

An aerial photograph of a large dam and reservoir. The reservoir is a deep blue-green color, and the dam is a long, low concrete structure. A winding road curves through a green, hilly landscape on the left side of the dam. The sky is clear and blue. The image is framed by decorative curved borders in orange, green, and blue at the top and bottom.

# *From Drought to Deliverance*

## *Why Ventura County's Water Future Demands Bold Moves*

UC ANR Irrigation and Nutrient Management Workshop  
August 21, 2025

Dr. Bram Sercu, Water Resources Supervisor

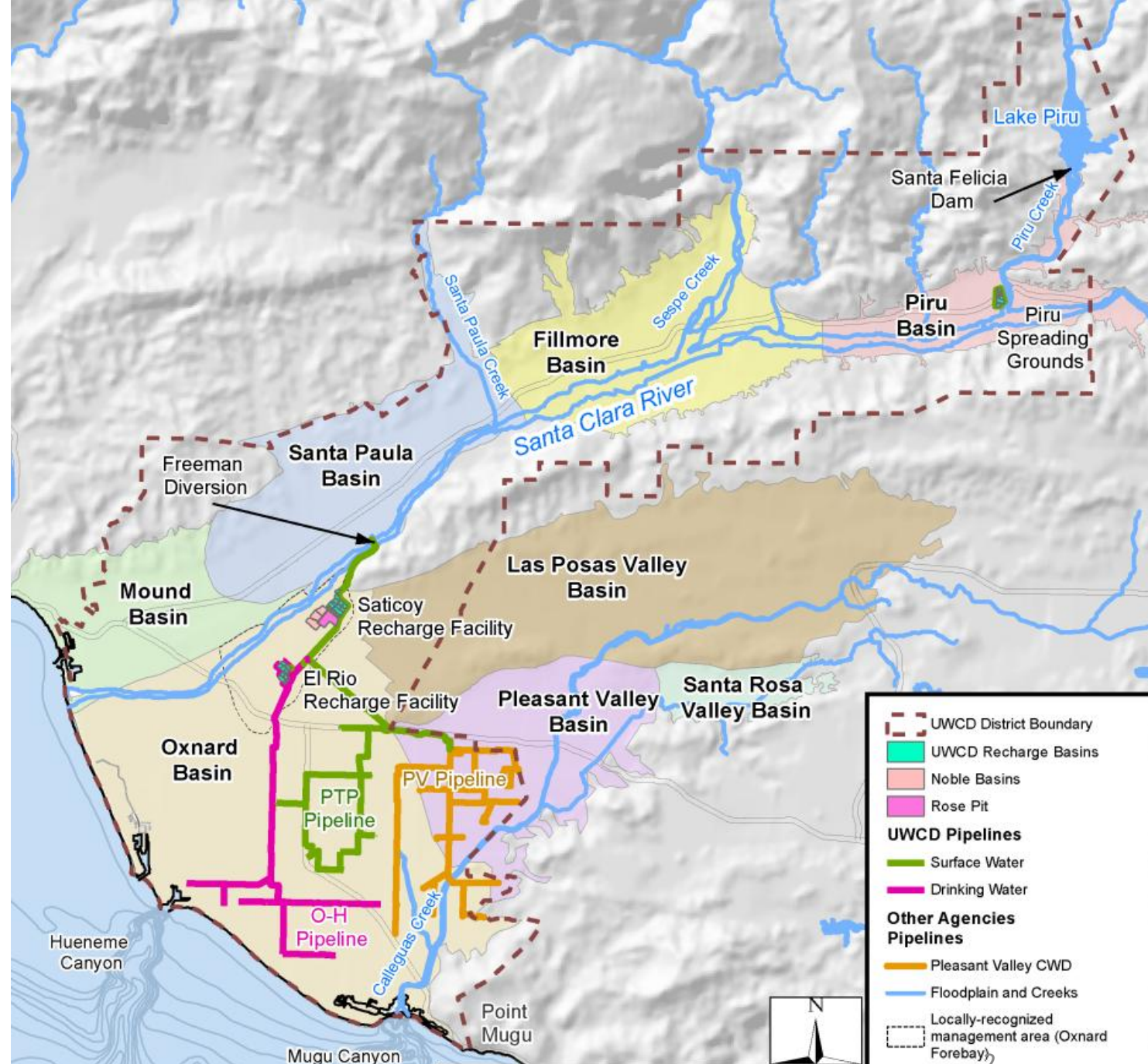


*Since 1927*

- ◆ **Large Groundwater Basins** in southern Ventura County (all except Santa Paula are DWR high-priority basins)
- ◆ **Extensive Reliance** on groundwater for both Ag and M&I supply
- ◆ **Long History** of overdraft and seawater intrusion in coastal basins

**Long history of conjunctive use strategies**

- ◆ Managed aquifer recharge
- ◆ Use surface water and imported water when available
- ◆ Use of groundwater when it is not





# Looking Back

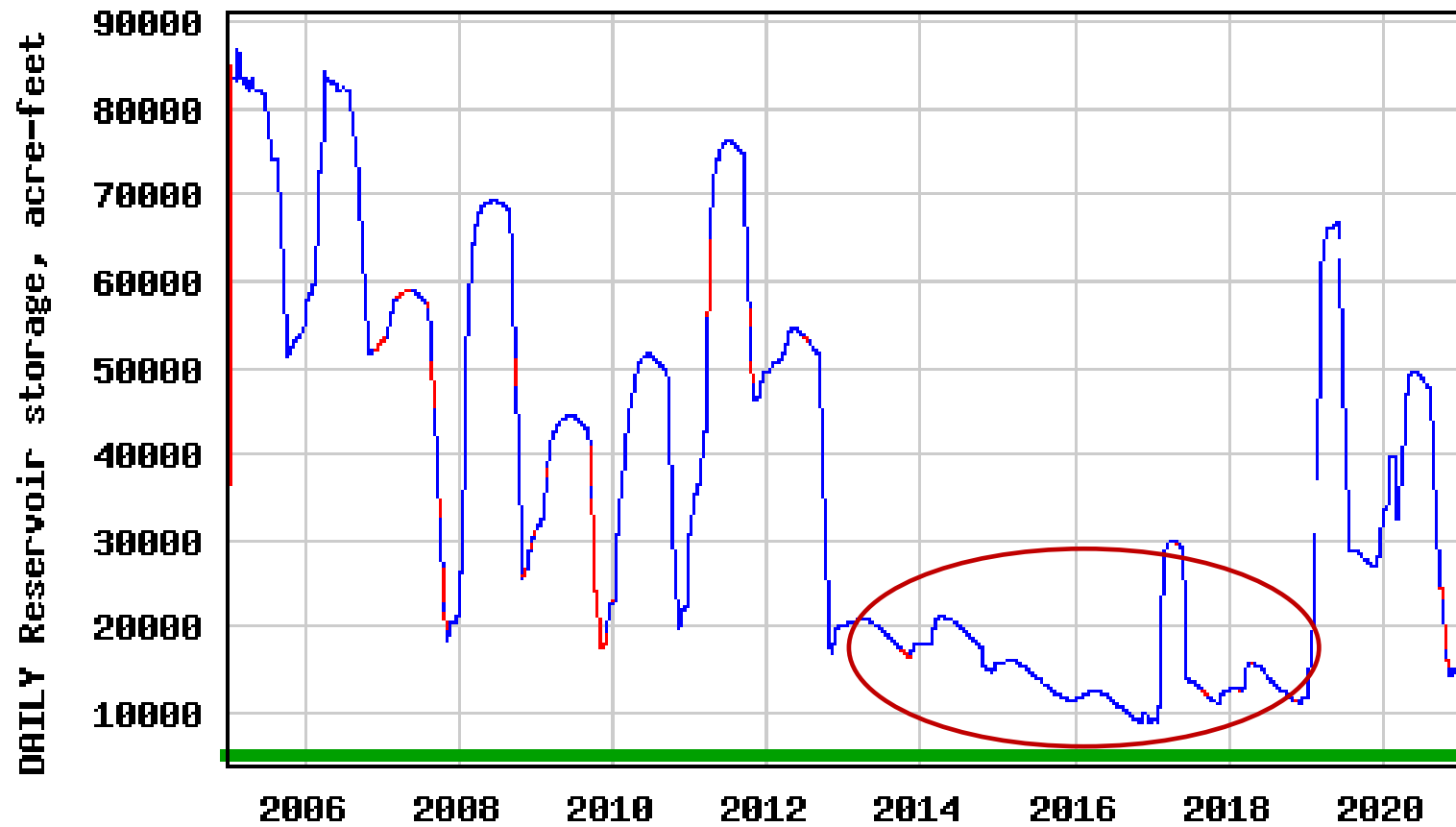




# Lake Piru Storage



USGS 11109700 LK PIRU NR PIRU CA





# Santa Felicia Dam & Lake Piru Reservoir

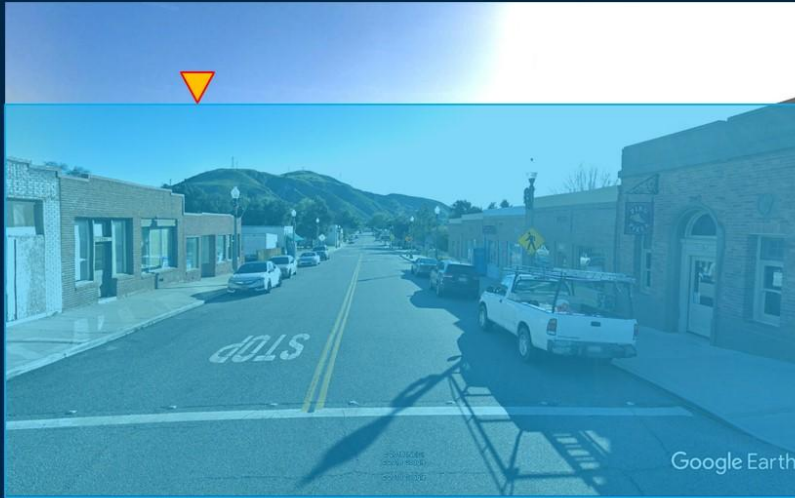




# IDF Hypothetical Dam Failure

## Main & Center – Piru, CA

- ▶ Flood Wave:  
1.5 M cfs based on inundation map
- ▼ Flood Wave Depth:  
15-20 feet



## 10th St & Harvard Blvd Santa Paula, CA

- ▶ Flood Wave:  
1.1 M cfs
- ▼ Flood Wave Depth:  
~20 feet



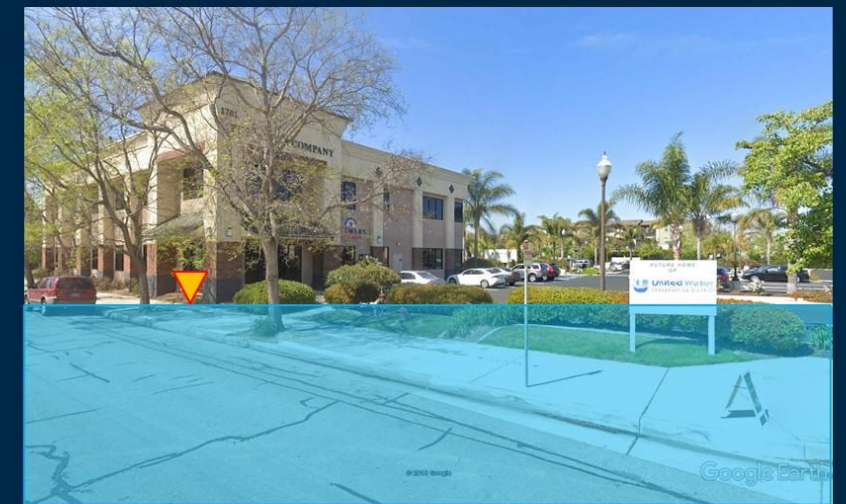
## B St. & HWY 126 – Fillmore, CA

- ▶ Flood Wave:  
1.4 M cfs
- ▼ Flood Wave Depth:  
10-12 feet




## United New Headquarters Oxnard, CA

- ▶ Flood Wave:  
200,000 cfs
- ▼ Flood Wave Depth:  
1-2 feet



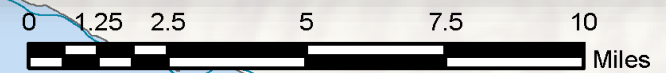
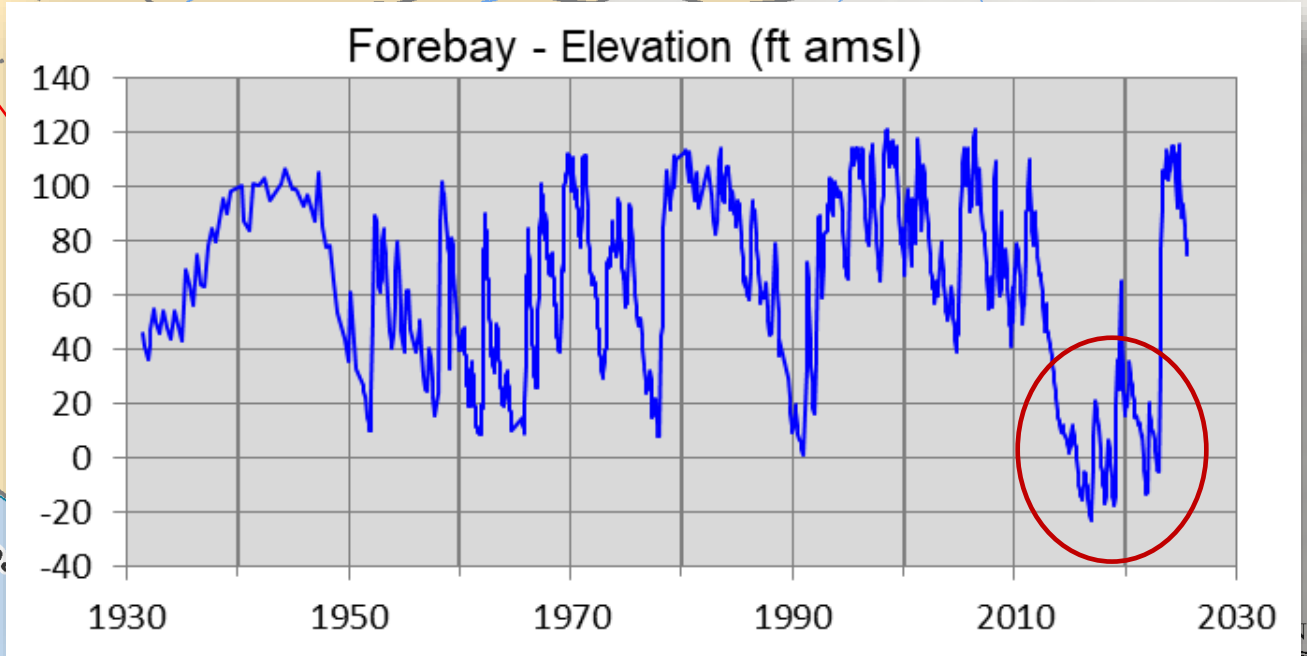


# Groundwater Basins Reached Historical Lows

 **Freeman  
Diversion**

Oxnard

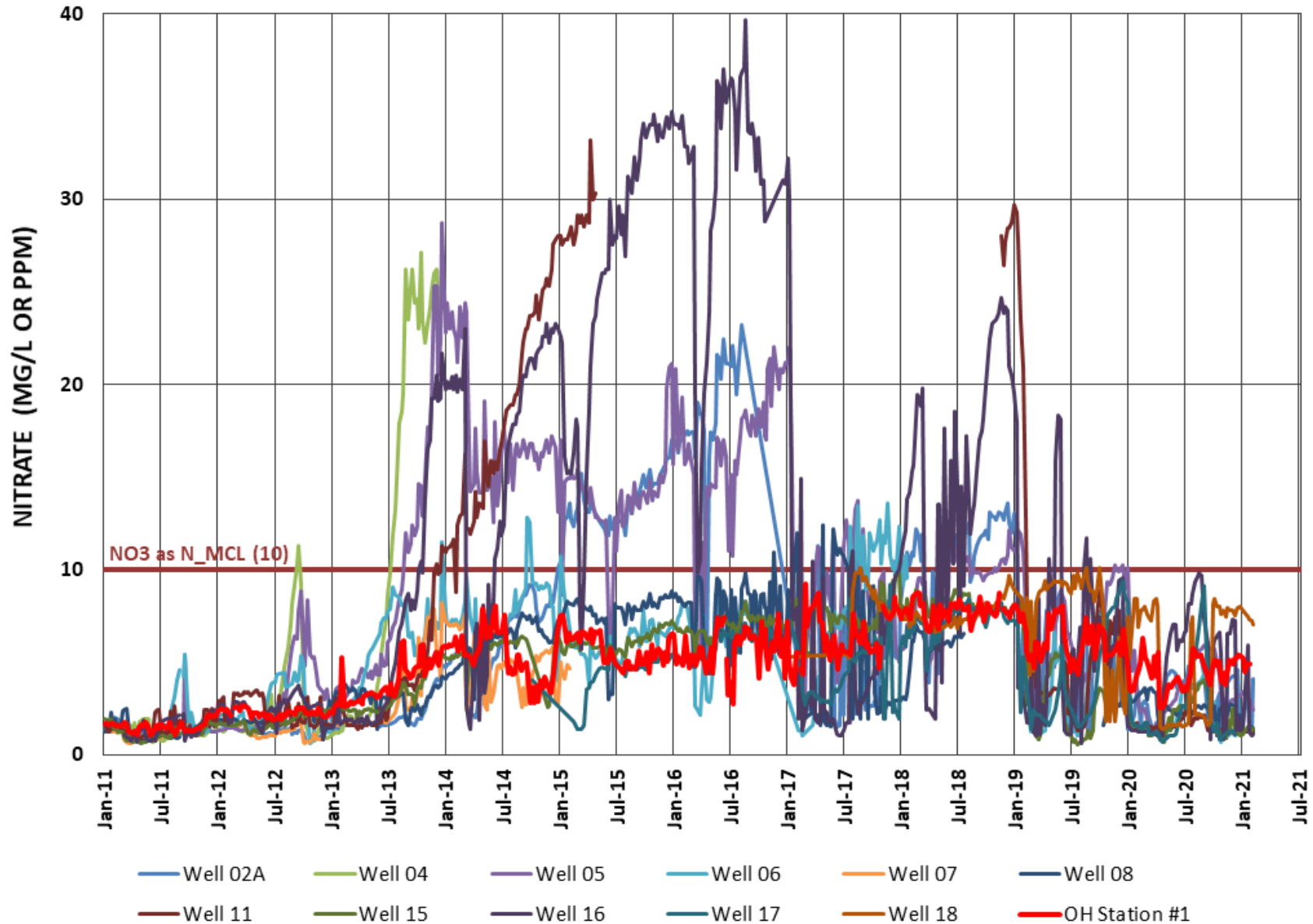
Pacific Oce





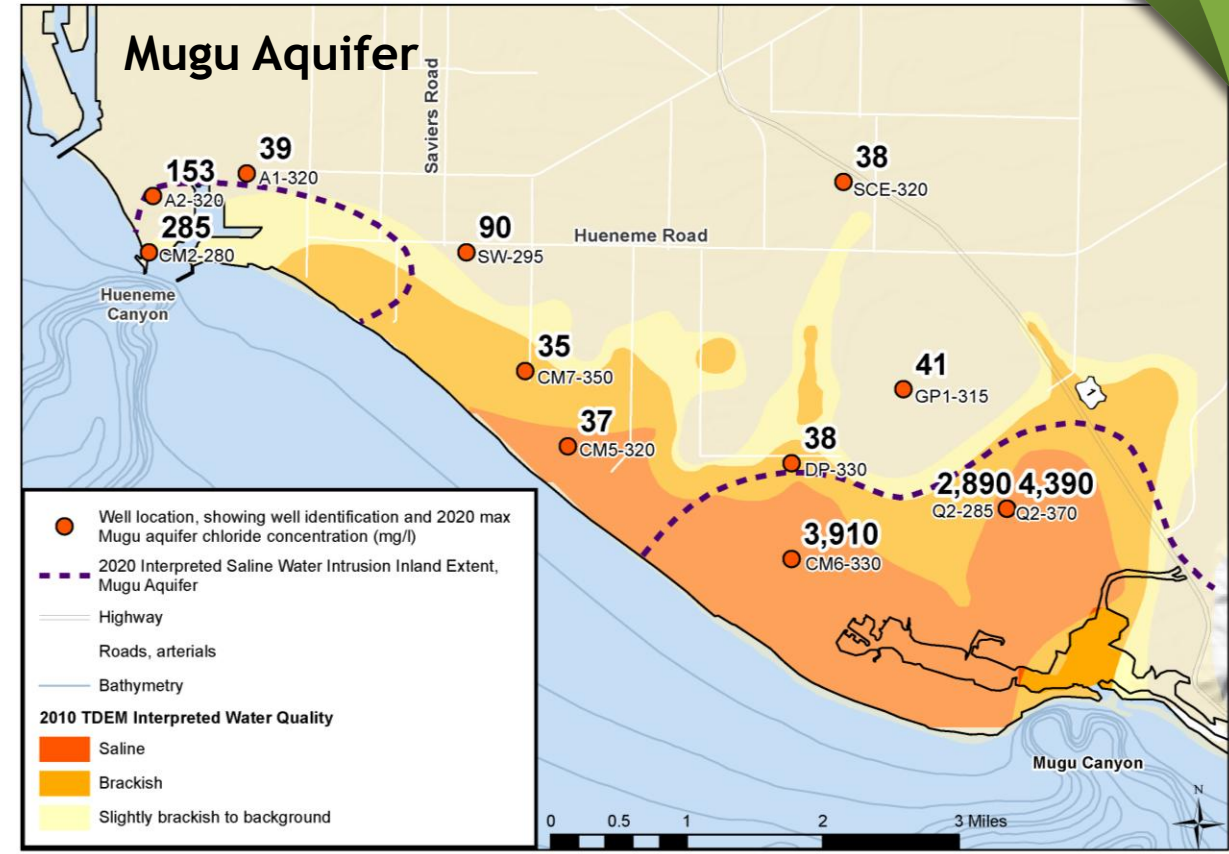
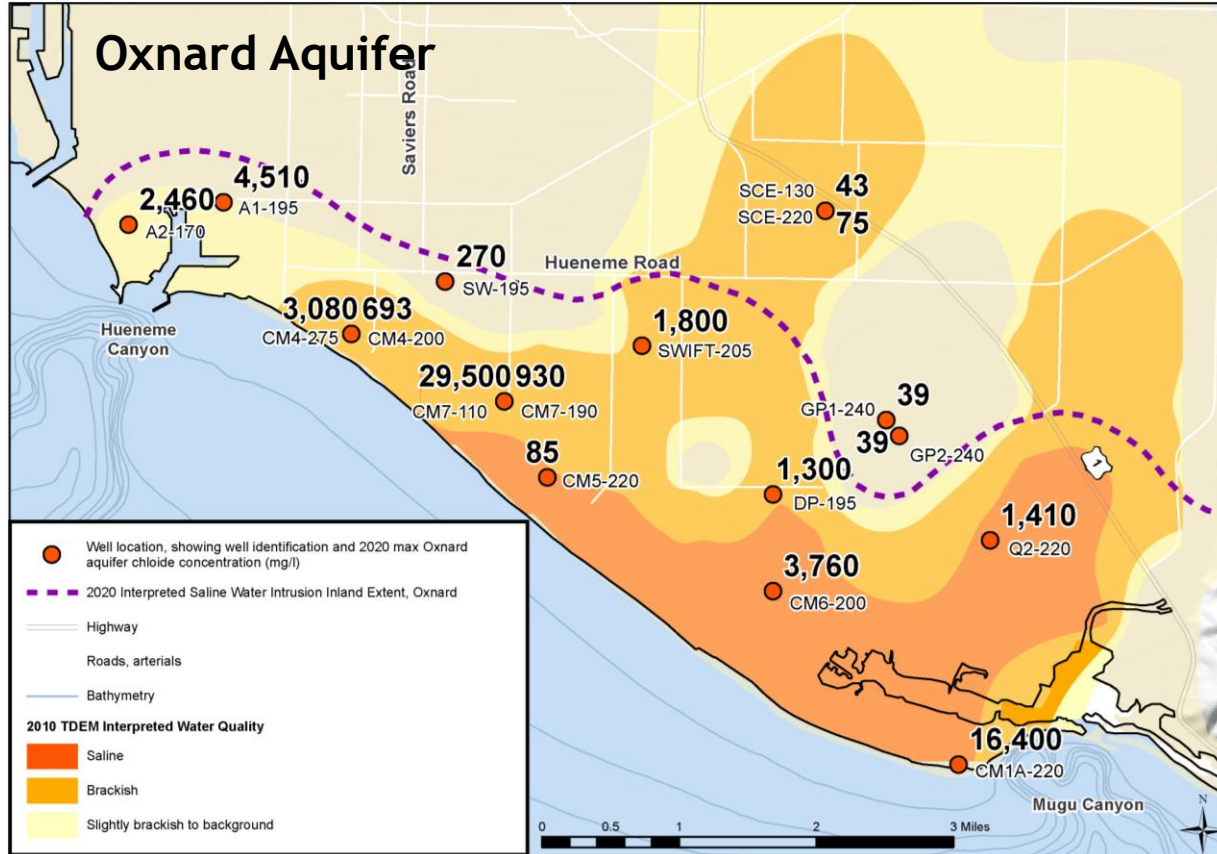
# Elevated nitrates in O-H wells at El Rio

OH UAS WELLS 2011 - 02/9/2021 NITRATE AS NITROGEN (NO3\_N)





# Seawater Intrusion in UAS by 2020





Ramp

150 cfs



Arbitrary Species Protections

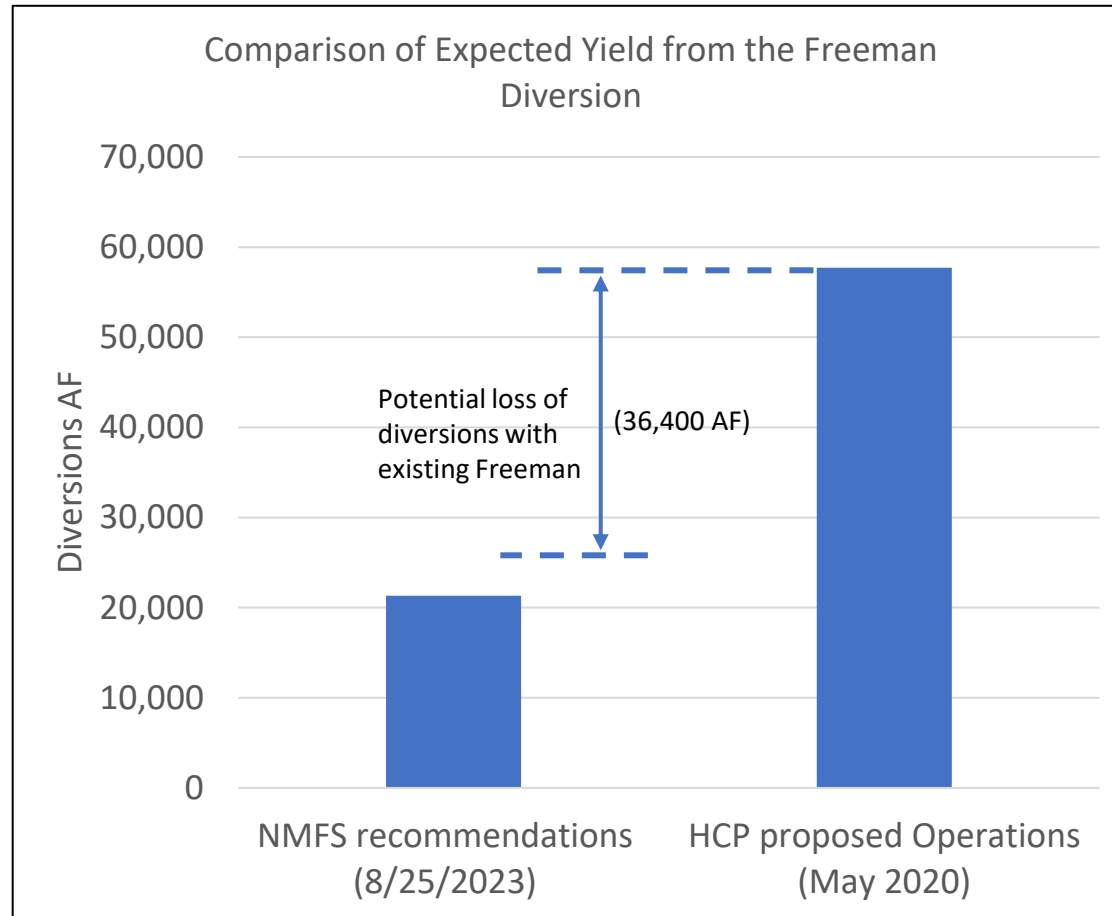


An aerial photograph showing a large-scale groundwater recharge facility. The image features several large, rectangular basins filled with water, separated by concrete walls. A winding river or canal flows through the facility, and various structures and roads are visible in the background. The sky is clear, and the overall scene depicts a complex water management system.

# Saticoy Groundwater Recharge Facilities

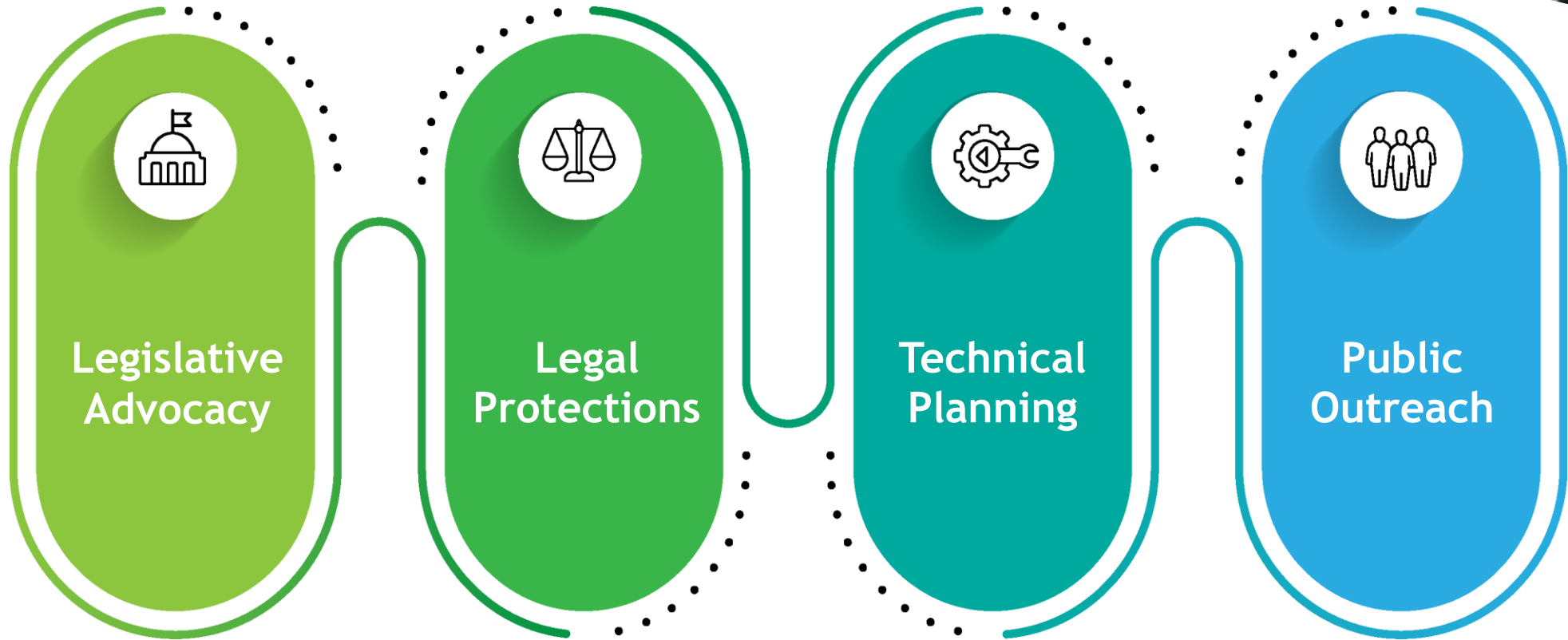


# Yield loss diversions due to NMFS requirements





# A Strategic Approach





# Legislative and Legal Efforts to Benefit Ventura County

## 2020 DOE Law Change

Collaboration with Feinstein's office on grant eligibility for small hydropower plants

## 5th Amendment Takings

Federal claim filed seeking just compensation from NMFS for "takings"

## ACWA State LEG Committee

Active member providing leadership, education, and coalition building



## 2025 FISH Act

Congressional collaboration on bill language to support effective regulation

## 2025 ESA Amendments Act

Congressional Testimony in 2024 and 2025, and contributed bill language

## Critical Habitat Petition

Legal petition requesting NMFS remove costly and erroneous habitat designation

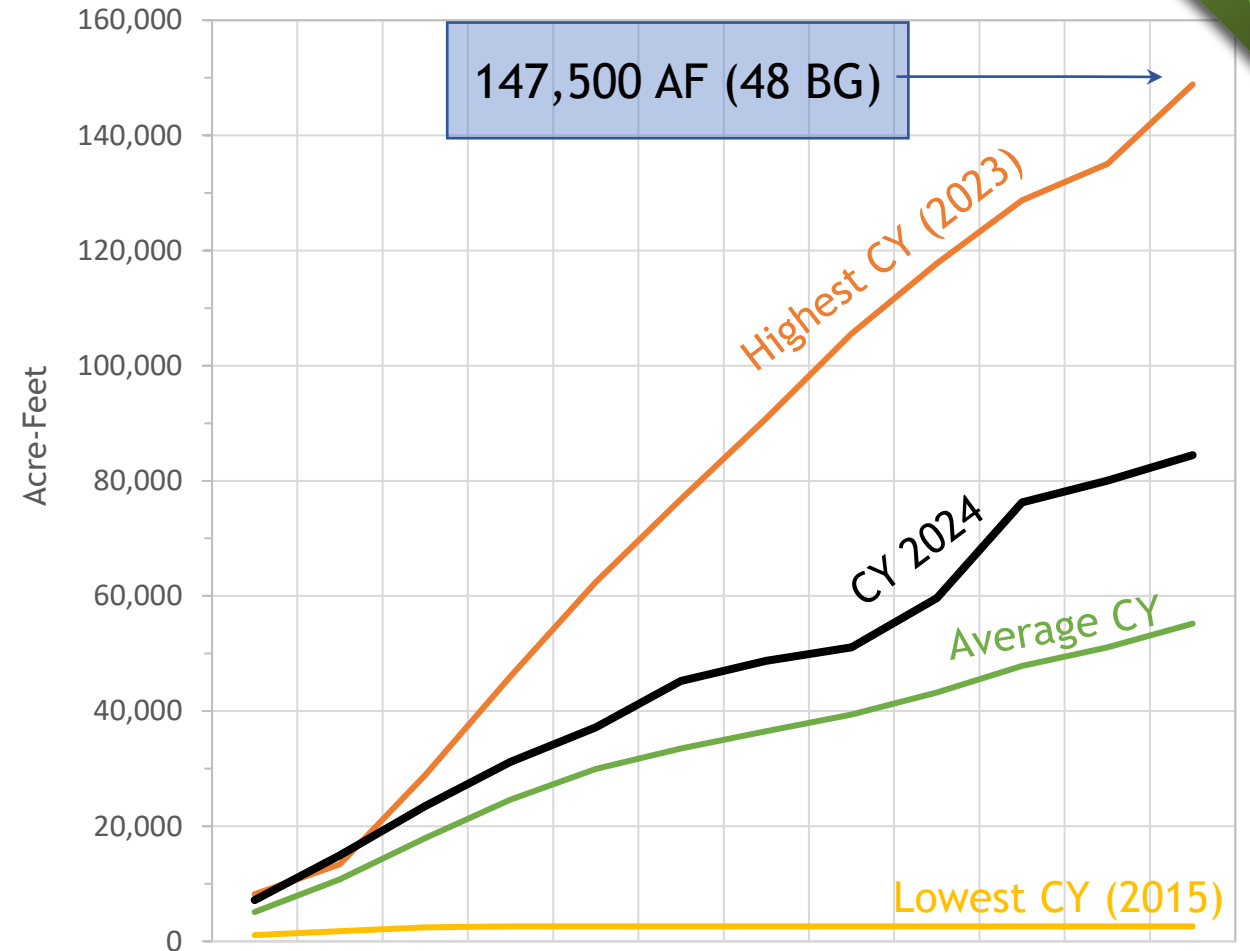


# UWCD Statewide Recharge Champion

DWR ranked Oxnard Basin #1

*“Highest groundwater recharge per acre”*

- ❖ 1.92 AF per acre in WY 2023
- ❖ 1.39 AF per acre in WY 2024



January 2023

Saticoy  
Basins

El Rio  
Basins



Port Hueneme



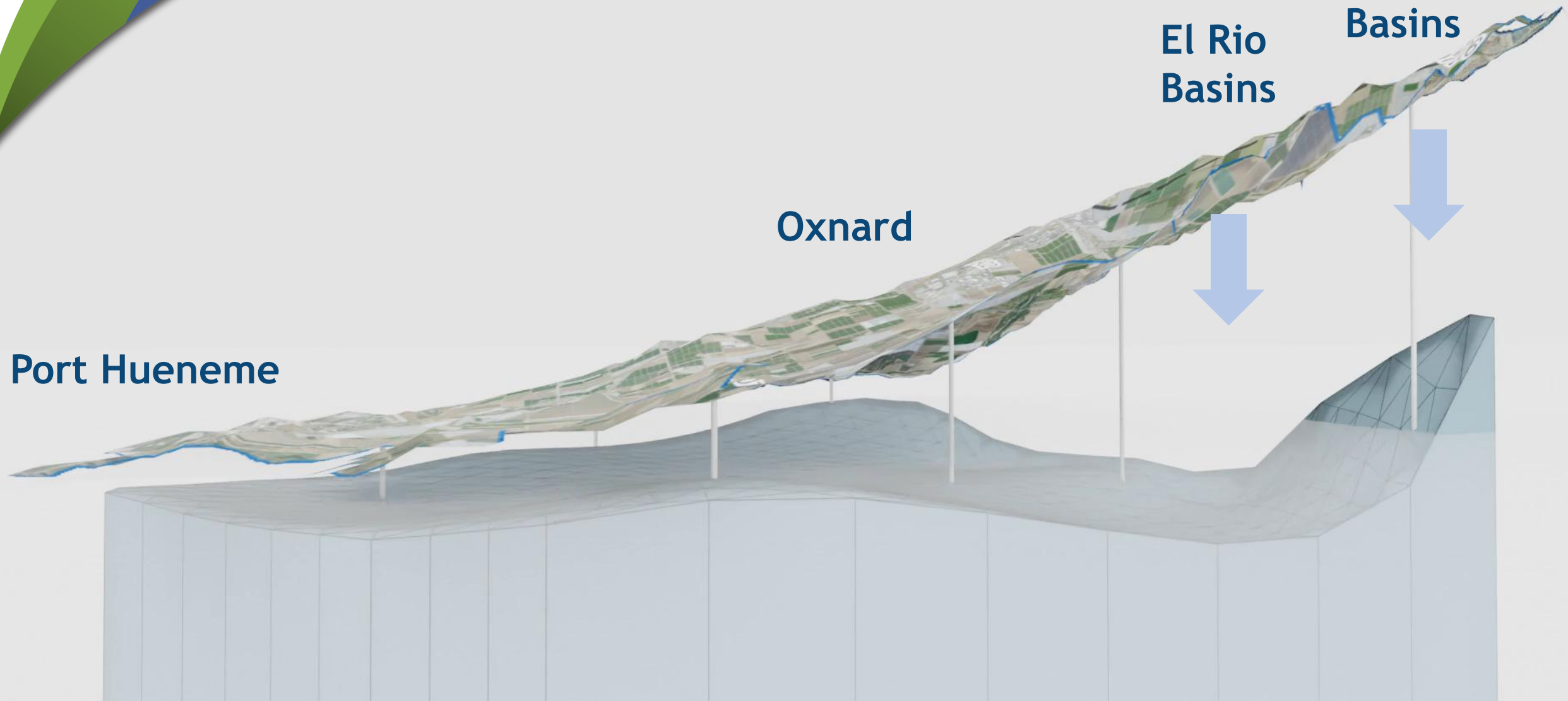
July 2023

Saticoy Basins

El Rio Basins

Oxnard

Port Hueneme



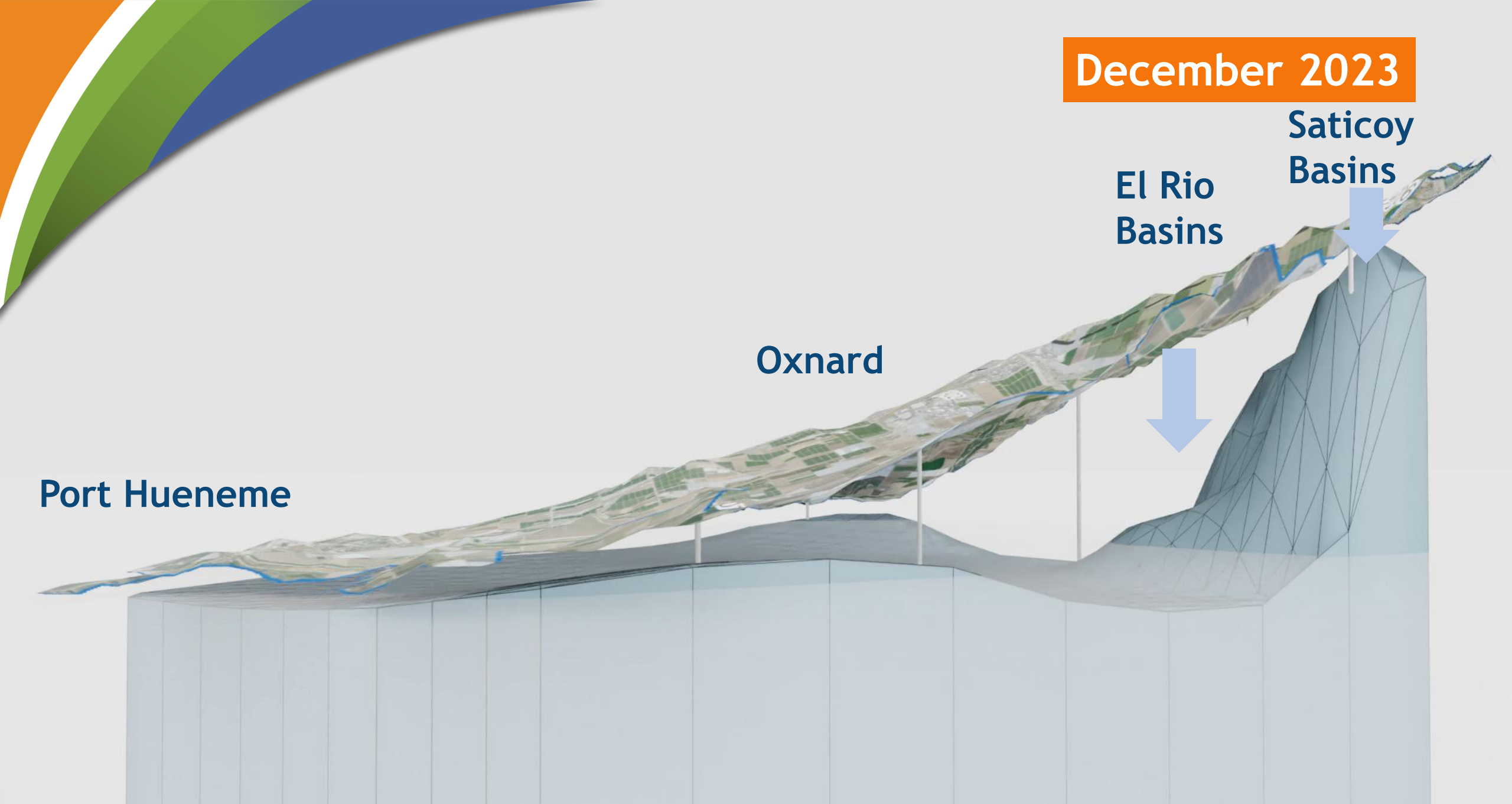
**December 2023**

**Saticoy Basins**

**El Rio Basins**

**Oxnard**

**Port Hueneme**







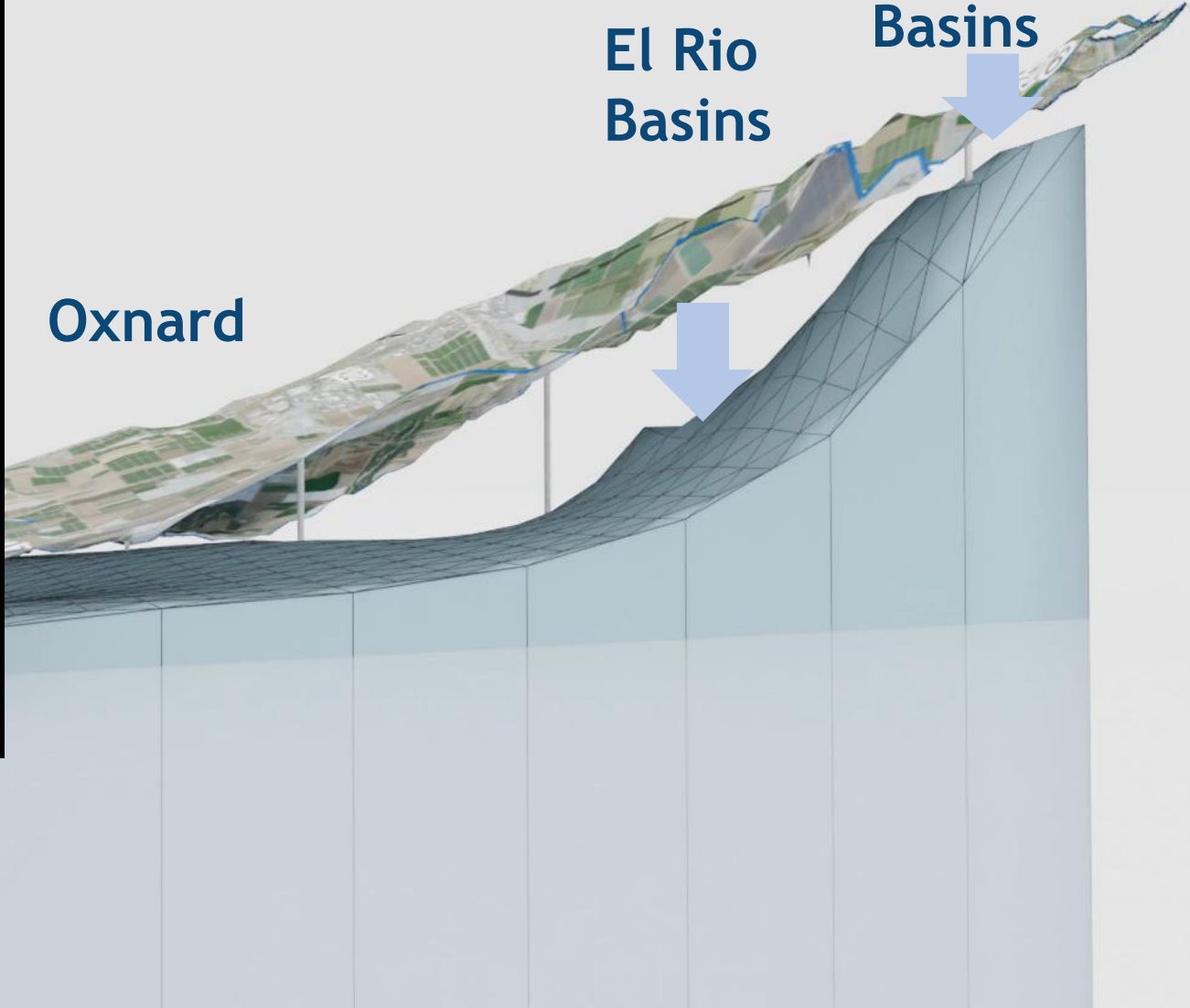
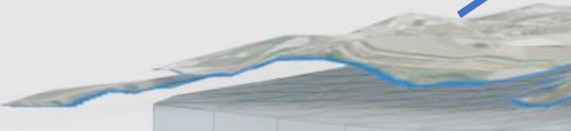
**March 2024**

**Saticoy Basins**

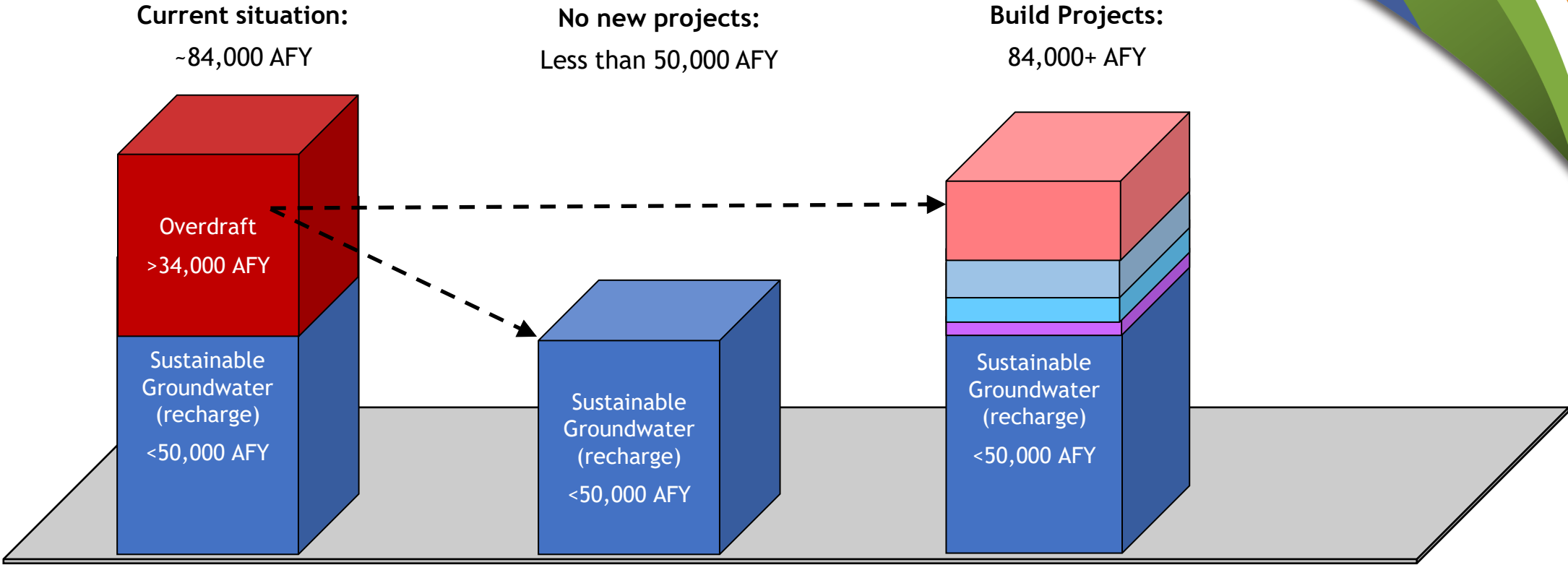
**El Rio Basins**

**Oxnard**

**Port Hueneme**



# Challenges Facing the Region (2020 GSP)



- ◆ Cheap water
- ◆ Unsustainable

**At risk if diversions reduced**

- |                                    |                                                |
|------------------------------------|------------------------------------------------|
| ◆ \$300 more per AF (2022 dollars) | ◆ \$400 more per AF, on average (2022 dollars) |
| ◆ 40% reduction in water supply    | ◆ Meets current needs                          |
| ◆ Economic uncertainty             | ◆ Economic certainty                           |
| ◆ No benefits (e.g., resilience)   | ◆ Multiple benefits                            |

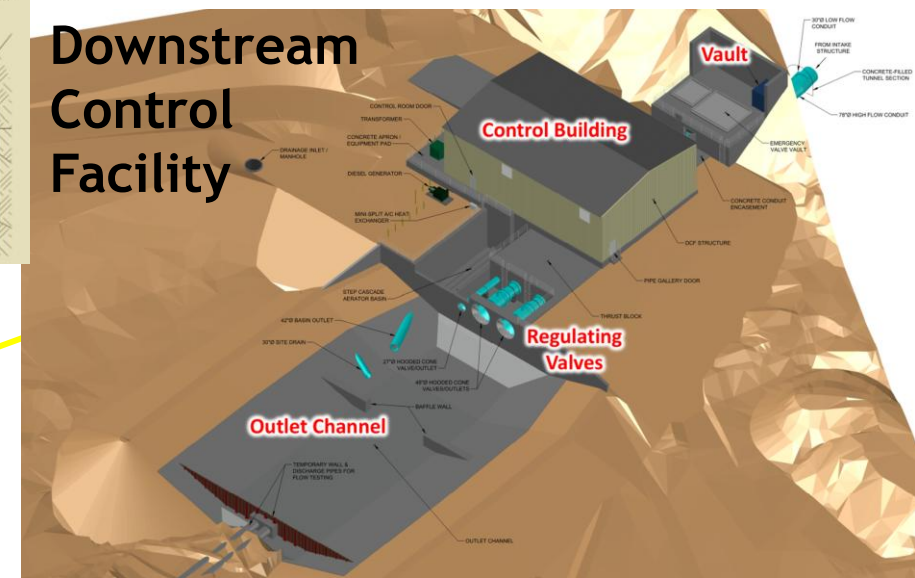
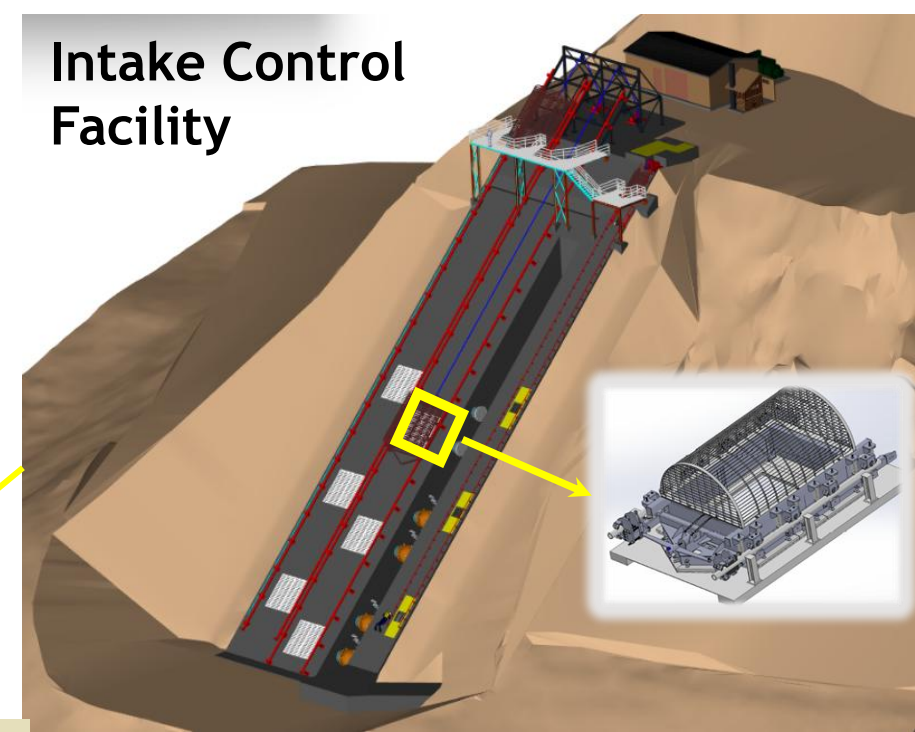
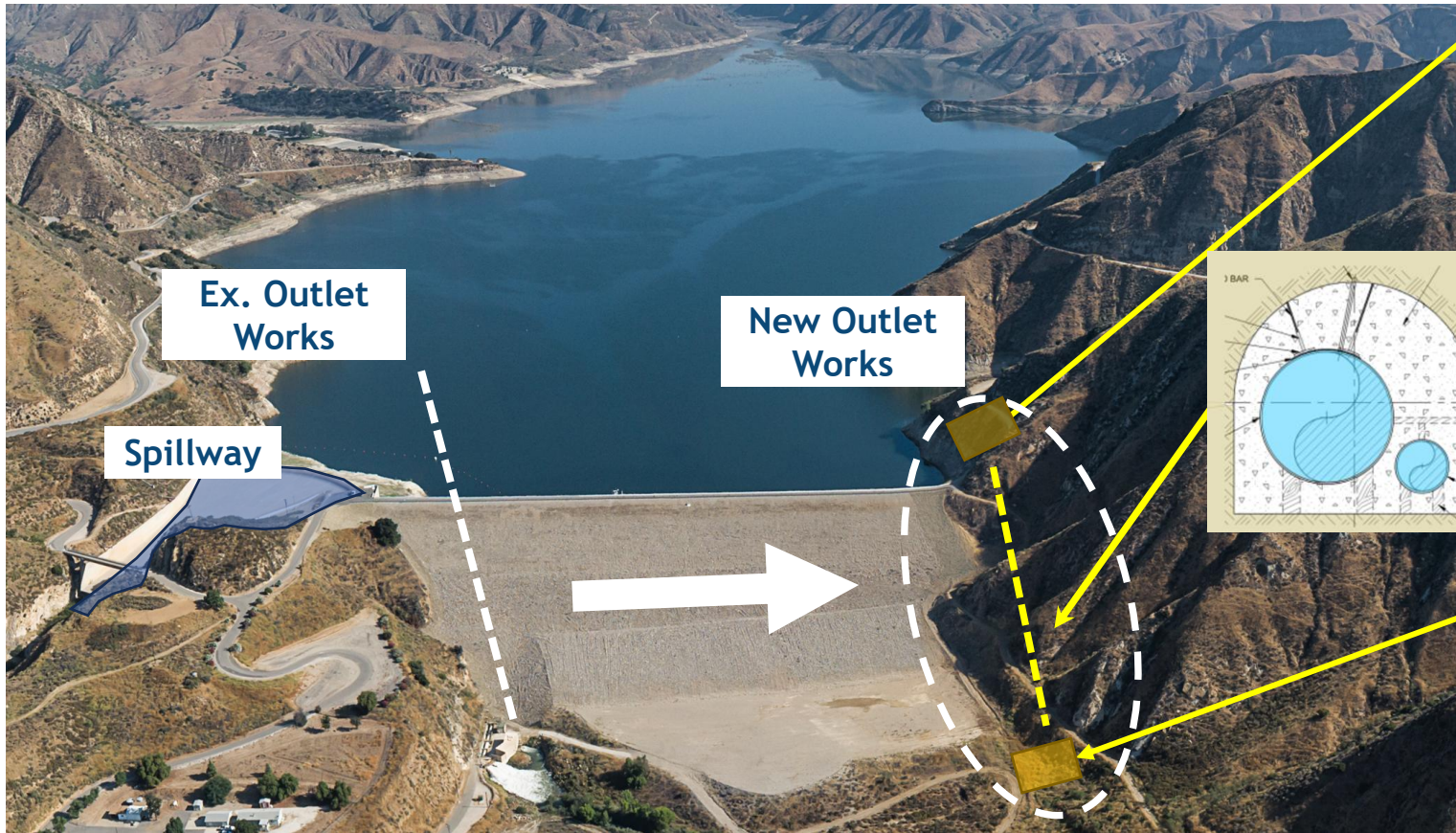


# Building for the Future

Project	Design Capacity (AFY)	Imp. Year	Capital Cost (\$M)
Recycled Water	7,000	2027	11
SFD Safety Improvement	N/A	2034	300
Freeman Diversion Expansion	8,000	2028	60
Freeman Conveyance Expansion		2033	50
EBB Water Phase 1	3,500	2029	51
EBB Water Phase 2	10,000	2035	360
<b>Totals</b>		-	<b>\$832M</b>

\* Excludes \$99M WIFIA Loan/\$ 1.8M pending grant applications

# Santa Felicia Dam Safety Improvement Project



New Conveyance (Outlet Works) System



# Freeman Diversion Expansion

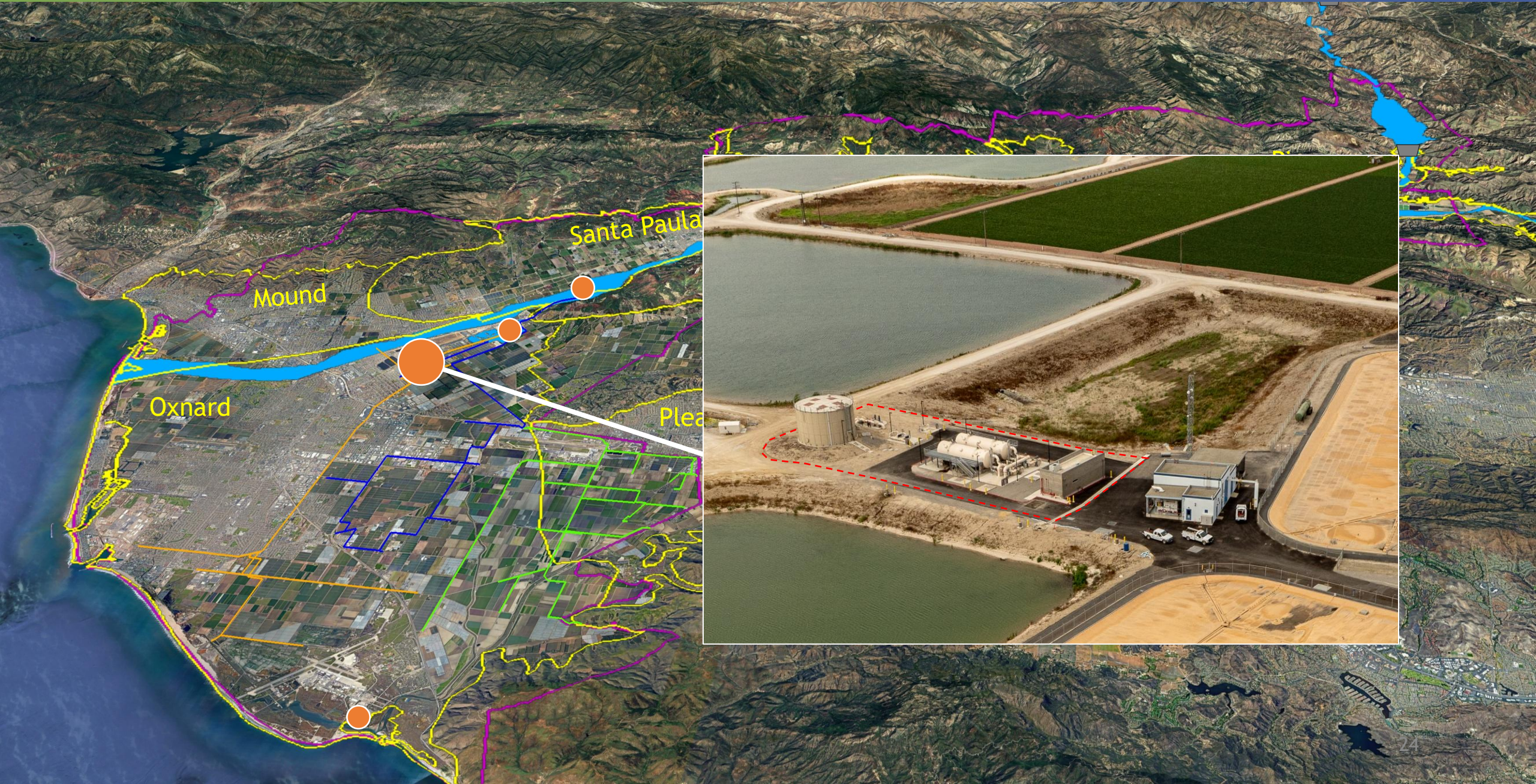
Grants: \$23M





# Iron & Manganese Treatment Facility

Grants: \$7.4M





# Recycled Water

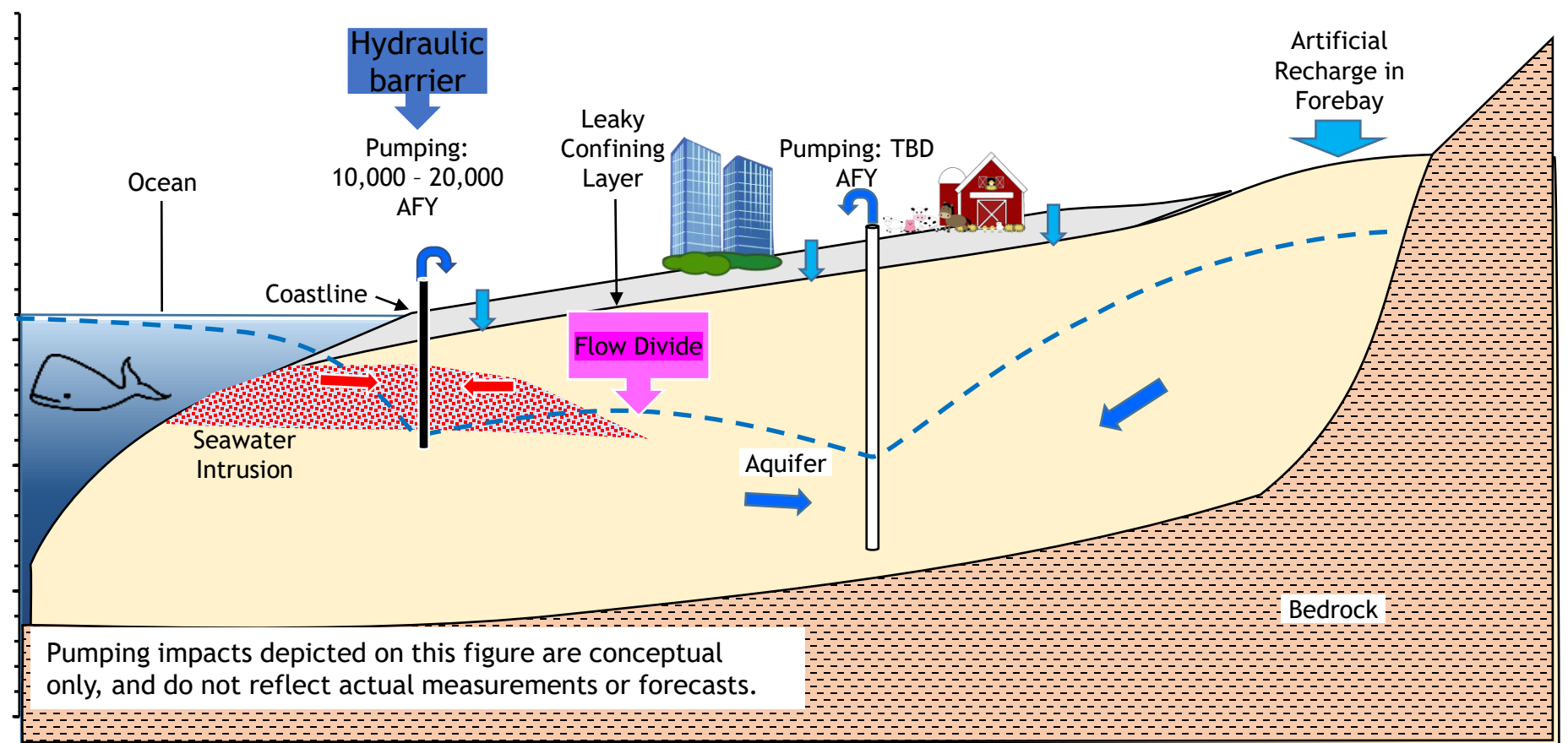
Grants: \$5M





# EBB Water Project

Grants: \$9.8M





# Collaboration with the Navy



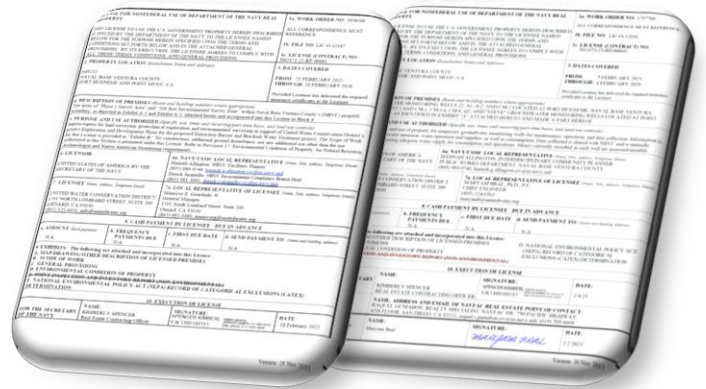
**Memorandum of Agreement**  
**Phase 1**  
**Public Relationship 2023-2027**

SUBJ: EXTRACTION BARRIER AND BRACKISH WATER TREATMENT PROJECT AT NAVAL BASE VENTURA COUNTY  
 IN WITNESS WHEREOF, the Parties have entered into this Agreement as of on the later of the two date(s) indicated below:

*[Signature]*  
 MAURICIO GUARDADO  
 UWCD General Manager

*[Signature]*  
 B. N. ROSEN  
 Rear Admiral, U.S. Navy  
 Commander, Navy Region Southwest

**License Agreements**  
**“Phase 1A” Project**  
**Development 2023-present**  
**Monitoring Well Installation**  
**Completion 2024**



# Grant Funding



FEMA

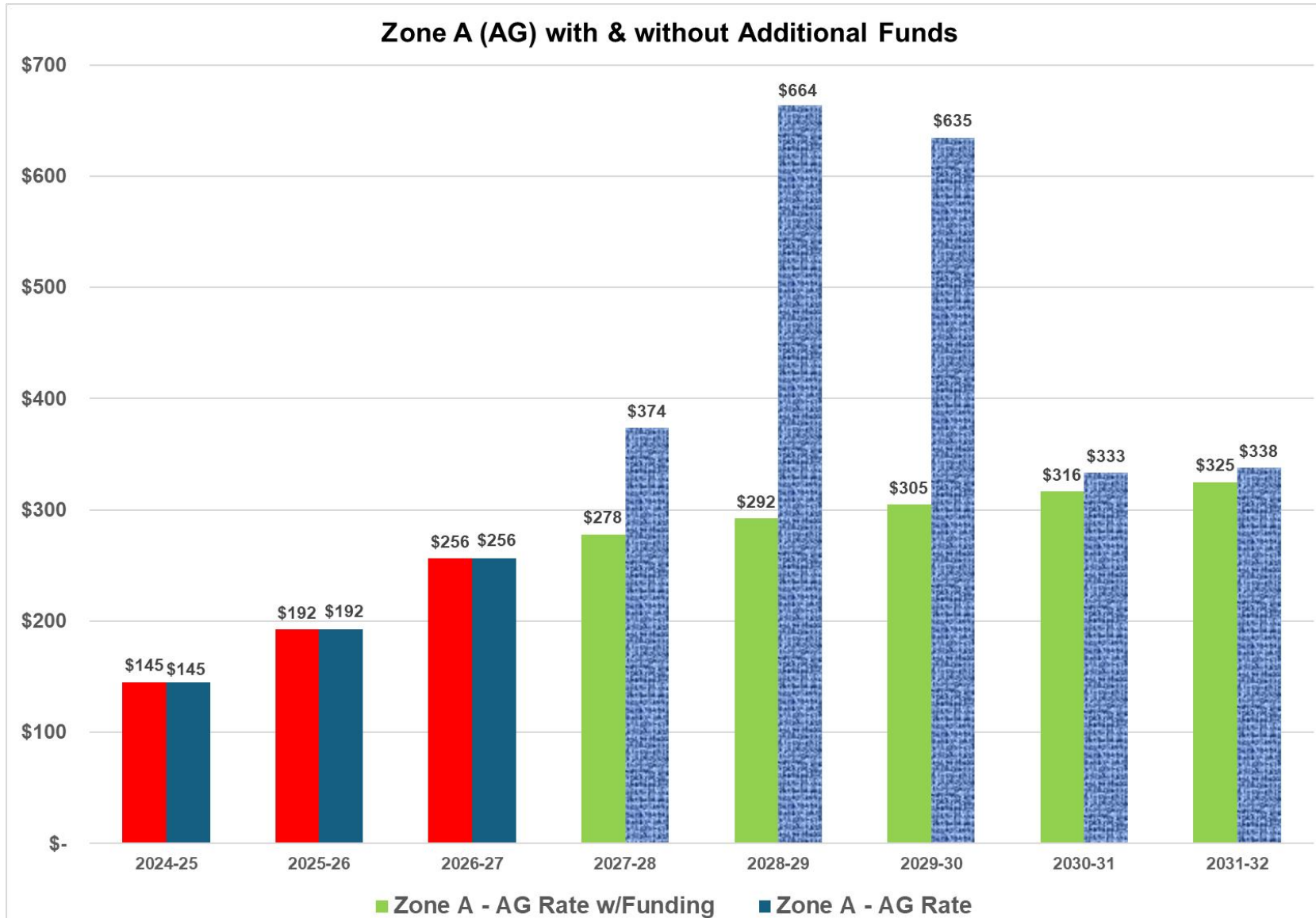


AWARDED - IN PROJECT COMPLETION PHASE			
Award Name	Project	Amount	Notification
FY24 USBR DOI WaterSMART: Environmental Water Resource Projects - Round 1	Freeman Diversion Fish Screen and Fish Bypass System Project	\$3,000,000	1/7/2025
FY 2024 State & Local Cybersecurity Grant Program for Local & Tribal Governments	Firewall & Network Switch Equipment Upgrades, Endpoint & Network Monitoring Installation, and Cybersecurity Vulnerability Review for the OT & SCADA Networking Systems	\$247,500	12/31/2024
FY24 FEMA High Hazard Potential Dams Grant Program	Santa Felicia: 100% Design and Bid Document Preparation for the Santa Felicia Dam Spillway Improvement Project	\$626,066	11/8/2024
FY23 USBR DOI WaterSMART Aquatic Ecosystem Restoration Projects	Freeman Diversion Fish Passage Rehabilitation Project	\$20,000,000	9/24/2024
DWR Prop 1 Integrated Regional Water Management Grant Program Round 2 - Implementation	Groundwater Recharge Capacity Expansion Project (Farm Base Recharge)	\$1,000,000	4/1/2023
SWRCB Prop 1 Groundwater Recharge Program		\$49,062	3/6/2023
FY22 FEMA High Hazard Potential Dams Grant Program		\$113,750	12/12/2022
DWR Sustainable Groundwater Grant Program Round 1 - Implementation		\$1,010,300	05/03/2022, Amended 11/6/2024
DWR Sustainable Groundwater Grant Program Round 1 - Implementation	PTP Recycled Water Connection - Laguna Road	\$4,615,856	05/03/2022, Amended 11/6/2024
DWR Sustainable Groundwater Grant Program Round 1 - Implementation	Extraction Barrier and Brackish Water Treatment Project Monitoring Well Construction and Data Collection	\$1,317,900	5/3/2022
DOD Defense Community Infrastructure Program	El Rio Iron and Manganese Treatment Project	\$4,230,133	9/21/2021
DWR Prop 1 Integrated Regional Water Management Grant Program Round 1 - Implementation	El Rio Iron and Manganese Treatment Project	\$3,120,887	9/29/2020
NRCS Conservation Innovation Grant	Recycled Water PTP-PV Interconnection	\$340,480	9/4/2020
DWR Prop 1 Water Use Efficiency Grant	Installation of SCADA Integrated Metering System at Turnouts of the PTP System	\$635,059	12/15/2016
CLOSED - PROJECT COMPLETED			
Award Name	Project	Amount	Award Date
CalOES Hazard Mitigation Grant Program Subrecipient Management Cost Funding	OH Backup Generator	\$26,581	3/8/2022
CalOES Community Power Resiliency to Special Districts Program	Emergency Power Supply for UWCD Drinking Water Treatment and Supply Facilities	\$198,612	3/12/2021
FEMA Hazard Mitigation Grant Program	OH Backup Generator	\$1,083,095	12/9/2020
USFS Southern California Forests and Watersheds	Special-status surveys, habitat mapping, and non-native cowbird removal in the Los Padres National Forest.	\$154,440	9/2/2020
SWRCB Prop 1 Groundwater Grant Program Round 2 - Planning	Coastal Brackish Groundwater Extraction and Treatment Plant	\$122,563	10/18/2019

Total Grants Awarded: \$50 million



# Projected Rates (estimates based on assumptions)



# Why a G.O. Bond?



Spreads  
Cost over  
Time

Supports  
Essential  
Projects

Locks in  
Low  
Interest  
Rates

Keeps  
Water  
Rates  
Steady

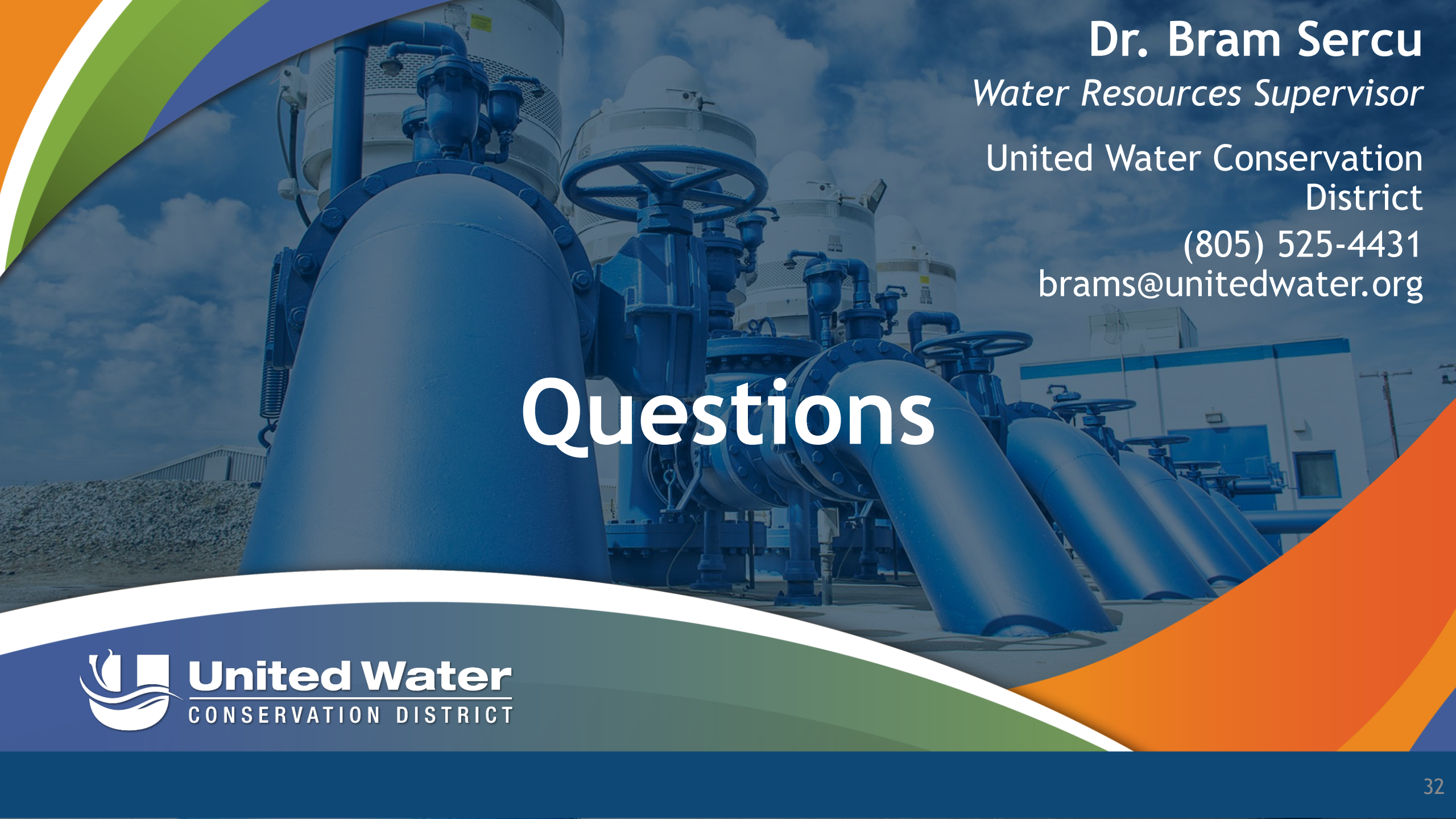




**Bottom Line:  
We can't do it alone.**







**Dr. Bram Sercu**  
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# Questions



**United Water**  
CONSERVATION DISTRICT