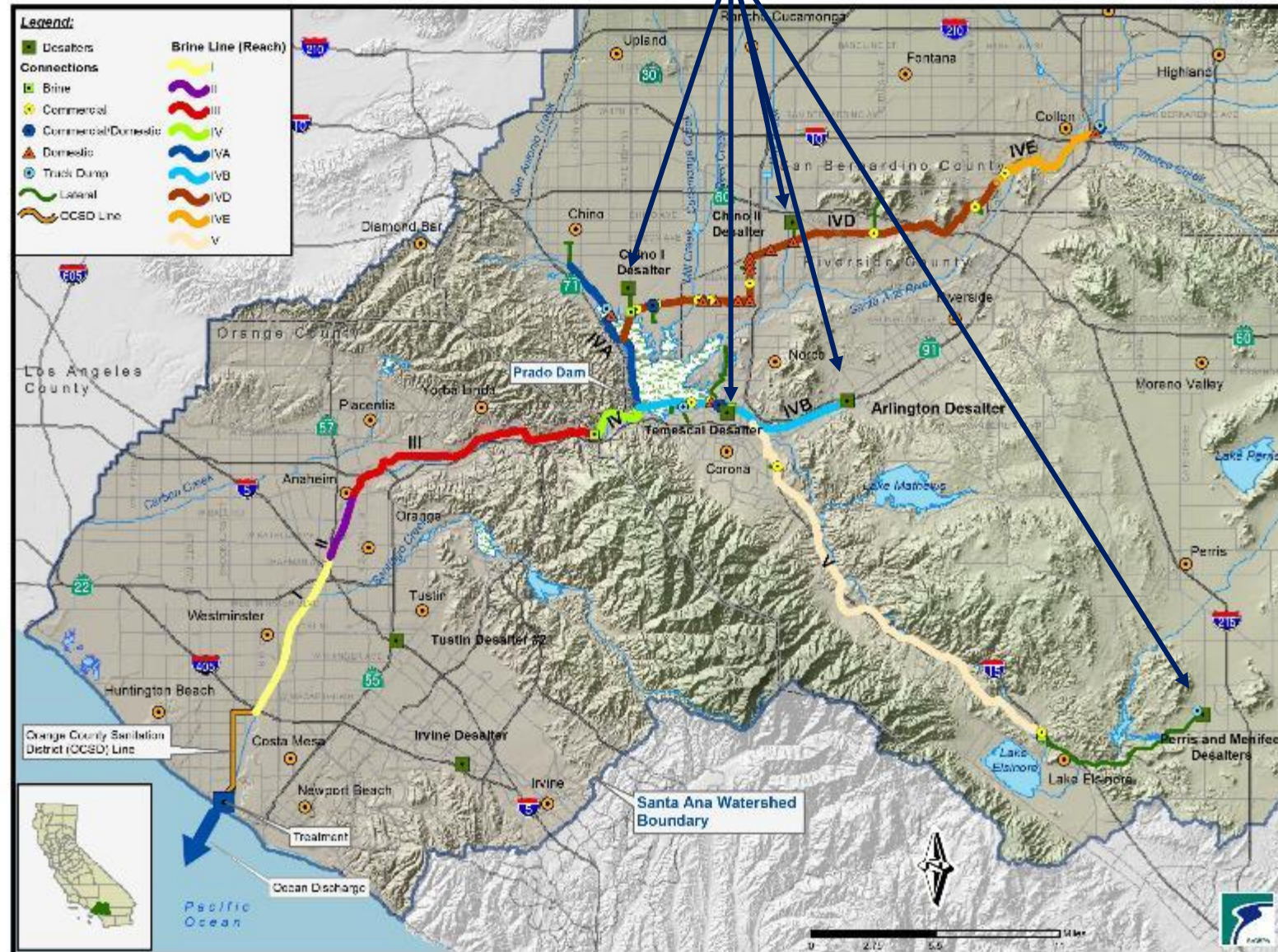
- Purpose
 - Provide public agencies and commercial industries with a cost-effective salinity management option for current and future projects
 - Allows for salt removal from the watershed
 - Help achieve long-term, watershed-wide salinity balance
- WWTP Benefits
 - Disposal of emergency discharges from local WWTPs
- Water Supply Benefits
 - Supports the use of groundwater desalters (brine disposal)
 - Protects Santa Ana River and groundwater basins
- Recycled Water Benefits
 - Keeps industrial effluent with high salinity out of collection systems
 - Maximum Benefit programs support recycled water projects

List of Desalters

Desalter (Owner/Operator)

- Arlington (WMWD)
- Chino I (CDA / IEUA)
- Chino II (CDA / JCSD)
- Menifee (EMWD)
- Perris (EMWD)
- Perris II (New) (EMWD)
- Temescal (Corona)

Desalters
(brine discharges)



Direct Connection Dischargers (Industrial)

- Mission Linen Supply
- OLS Energy
- Repet, Inc.
- Del Real, LLC
- Magnolia Foods, LLC
- Metal Container Corporation
- SCE Mira Loma Peaker Plant
- City of Colton – Aqua Mansa Power Plant
- Mountainview Generating Station
- Rialto Bioenergy Facility, LLC
- Aramark Uniform & Career Apparel, LLC
- Dart Container Corporation
- Frutarom USA, Inc.
- Wellington Foods, Inc.

- Industries with:
 - Large Water Softeners
 - Large Cooling Towers
 - Large Boilers
 - Ultra-pure water



WELLINGTON FOODS
INCORPORATED



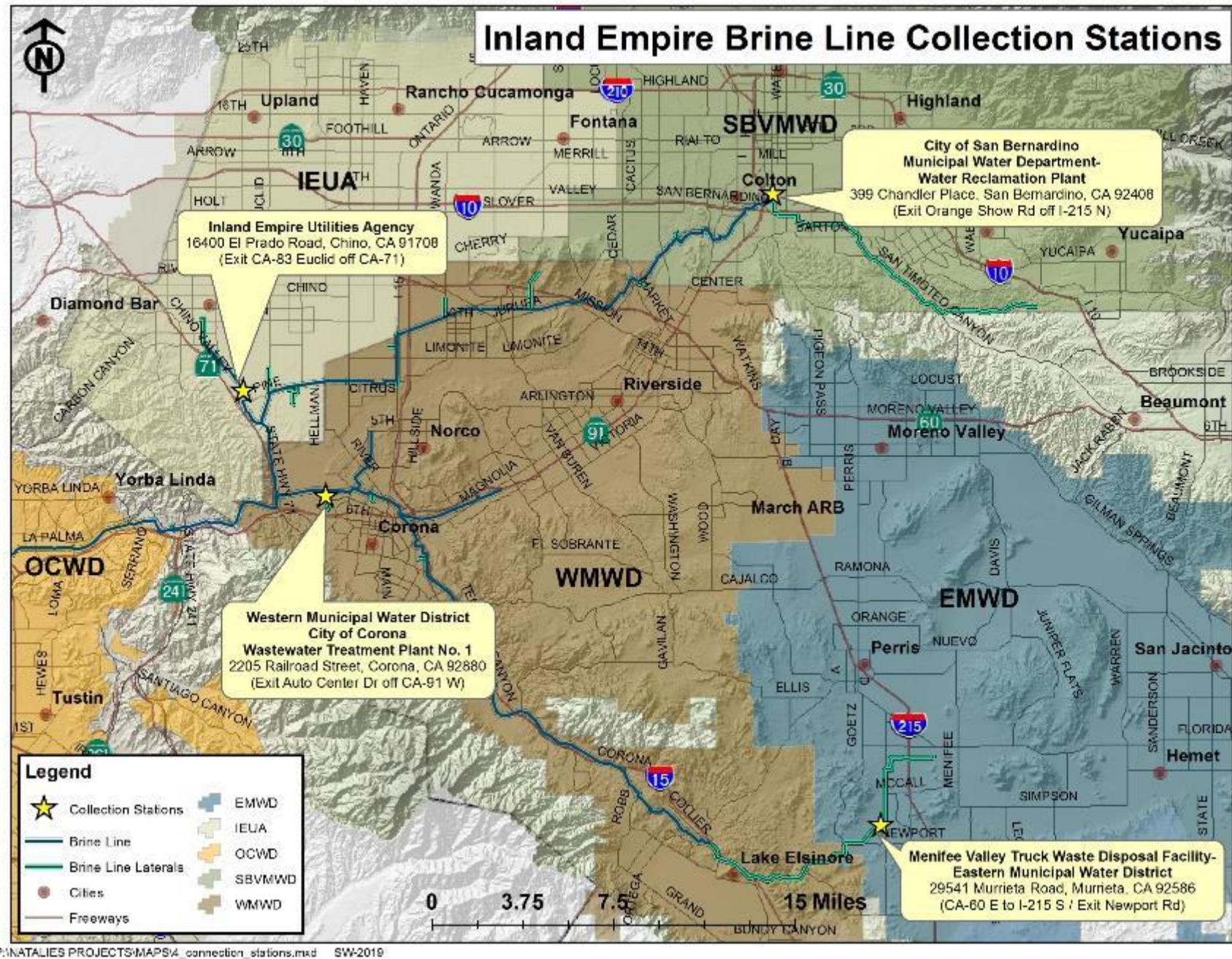
**Metal Container
Corporation**

ONE OF THE ANHEUSER-BUSCH COMPANIES

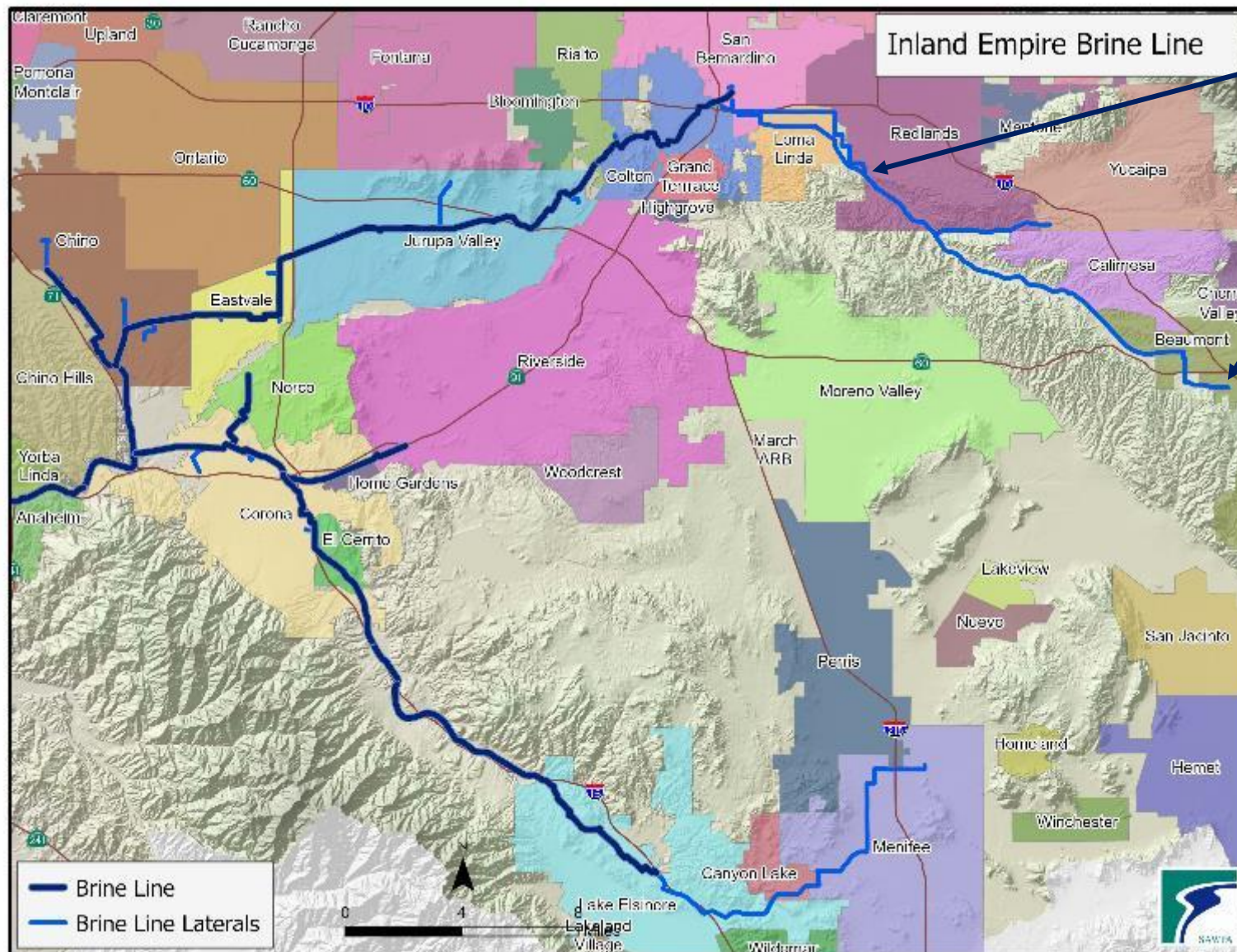


4 Brine Collection Stations

- Angelica
- Corona Regional Medical Center
- C.C. Graber Company
- Decra Roofing
- Indian Oaks Campground, LLC
- Infineon Technologies
- Eastside Water Treatment Plant
- La Sierra University
- Loma Linda University Power Plant
- Loma Linda VA Medical Center
- Niagra Bottling, LLC
- Prudential Overall Supply
- Qualified Mobile, Inc.
- Rayne Water Conditioning
- San Antonia Regional Hospital
- Saratoga Foods, Inc.
- Sierra Aluminum Company



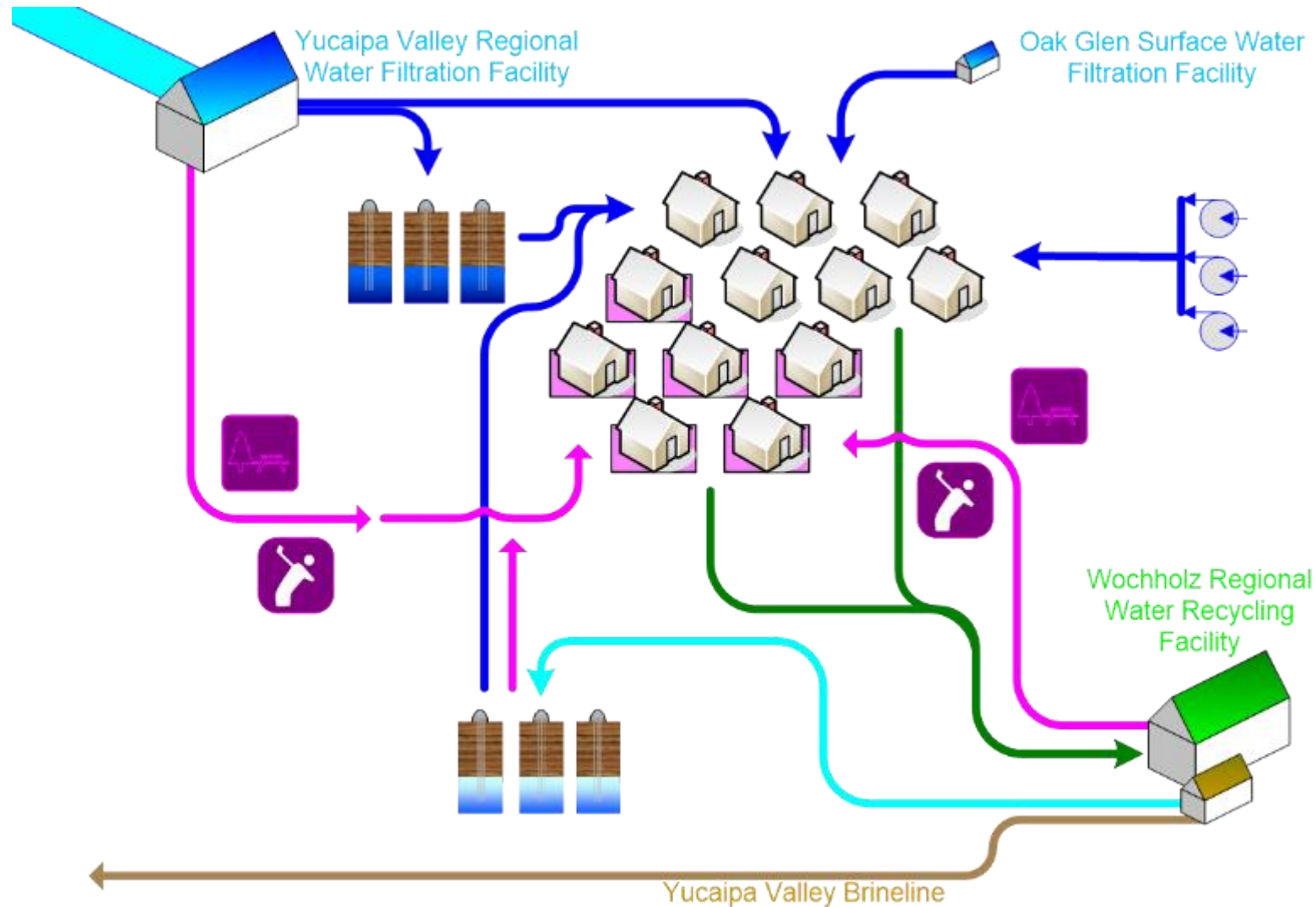
Wastewater RO Concentrate Dischargers



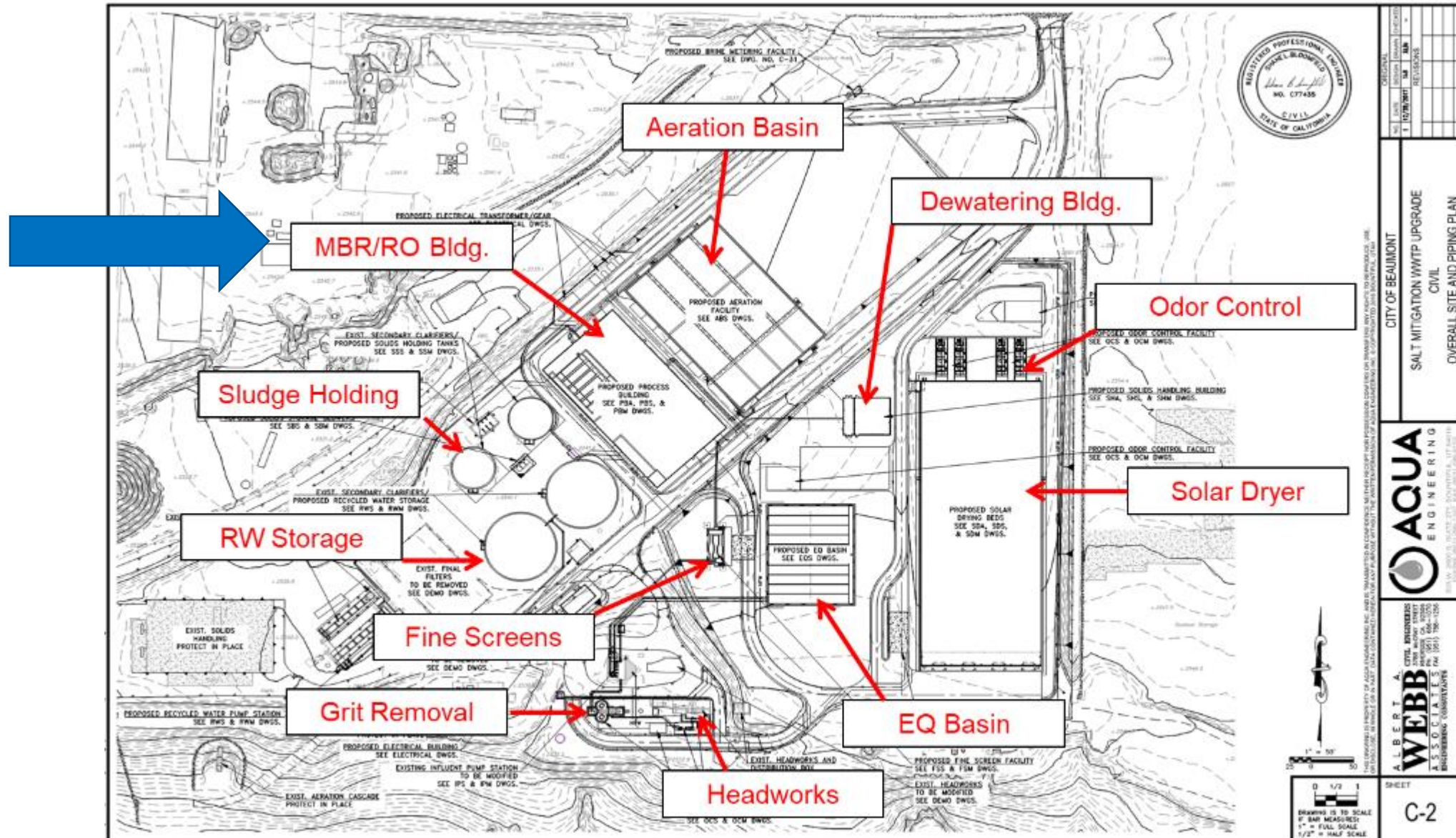
Yucaipa Valley Water District Henry Wochholz Regional Water Recycling Facility

City of Beaumont Wastewater Treatment Plant

Yucaipa Valley Water District (courtesy of YVWD)



City of Beaumont WWTP (courtesy of City of Beaumont)



WWTP RO required for Salt Management (source: YVWD and Beaumont)

Santa Ana River Basin Plan (Santa Ana RWQCB)

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graph TD; A[Santa Ana River Basin Plan (Santa Ana RWQCB)] --> B[Basin Plan Amendment (RB-2004-0001) creating "Maximum Benefit" program for TDS management (groundwater basins) and water reuse]; B --> C[To accommodate recycled water projects, alternative water quality (Max Benefit) objectives were established for groundwater basins]; C --> D[In return, commitments for salt removals were made to ensure beneficial uses of groundwater basins]; D --> E[Max benefit requirements includes WWTP water quality standards for recycled water and effluent to Santa Ana River and tributaries];
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Basin Plan Amendment (RB-2004-0001) creating "Maximum Benefit" program for TDS management (groundwater basins) and water reuse

To accommodate recycled water projects, alternative water quality (Max Benefit) objectives were established for groundwater basins

In return, commitments for salt removals were made to ensure beneficial uses of groundwater basins

Max benefit requirements includes WWTP water quality standards for recycled water and effluent to Santa Ana River and tributaries

Overview of Brine Line Costs

- Costs of disposal based on:
 - Volume discharged
 - Pounds of BOD
 - Pounds TSS
 - Fixed capacity charges
 - Type of connection (direct or indirect)
 - **But not TDS!**
- Direct discharger brine (industrial)
 - **\$184 per 100,000 gallons*** (25 mg/L BOD and 25 mg/L TSS)
- Desalter brine
 - **\$170 per 100,000 gal*** (5 BOD and 5 TSS)
- POTW RO concentrate
 - **\$176 per / 100,000 gal*** (15 BOD 10 TSS)
- Indirect cost for brine disposal:
 - **\$0.016 per gallon or \$80 for a 5,000 gal truck*** (<100 BOD and <100 TSS).
 - Does not include hauling costs.

* Plus SAWPA Member Agency administrative cost (if applicable)

Brine Line – Current Activities

Brine Line Master Plan

- Long-term planning document that addresses facility needs
 - Manage and implement the growth and expansion to best serve the watershed and our Member Agencies and current and future BL dischargers
- Benefits
 - Consistency in decision making
 - Ability to make informed decisions
 - Focus resources and prioritize projects
 - Promote economic development
 - Maintain System Reliability
 - Accommodate future growth
 - Meet future regulatory requirements
- Scope under development
 - RFP expected 1st Quarter 2022



Brine Line O&M Activities

- Pipeline inspection (CCTV)
- Maintenance access structure inspections
- Line cleaning
- Valve exercising
- Air vacuum valve maintenance
- USA DigAlert markings
- Contractor coordination,
- Meter readings
- Meter maintenance



Maintenance access structure inspections and repairs



Coordination with other Agency contractor's working near Brine Line



Right of way maintenance - Prado

Brine Line PFAS Monitoring

- Six samples planned (Monthly: July-Dec)
- Results for first 3 months (38 total PFAS parameters analyzed)
 - 11 – 13 above reporting limit
 - 25 – 27 below reporting limit and/or non-detect
- Results for PFOA and PFOS (range of first 3 samples)

Parameter	Result	Units
Perfluorooctanoic Acid (PFOA)	89 – 130	ng/L
Perfluorooctanesulfonic Acid (PFOS)	97 – 150	ng/L

Other SAWPA Activities

(SAWPA Contact: Mark Norton)

Prop 1 Round 2 Integrated Regional Water Management (IRWM)

Schedule:



DWR Releases Final
R2 Grant Guidelines
and PSP (Dec 2021)



OWOW Steering
Committee Approves
R2 Projects (Aug 2022)

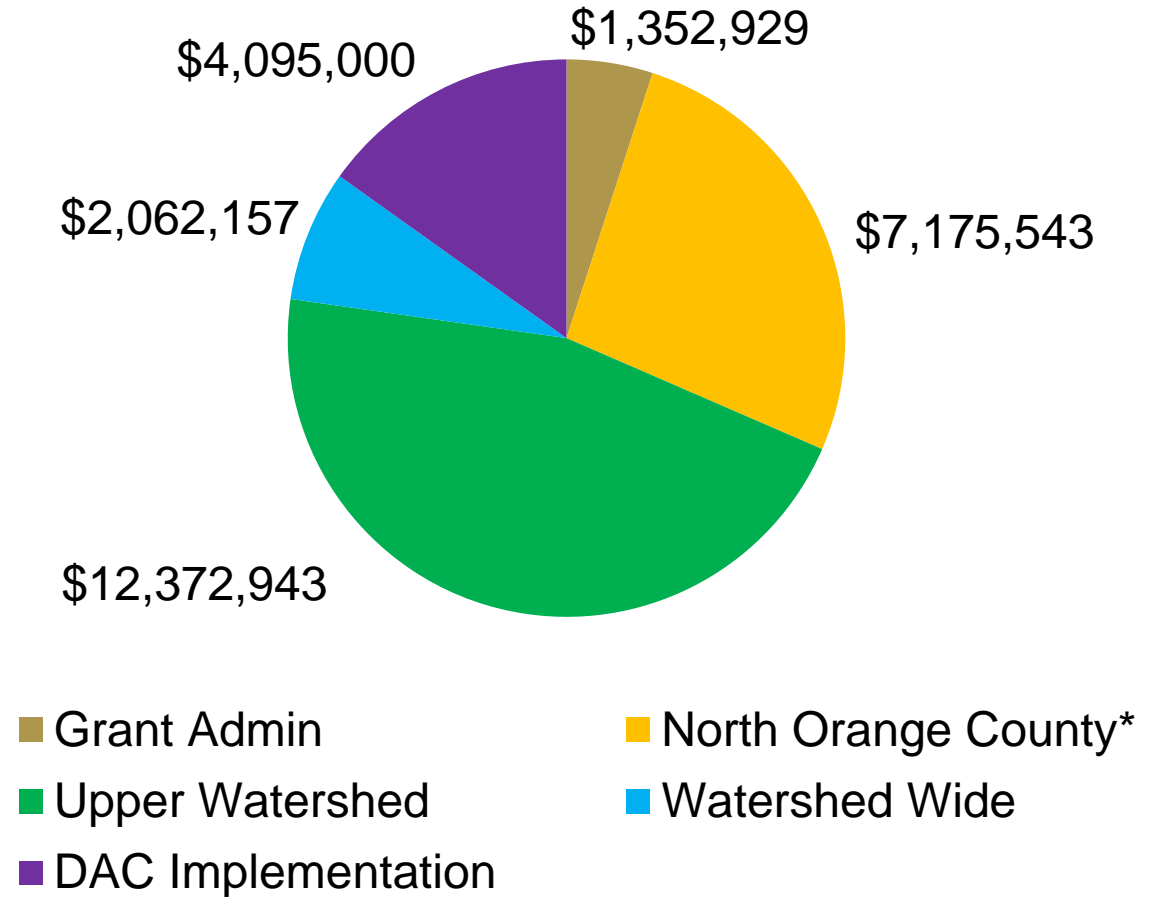


R2 Application
Submittal to DWR
(Sept 2022)



SAWPA finalizes grant
agreement for R2
(2023)

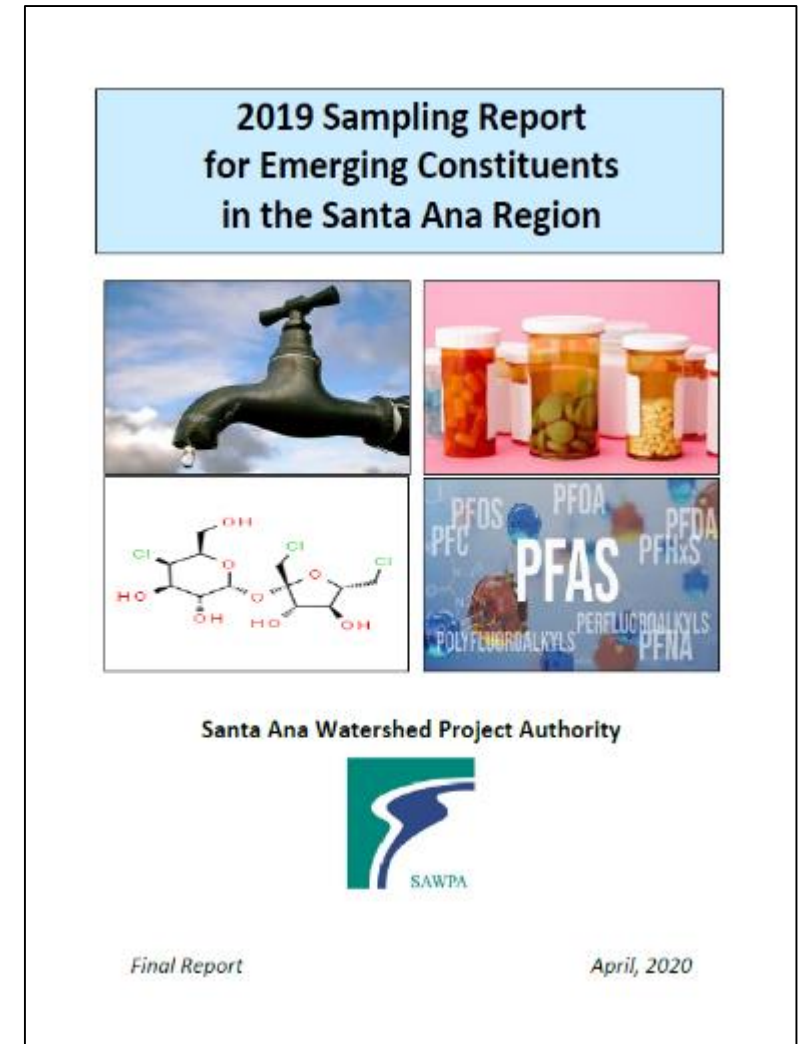
Round 2 Amounts By Category



Total = \$27,058,572

Emerging Constituents (EC) Program Task Force

- Background
 - Complies with Regional Board Resolution for Imported Water Recharge
 - Voluntary Annual Sampling reports
- Current activities
 - 2019 Sampling Study
 - Report was shared with the Regional Board
 - Quarterly meetings
 - Annual EC and PFAS data compilation report (Spring 2022) using data from available sources

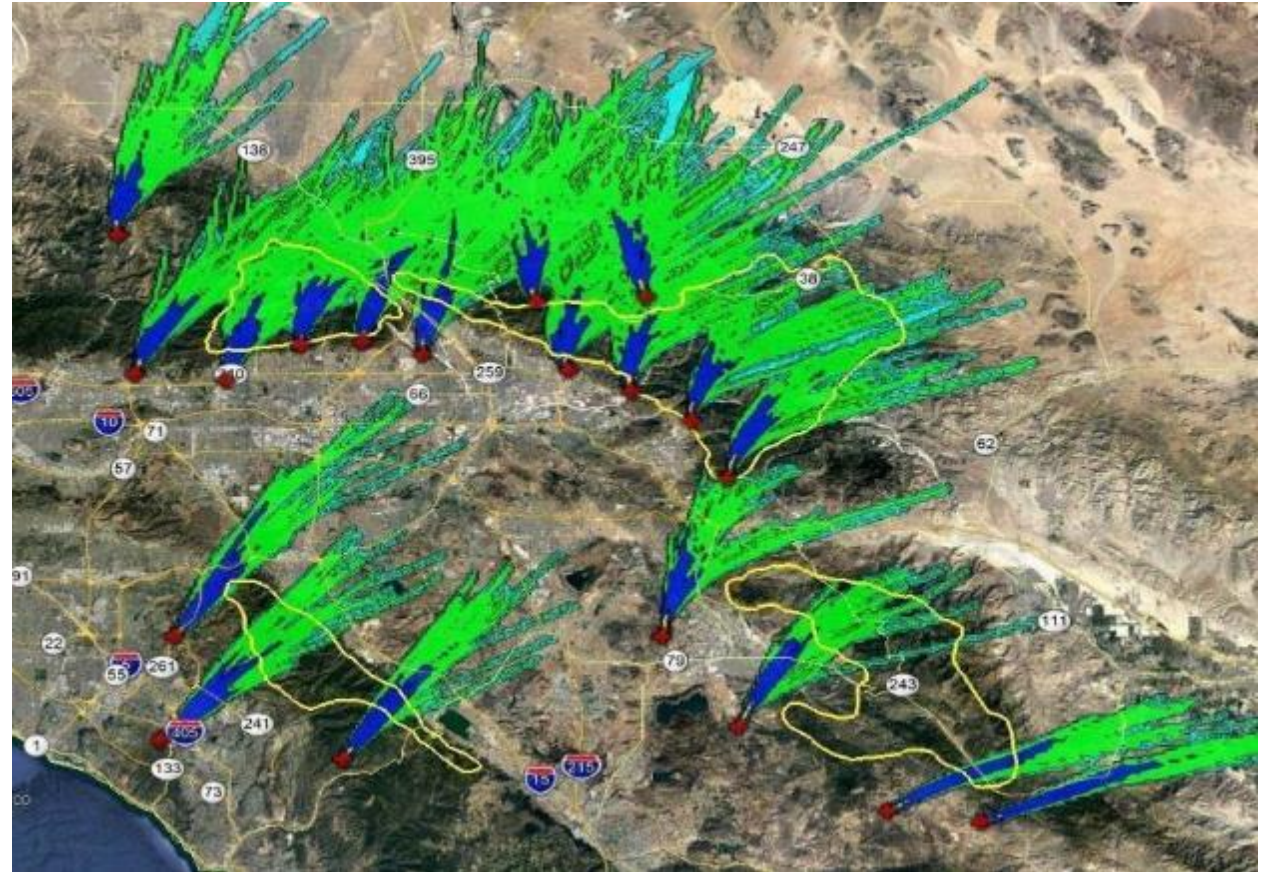


SAWPA Weather Modification Pilot Program: Cloud Seeding



Weather Modification Pilot Program Status

- Underway:
 - CEQA
 - Ground-based site selection
- Outreach to stakeholders and the public
- Prop 1 Round 2
 - Proposal for funding
- Pilot Program
 - Commence 2022-2023



SAWPA Feasibility Study: Ground Based Seeding Dispersion Model



Thank you!

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