

**RECENT IMPROVEMENTS IN GROUNDWATER BASIN CONDITIONS
IN SOUTHERN VENTURA COUNTY,
AND
UPDATES ON NEW WATER SUPPLY PROJECTS TO ADDRESS
ONGOING OVERDRAFT**

**Bram Sercu, Principal Hydrologist
UCCE Irrigation and Nutrient Management Workshop
August 14, 2024**

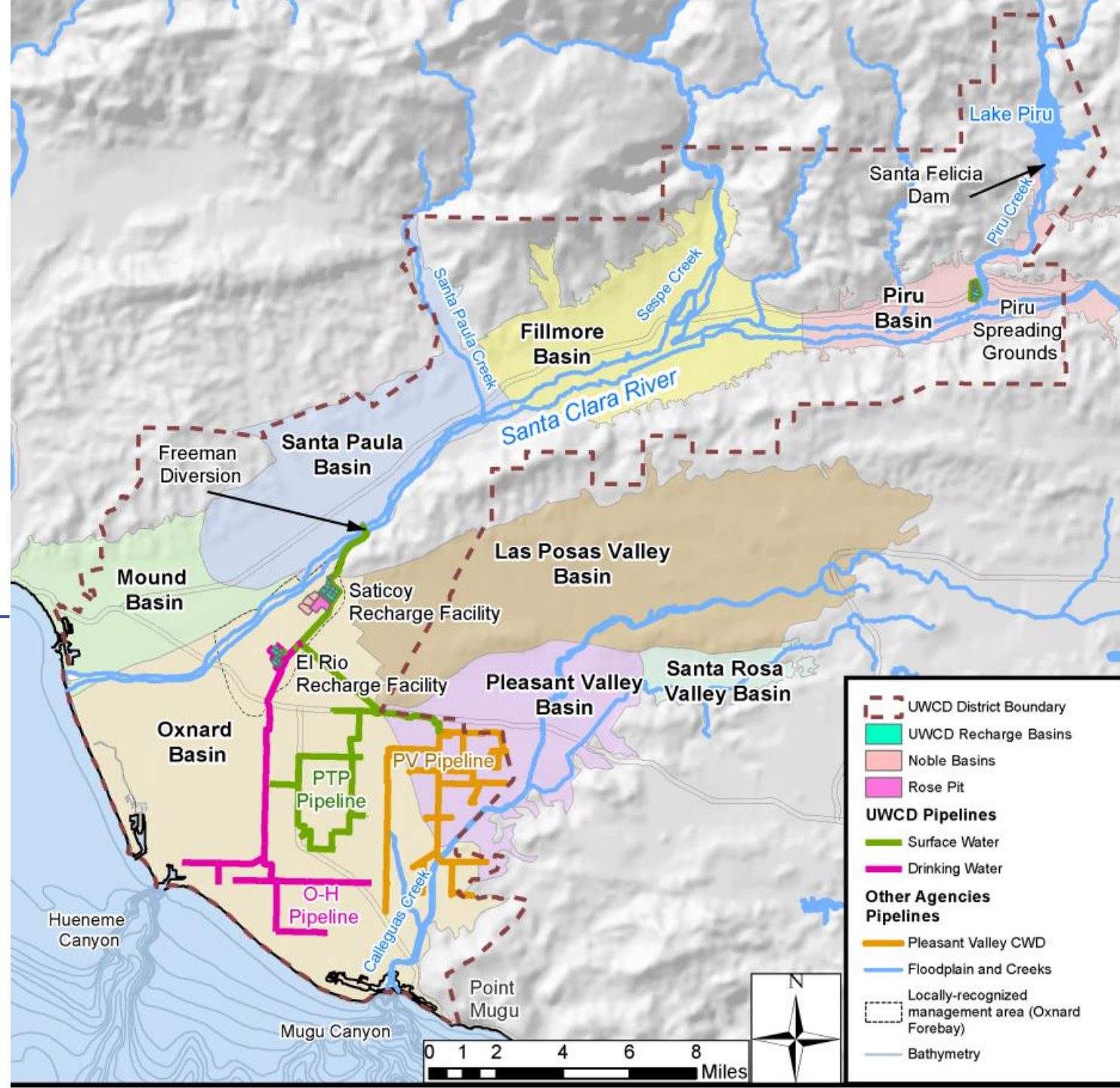


United Water Conservation District

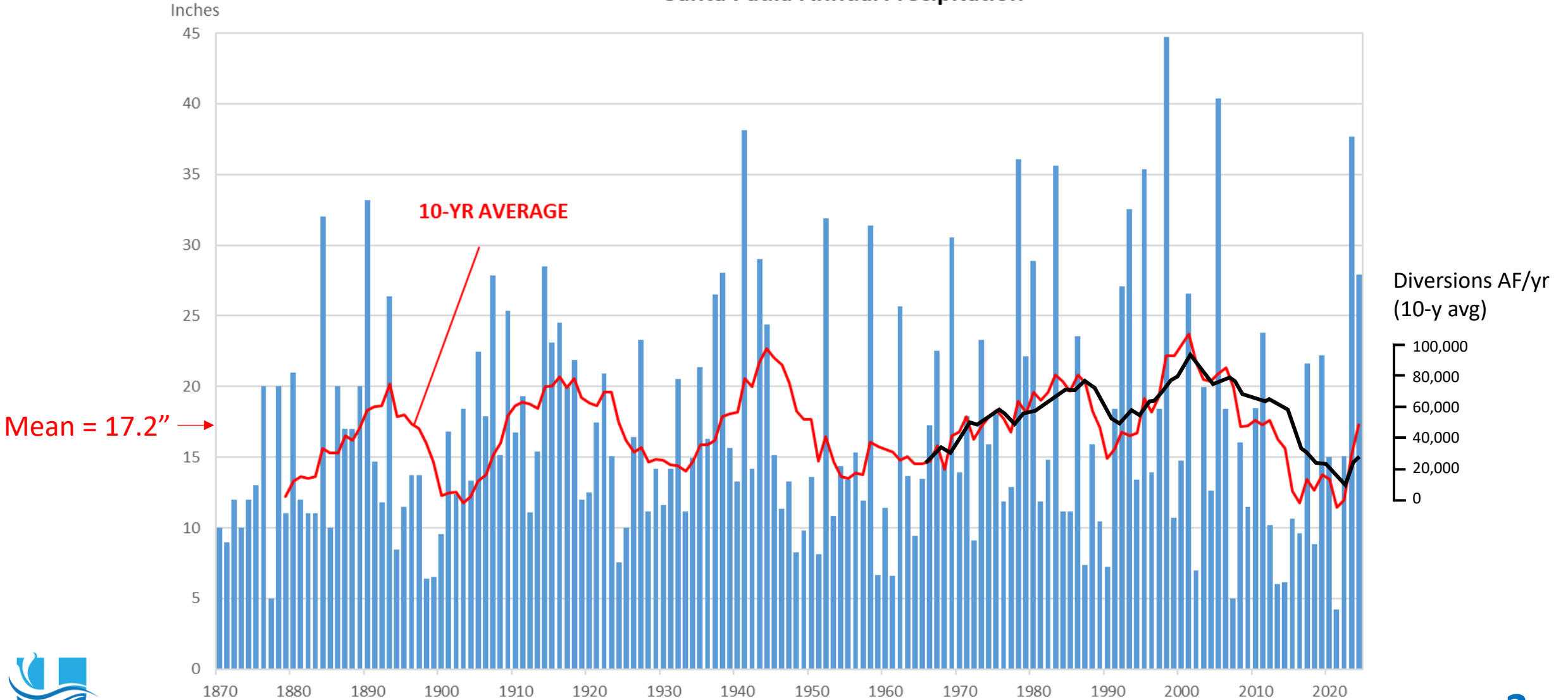
- ◆ **LARGE GROUNDWATER BASINS** in southern Ventura County (*all are DWR high-priority basins*)
- ◆ **EXTENSIVE RELIANCE** on groundwater for both Ag and M&I supply
- ◆ **LONG HISTORY** of overdraft and seawater intrusion in coastal basins

Long history of conjunctive use strategies

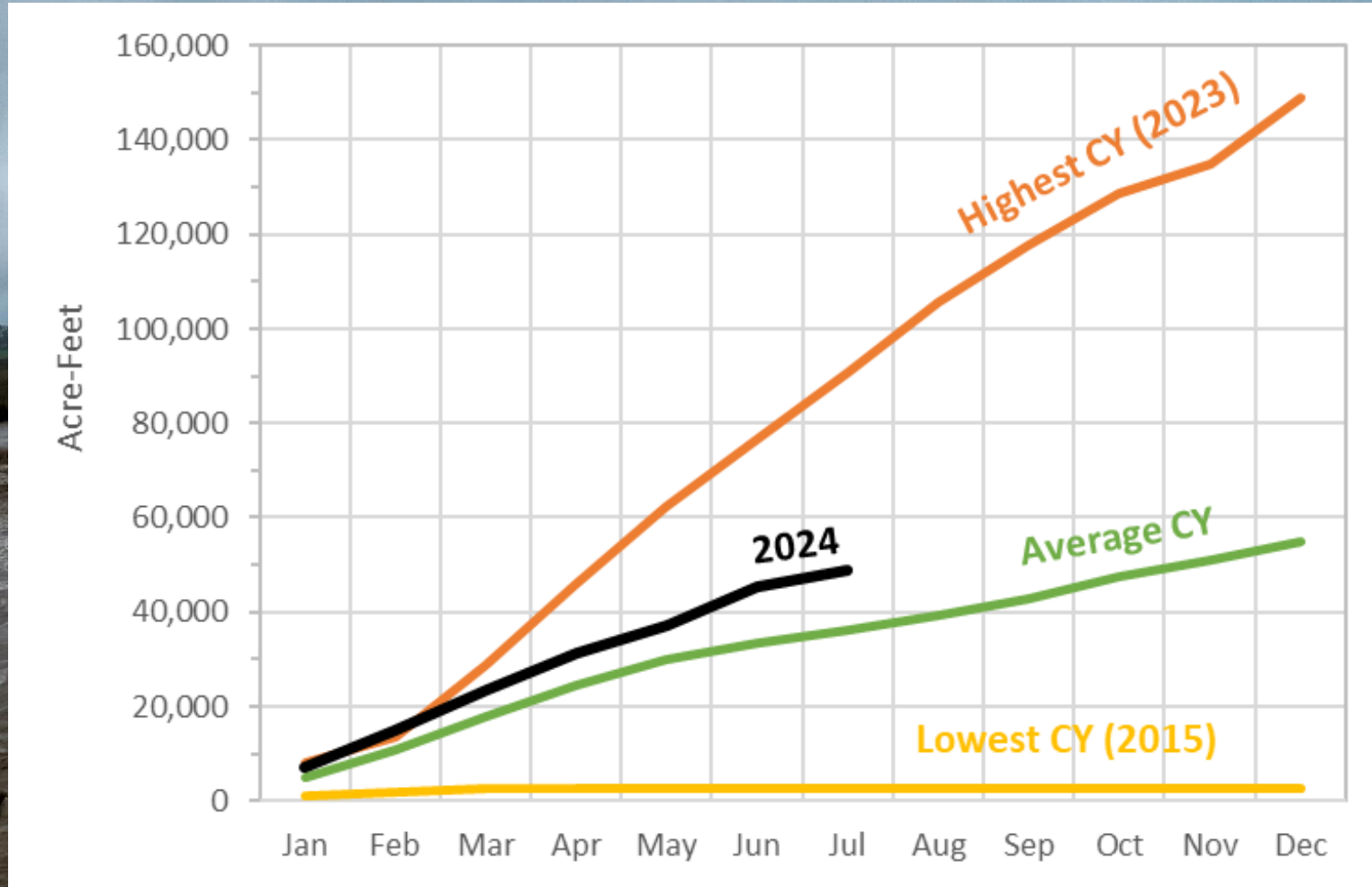
- ◆ Managed aquifer recharge
- ◆ Use surface water and imported water when available
- ◆ Use of groundwater when it is not.



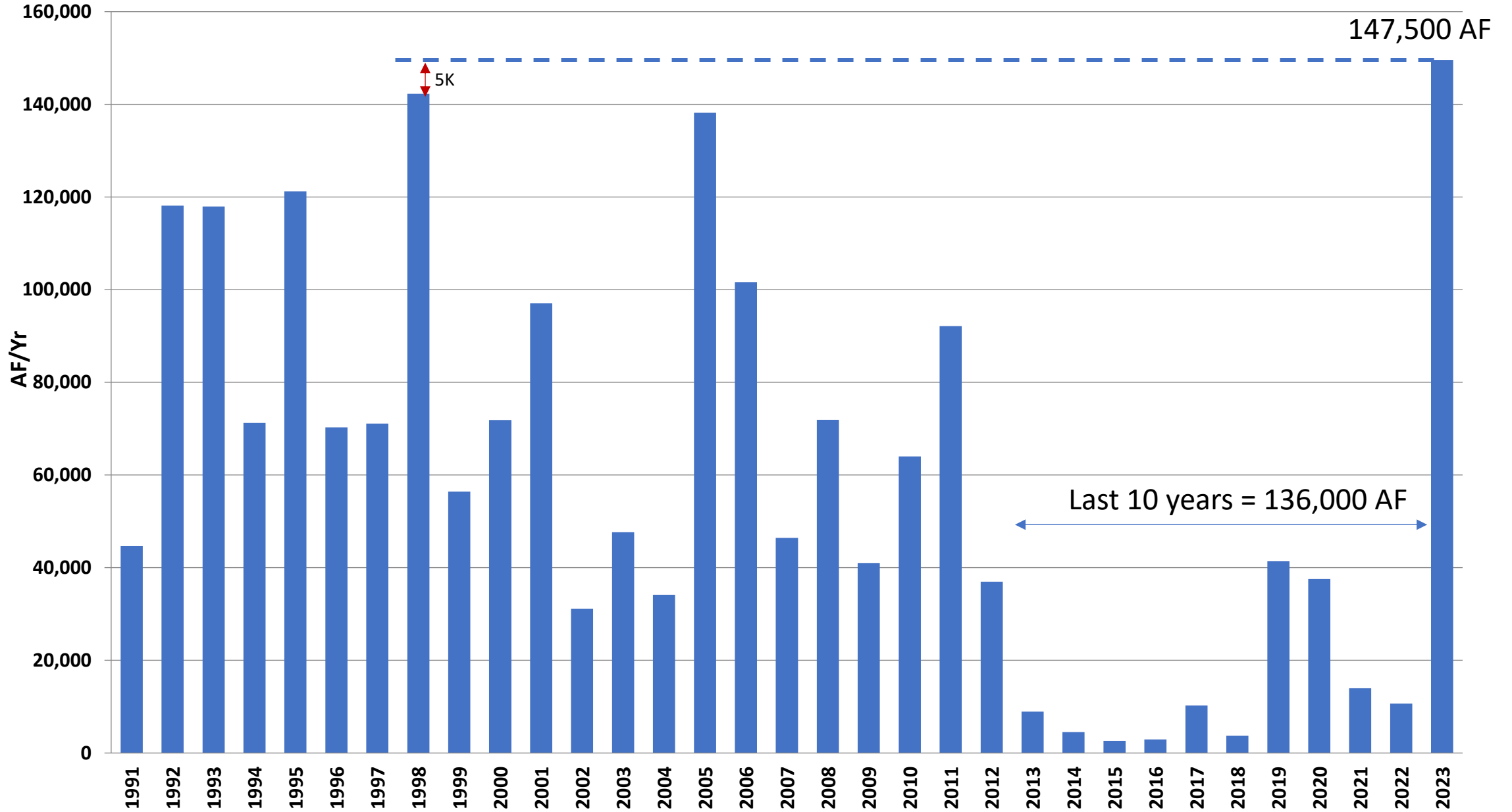
Santa Paula Annual Precipitation



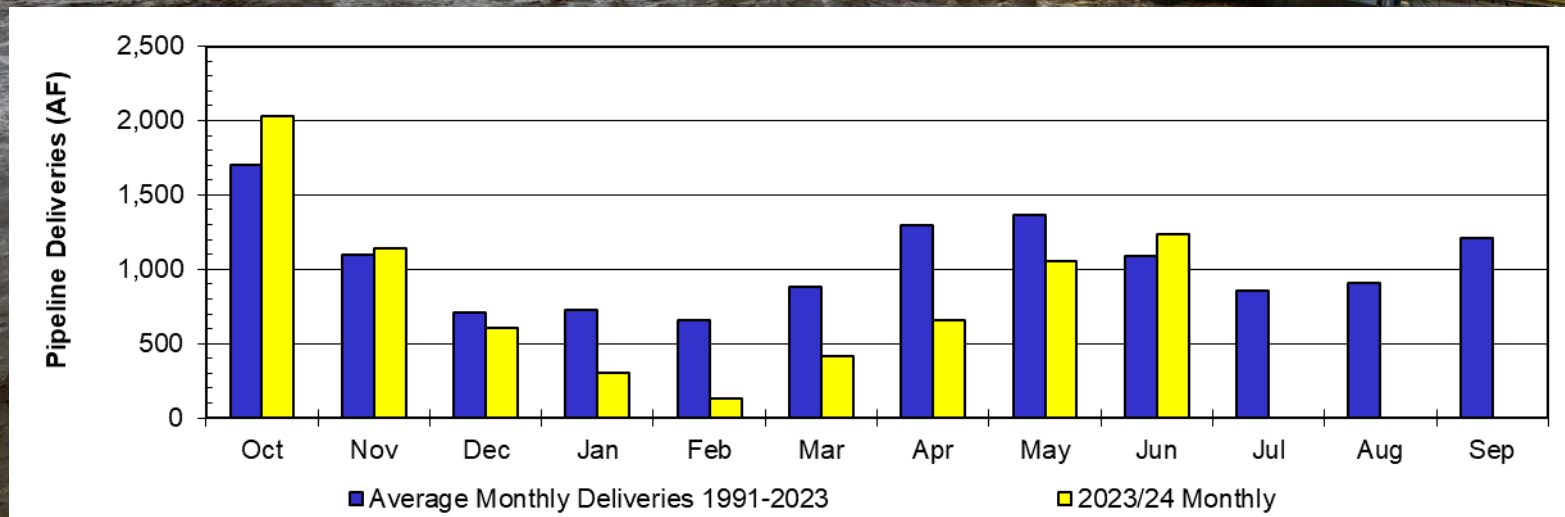
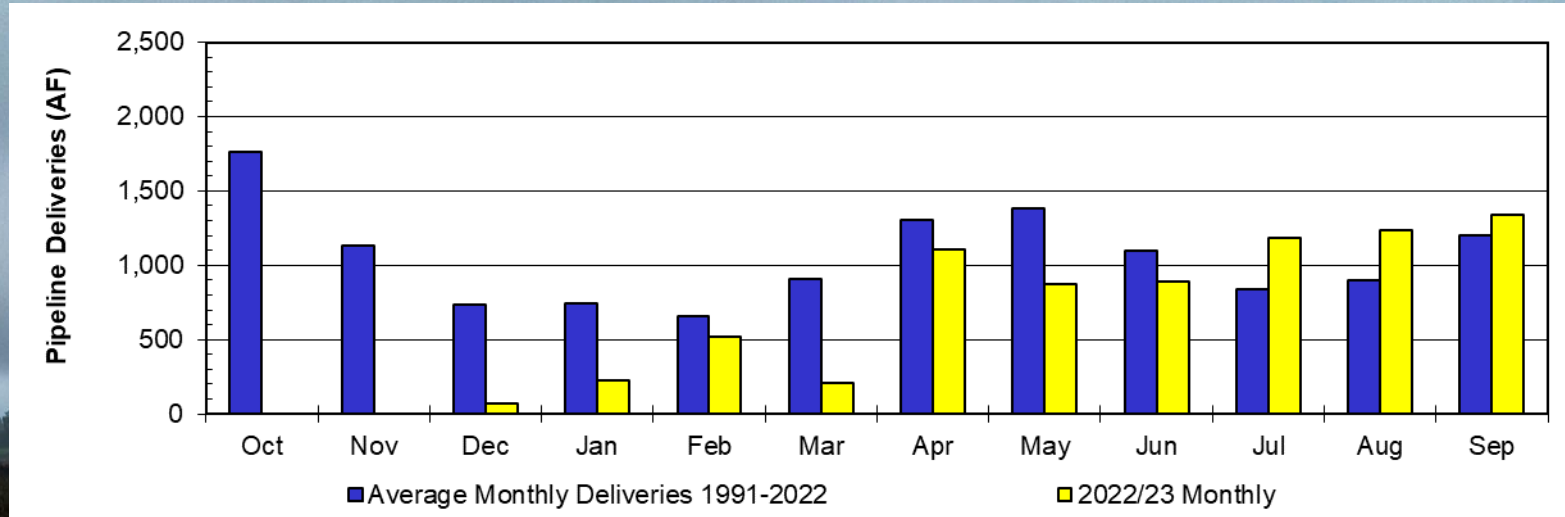
2023/2024 Diversions



Annual Total Freeman Diversions

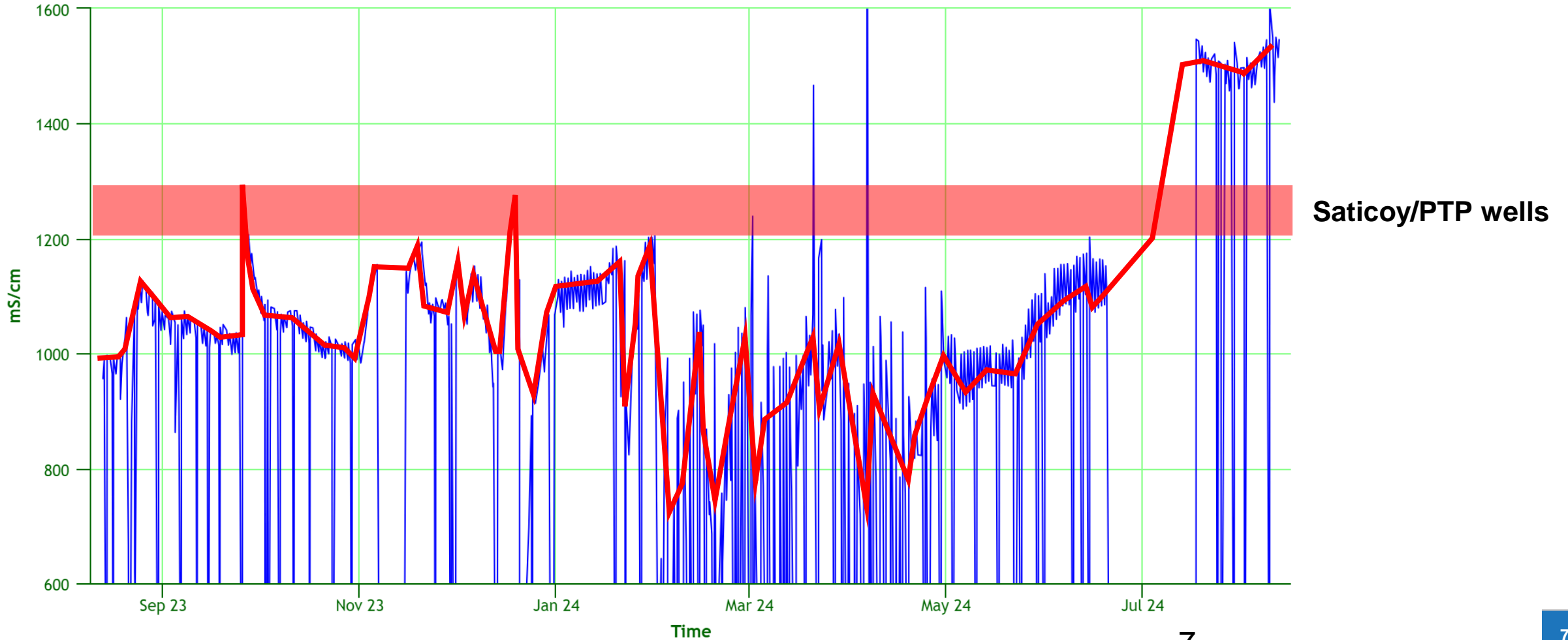


2023/2024 Pipeline Surface Water Deliveries

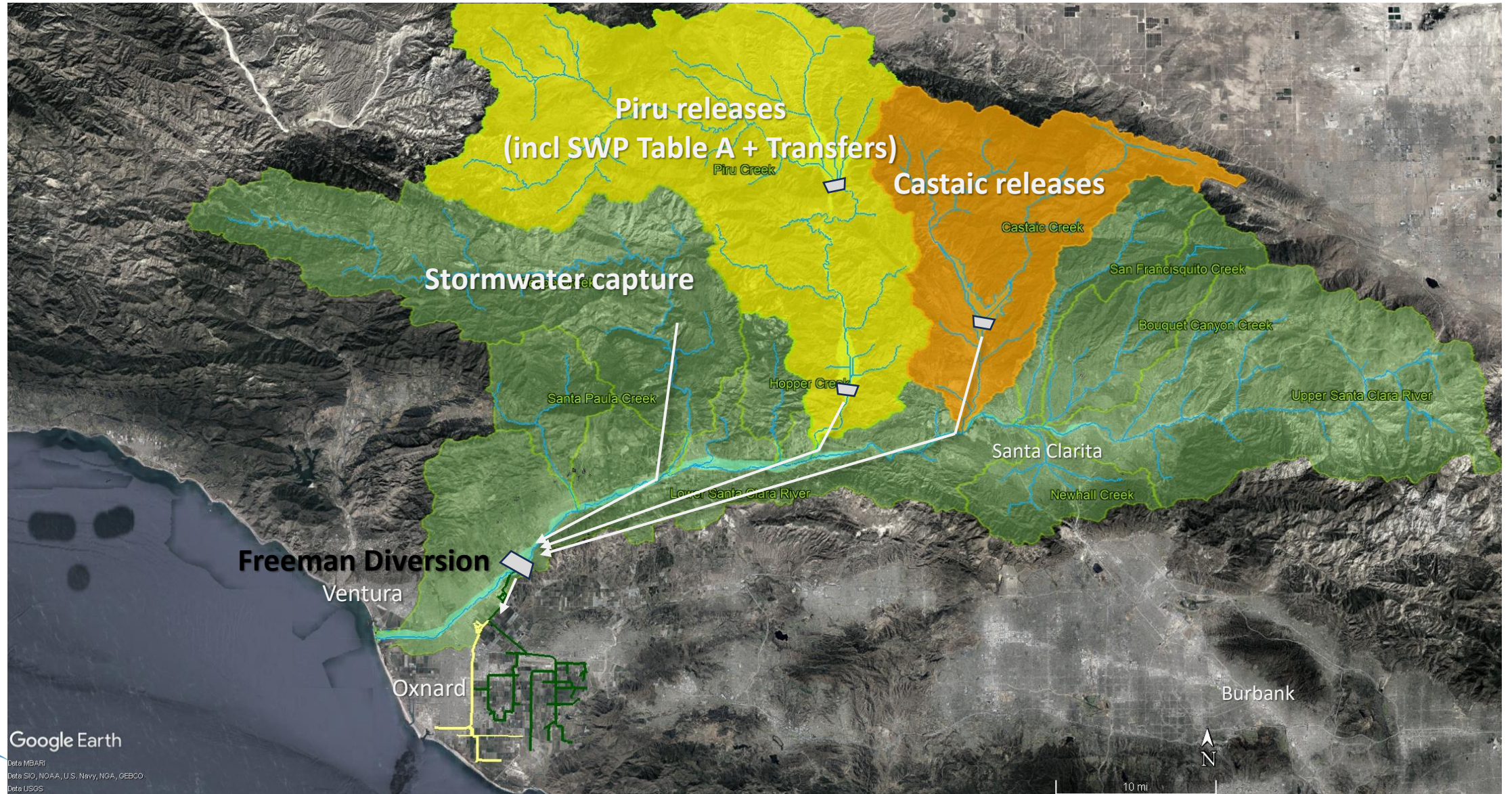


Surface Water/Groundwater Conductivity

FMN CNL Conductivity



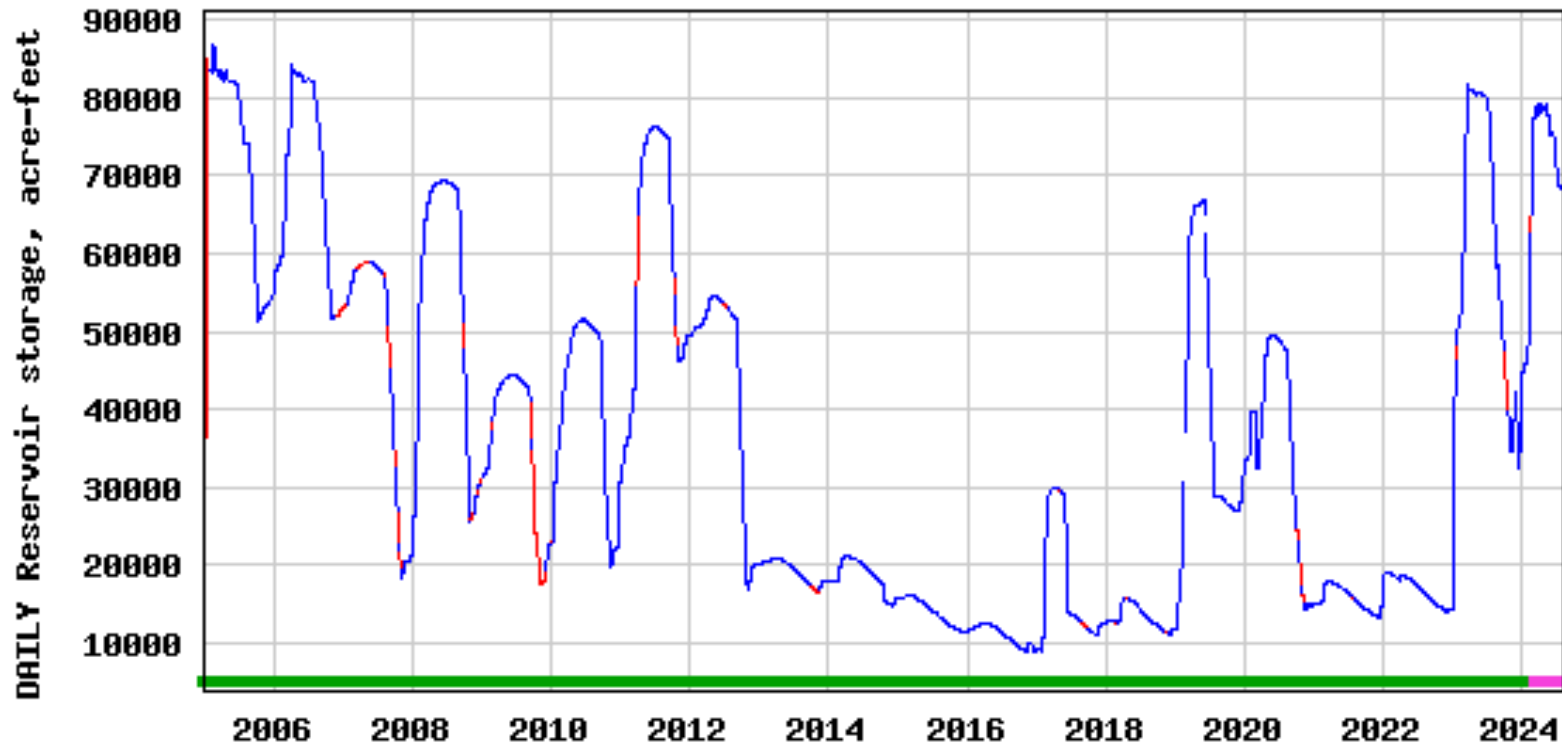
Surface Water supplies in 2023/2024



Lake Piru Storage



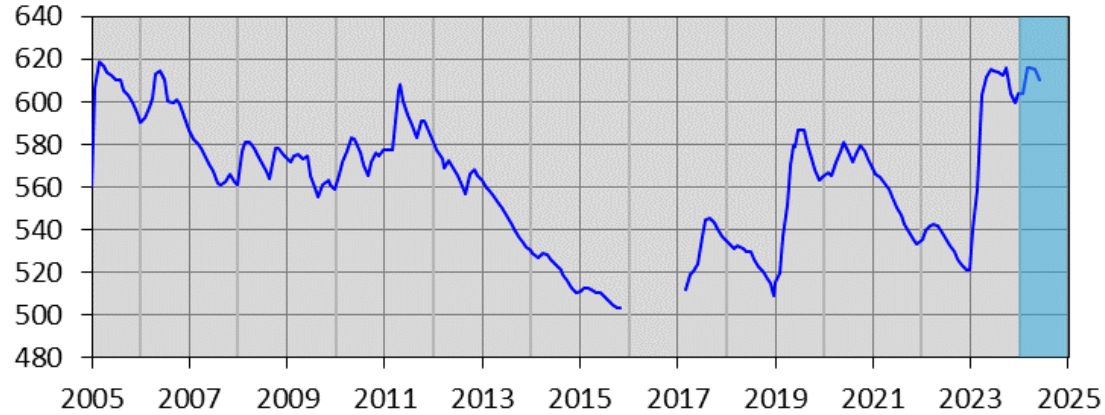
USGS 11109700 LK PIRU NR PIRU CA



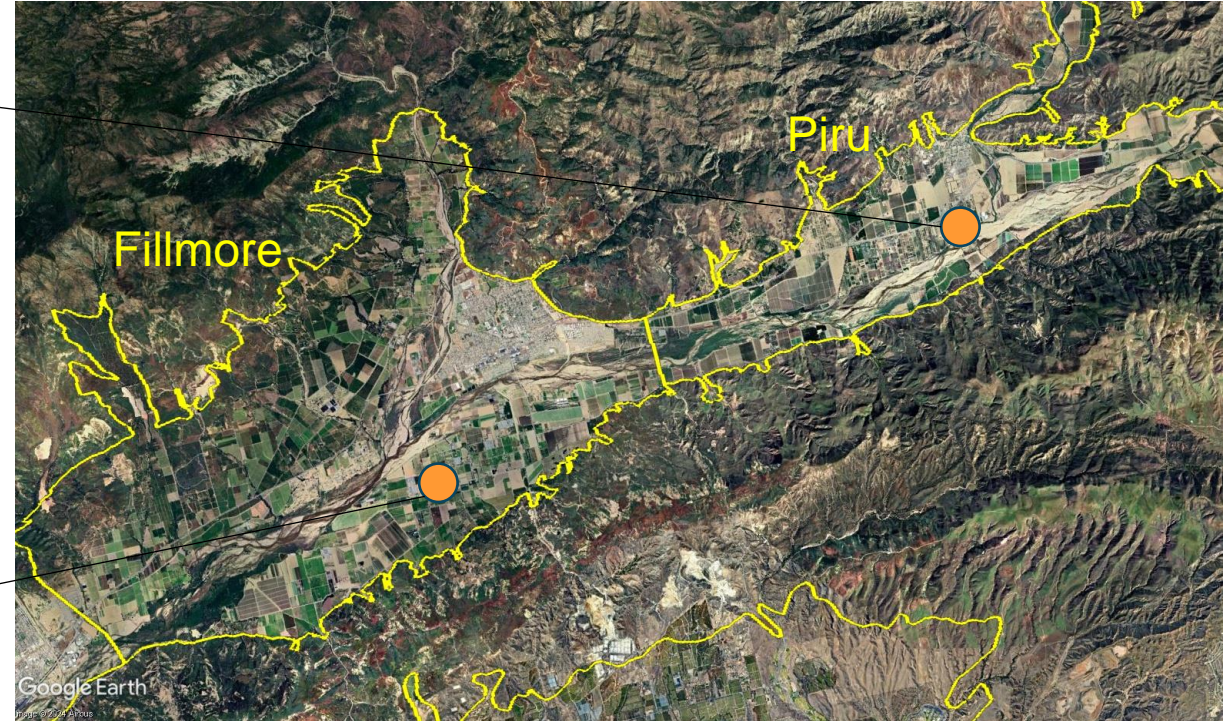
- Daily observation at midnight reservoir storage
- Estimated daily observation at midnight reservoir storage
- Period of approved data
- Period of provisional data

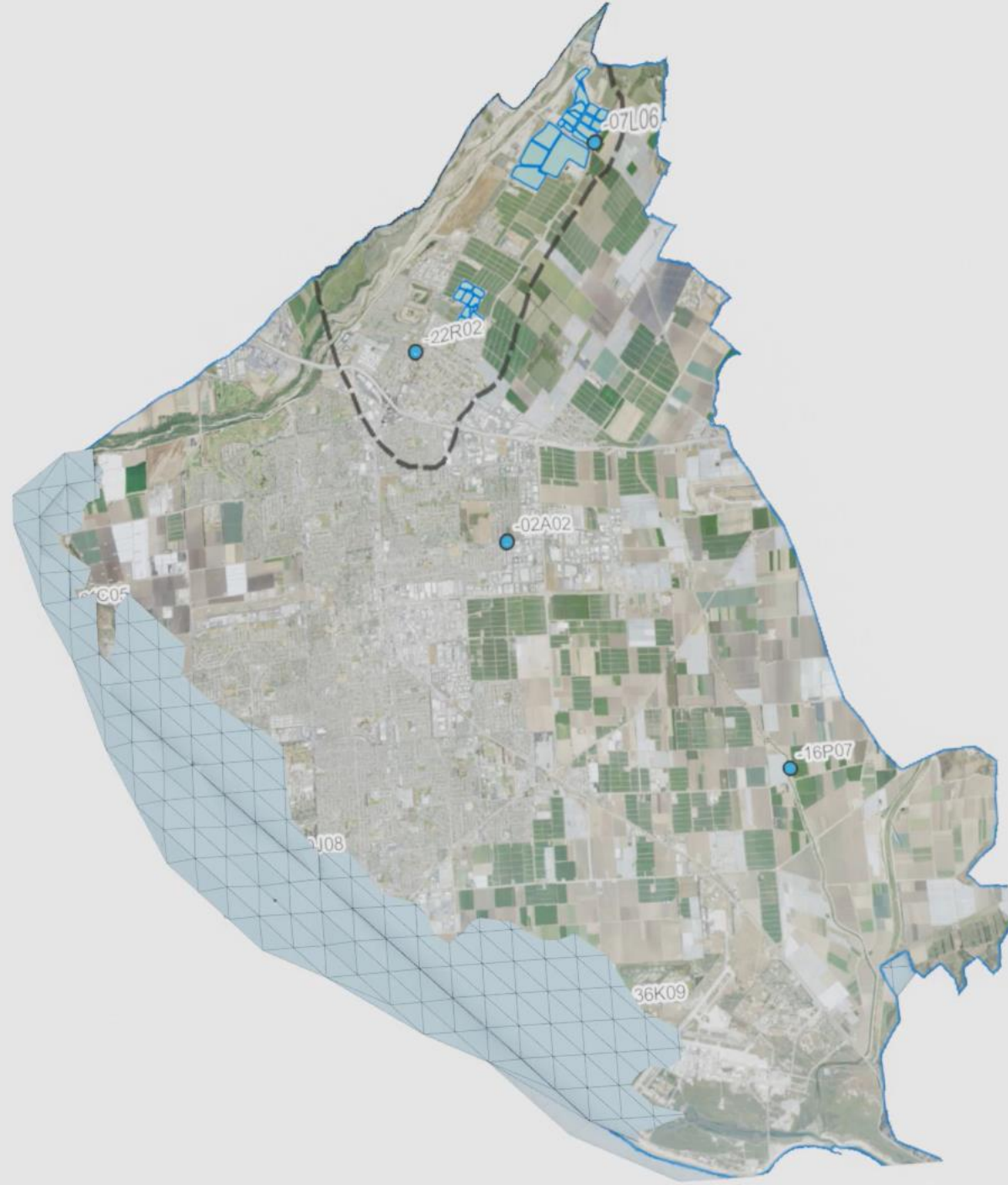
Groundwater Conditions Upper Basins

Piru Basin - 04N18W29M02



Fillmore Basin - 03N20W02A01





January 2023

Saticoy

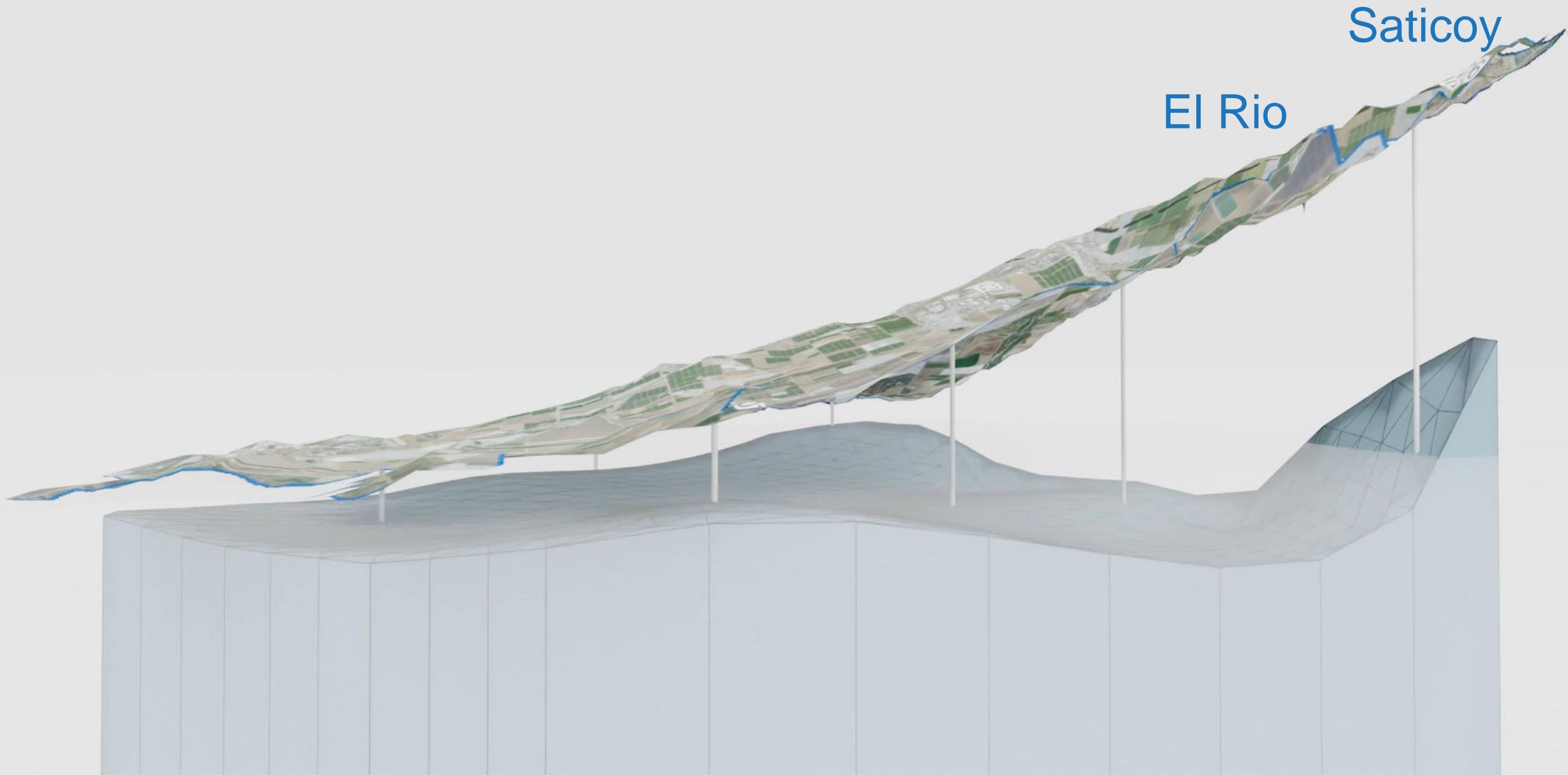
El Rio



July 2023

Saticoy

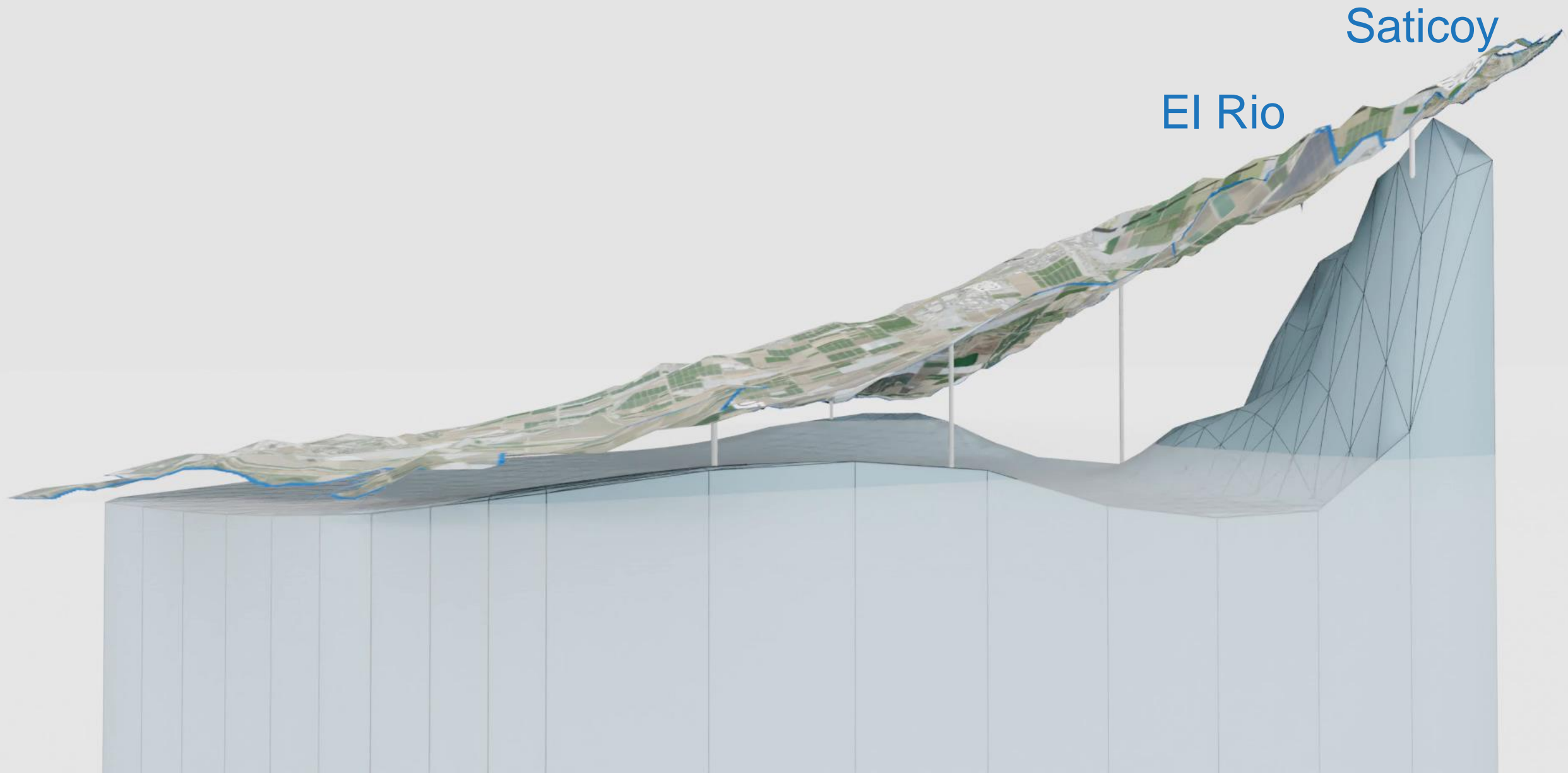
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December 2023

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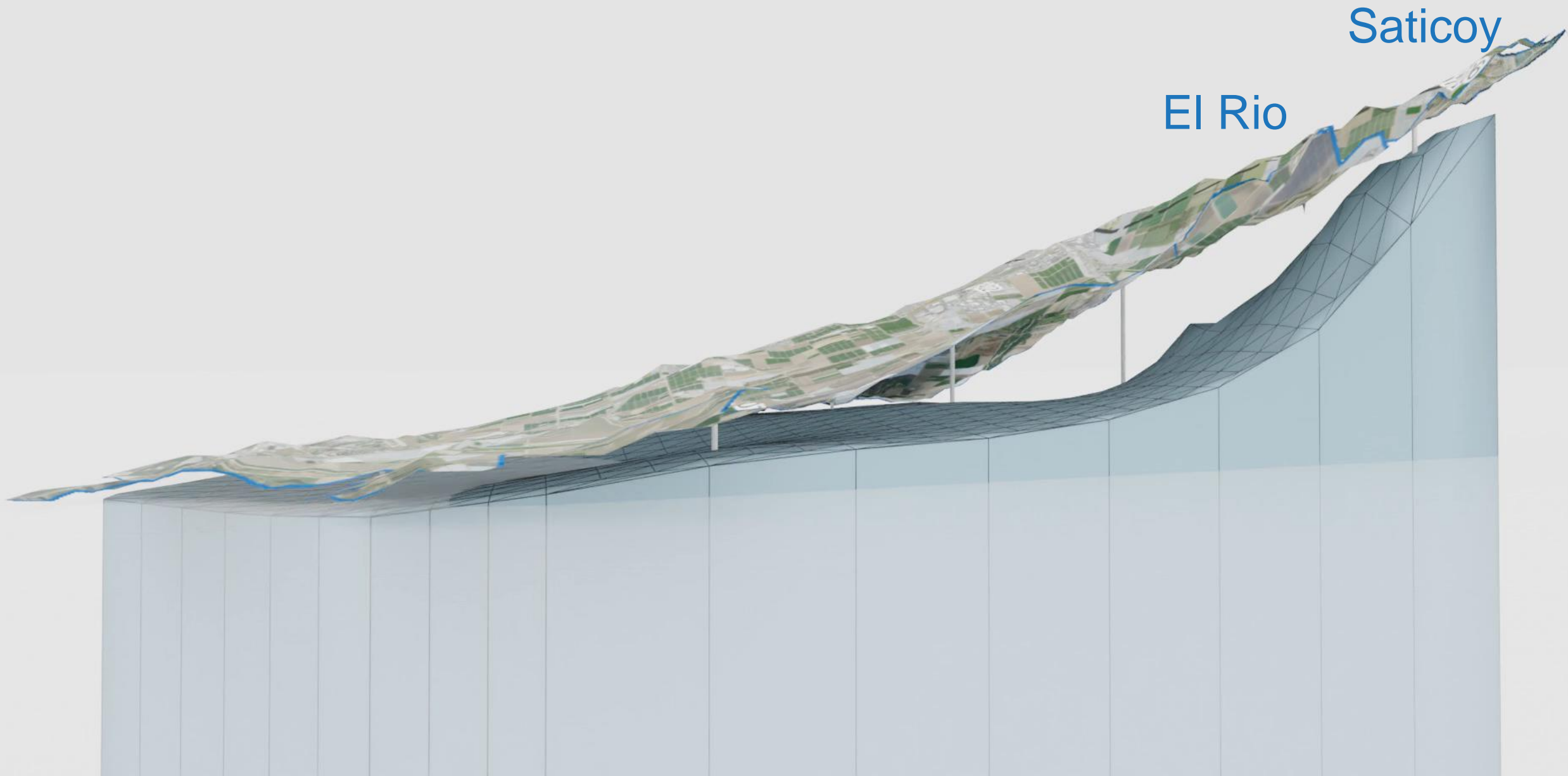
El Rio



March 2024

Saticoy

El Rio

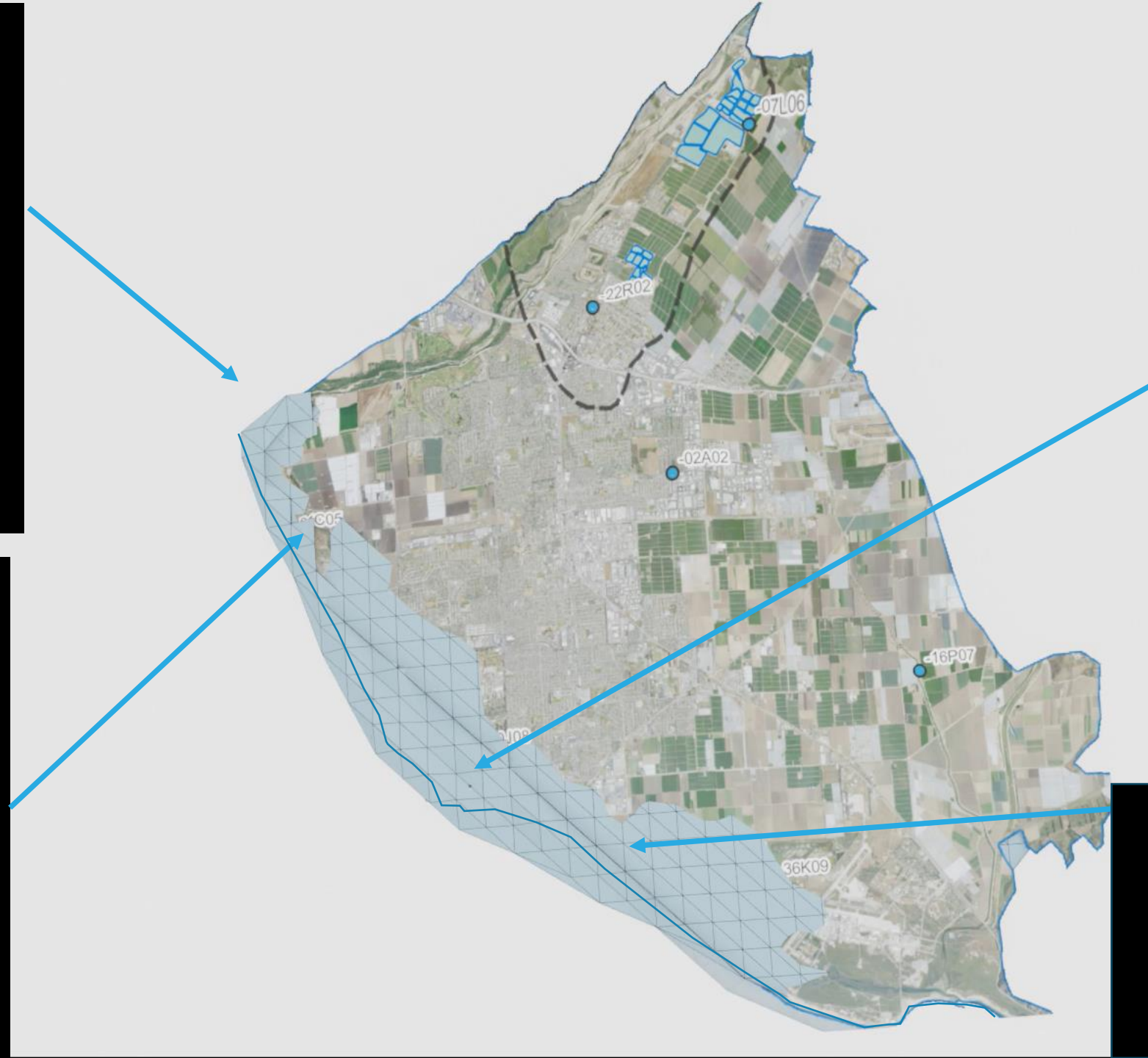


MP 660

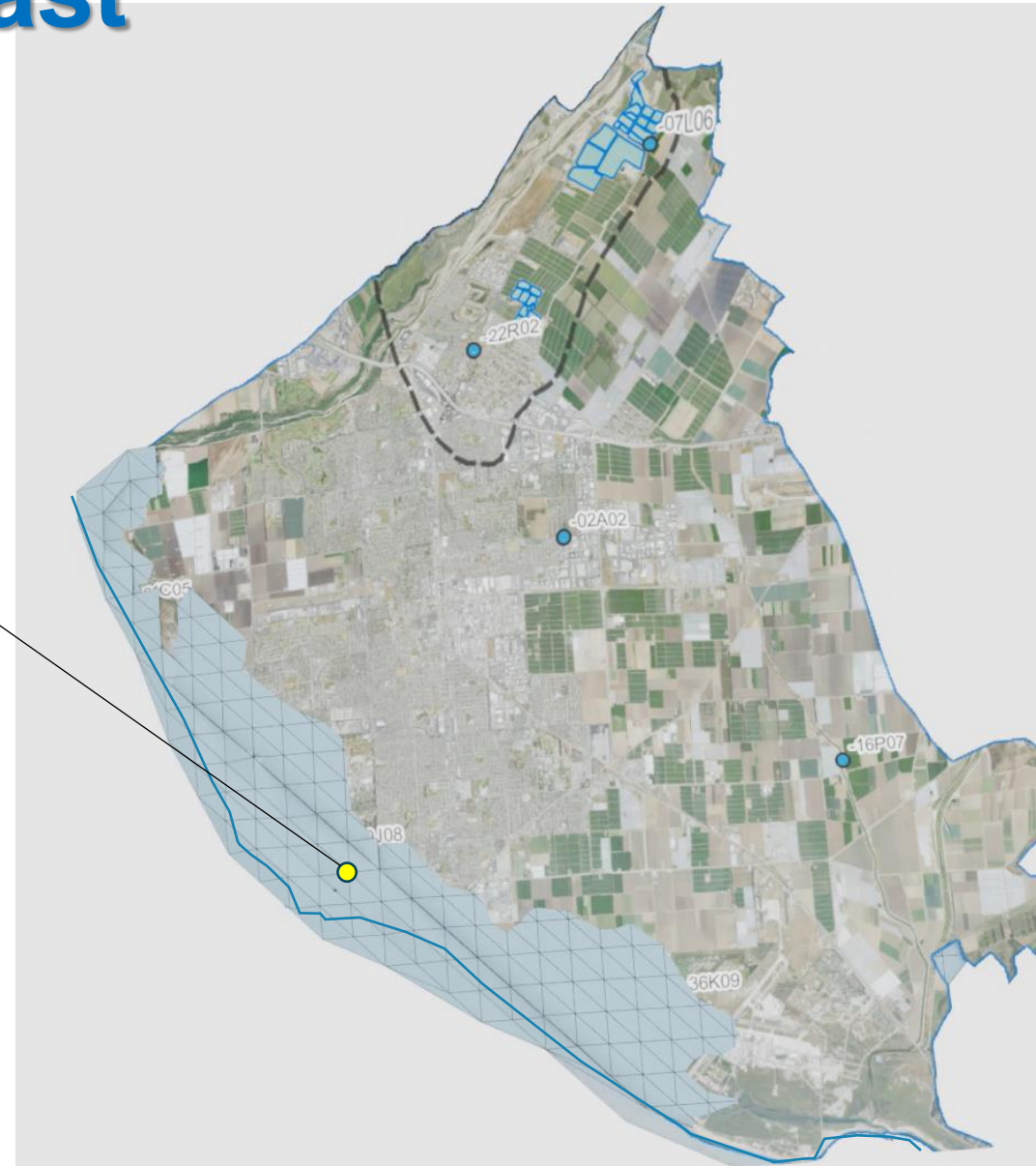
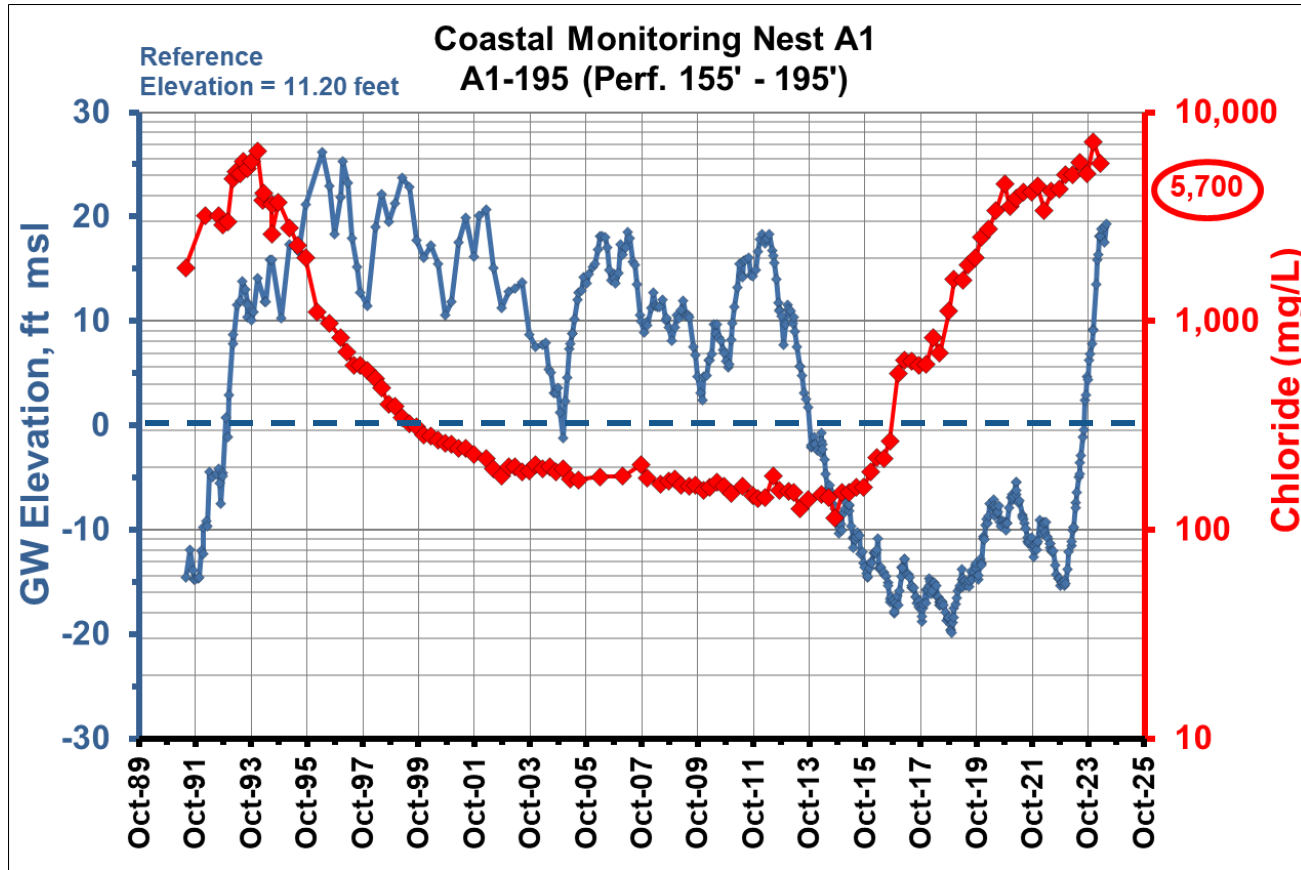
A1 195

CM#3

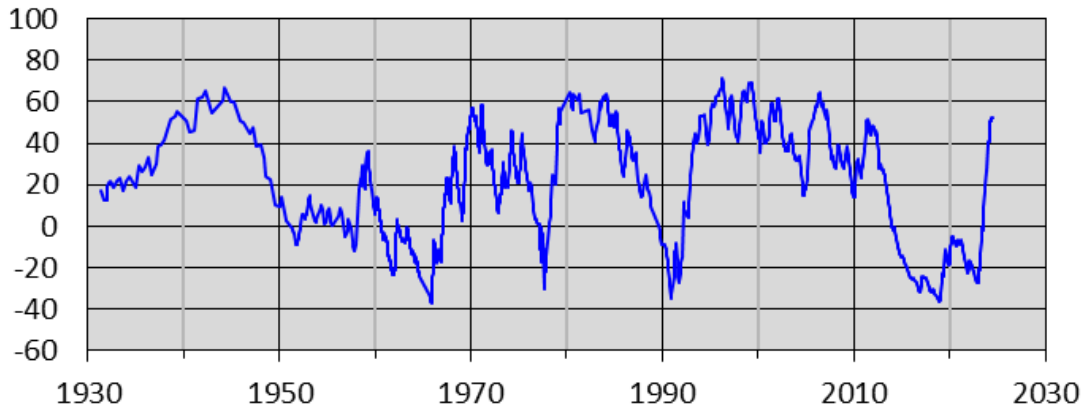
CM#7



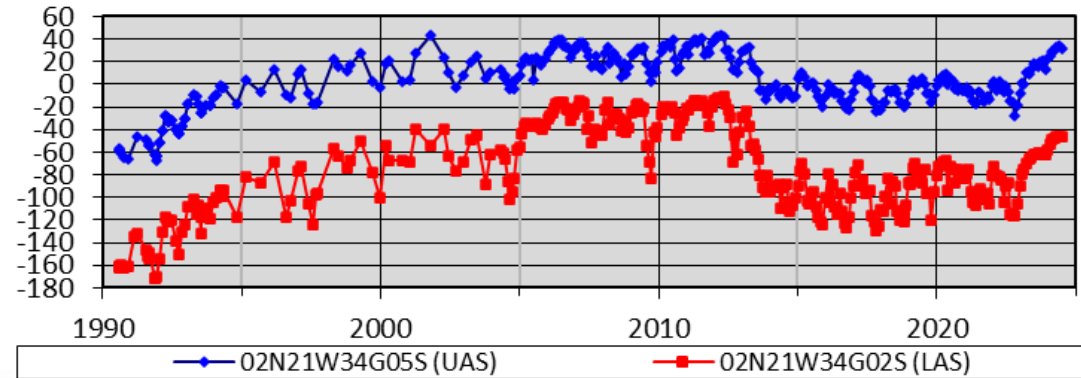
Extended period above sea level needed for reducing chloride along coast



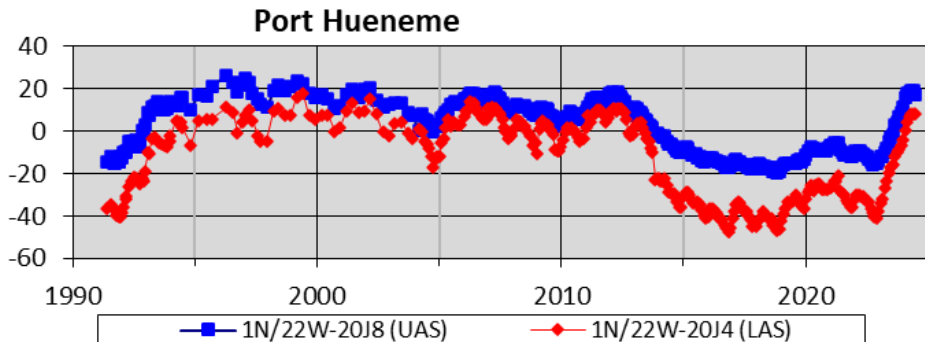
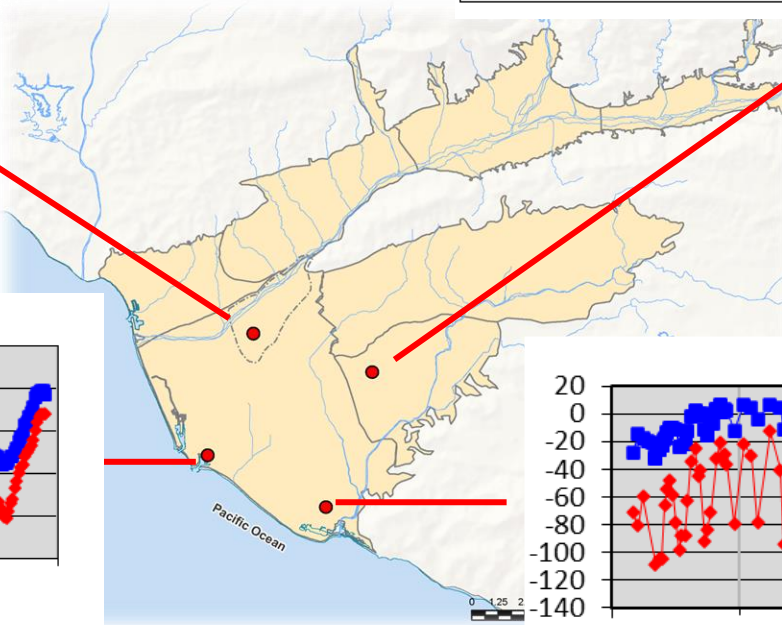
Change in Groundwater Levels – Coastal Basins



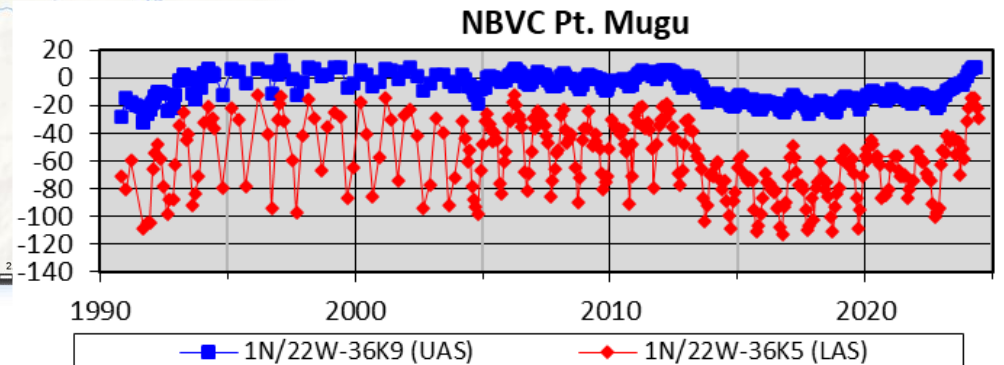
**Oxnard Forebay
(Upper Aquifer System)**



**Pleasant Valley Basin
(Upper and Lower Aquifer Systems)**



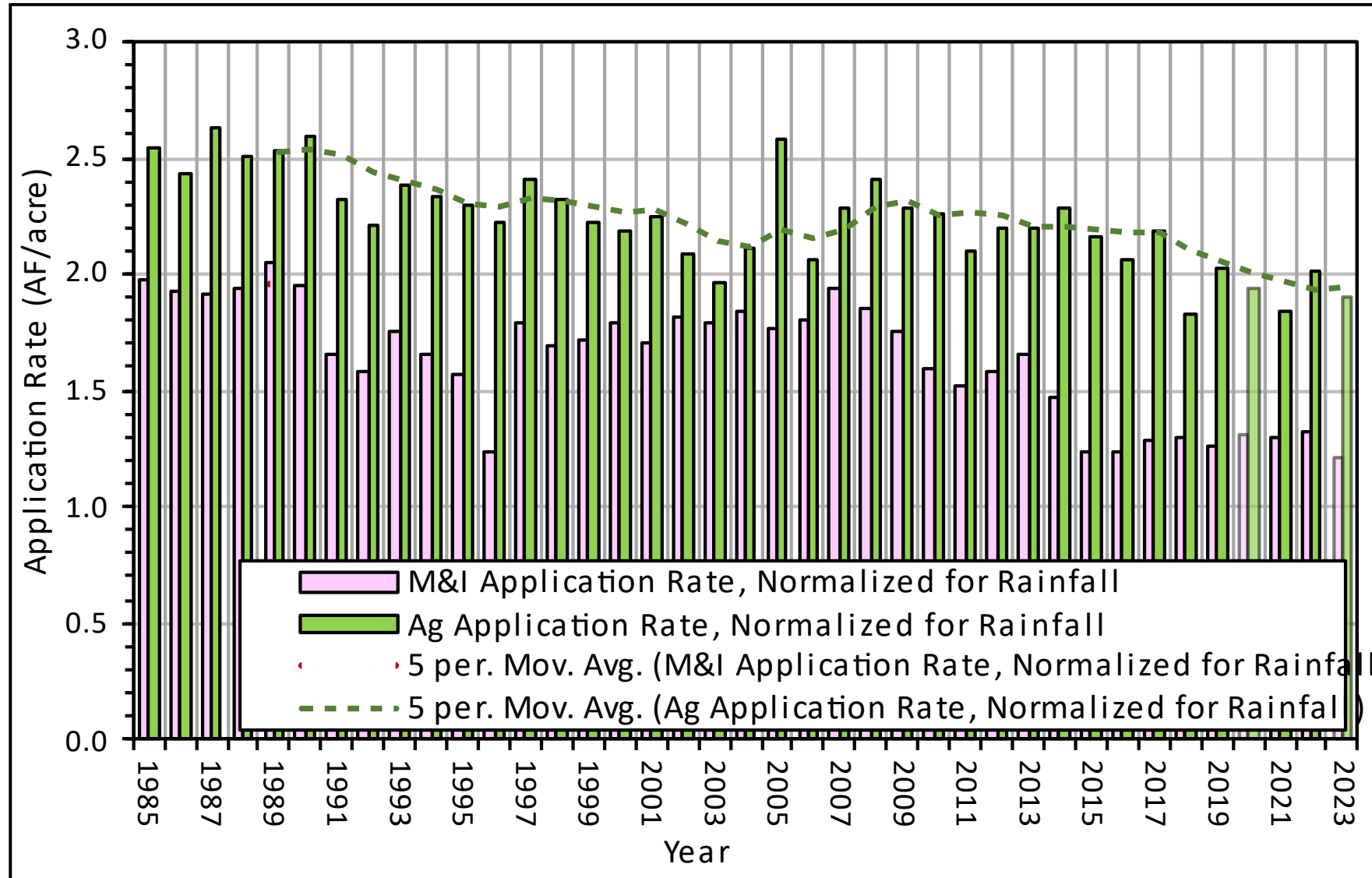
Port Hueneme




NBVC Pt. Mugu



Water Application Rates Have Decreased (normalized for rainfall)

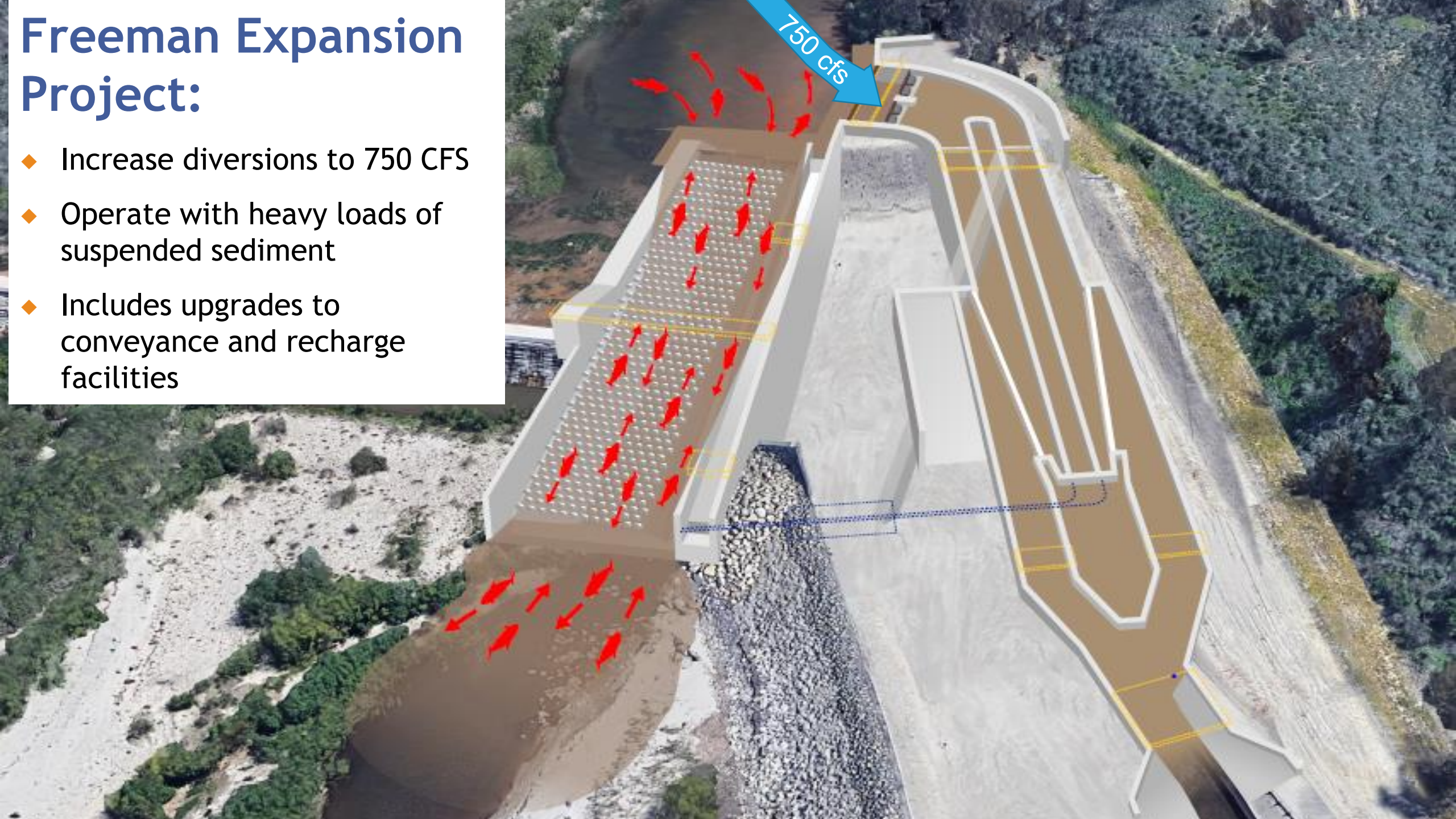


Water Supply Projects:

- Freeman Expansion Project
 - Dam Safety improvement project
 - EBB (Extraction Barrier Brackish Water Treatment)
 - Recycled Water Pipeline
 - PTP metering project
- 

Freeman Expansion Project:

- ◆ Increase diversions to 750 CFS
- ◆ Operate with heavy loads of suspended sediment
- ◆ Includes upgrades to conveyance and recharge facilities



Santa Felicia Dam Safety Improvement Project

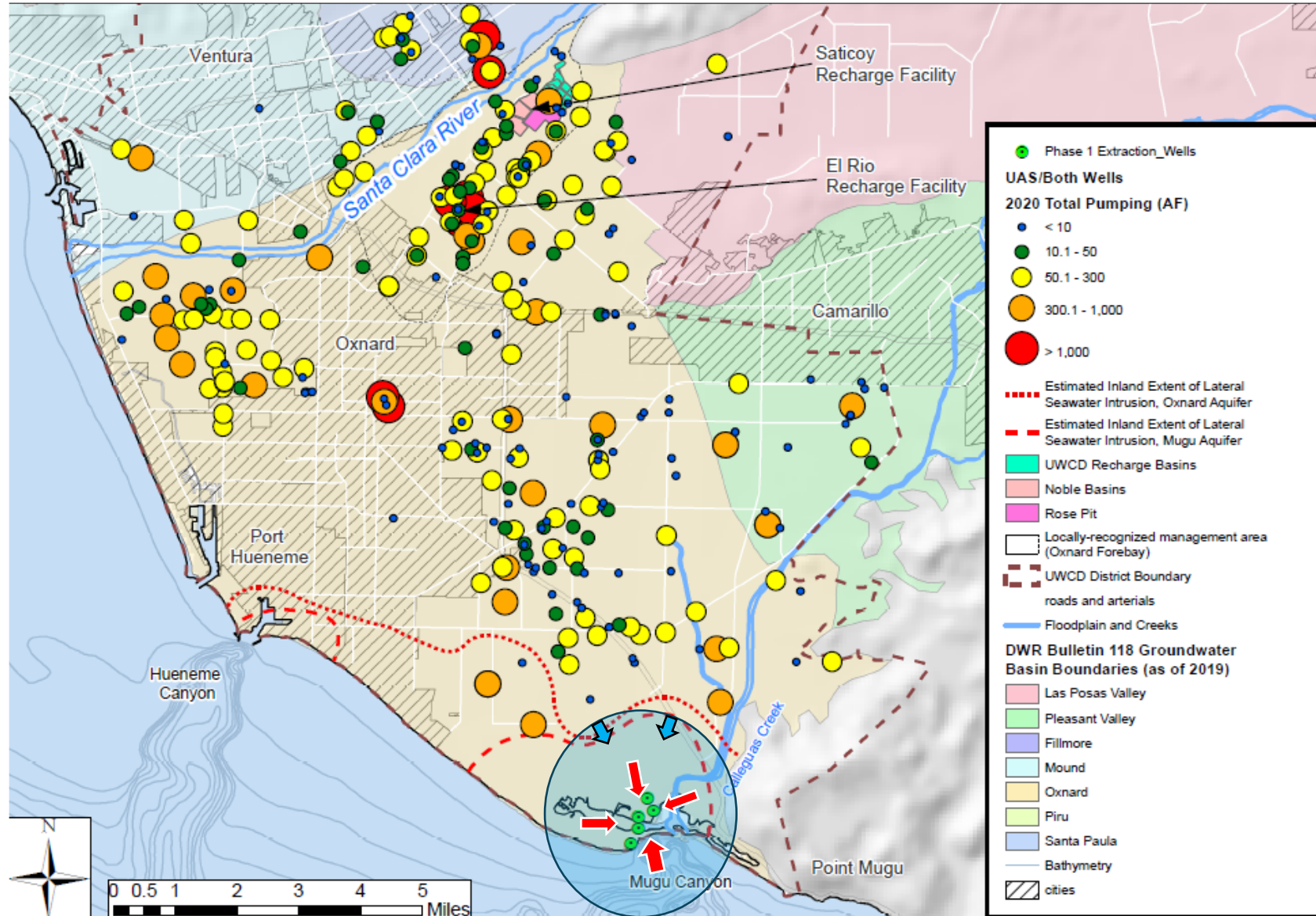


Spillway

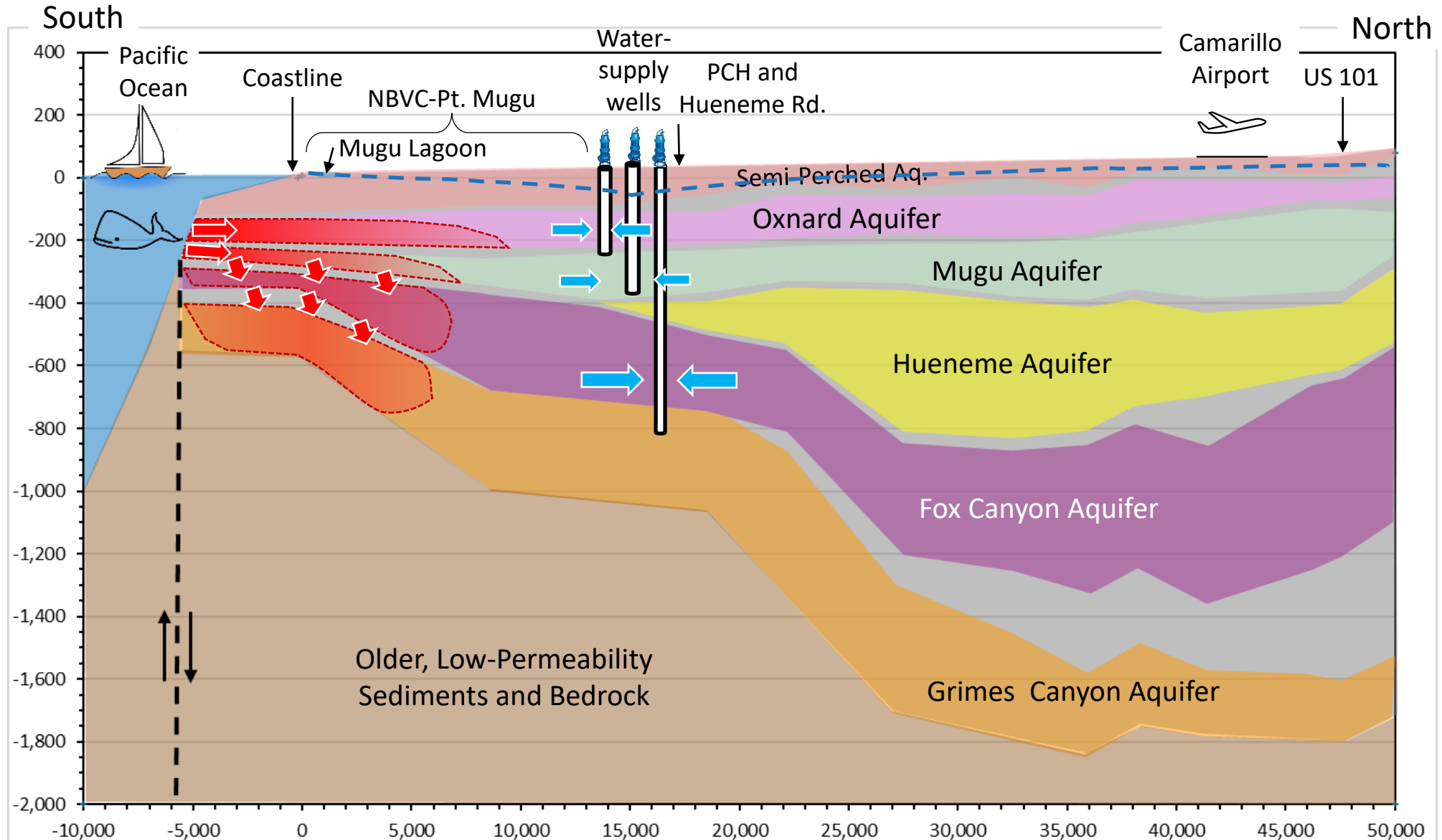
Outlet Works

EBB Water Phase 1 (est. completion 2027)

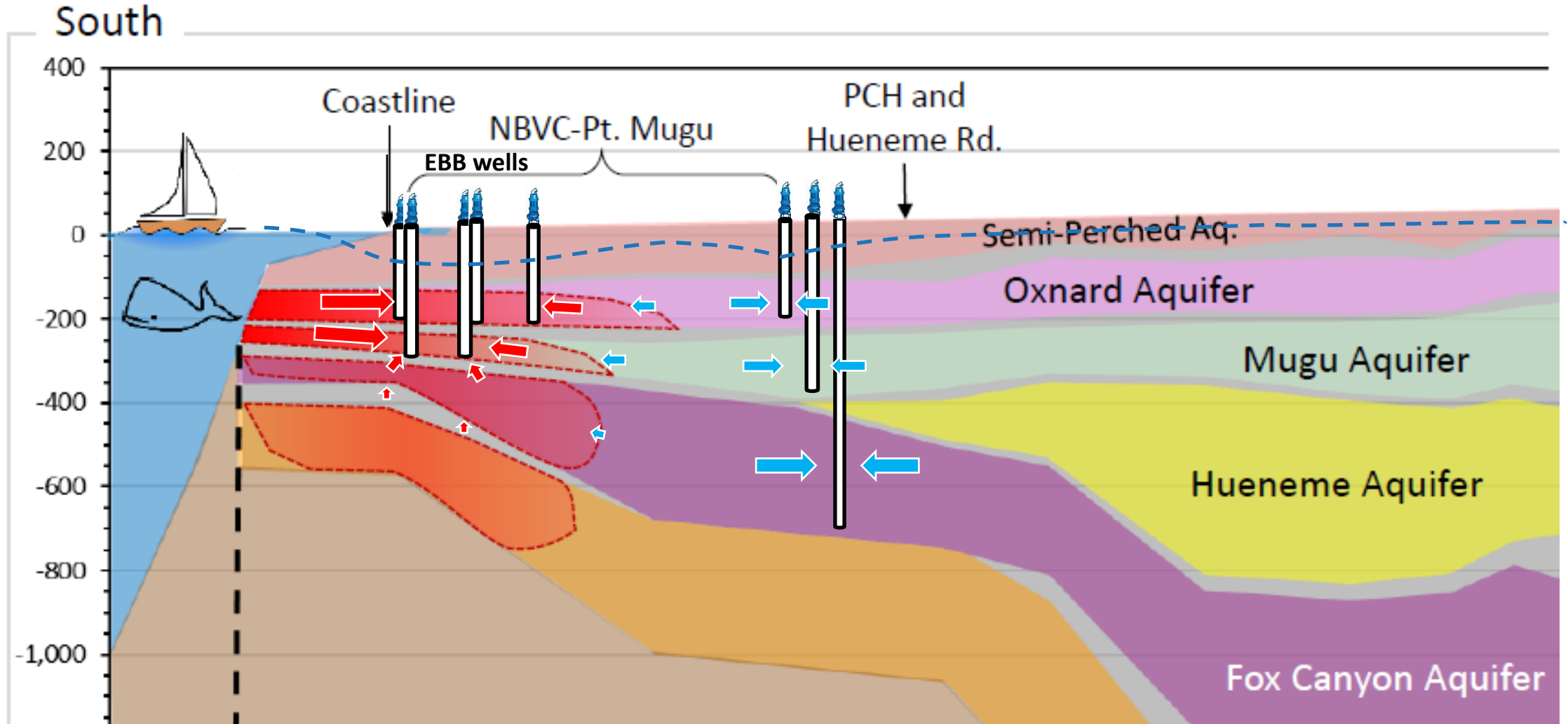
- OXN/MUGU wells
- ~3,500 AFY total
- Discharge of brackish to saline water to Mugu Lagoon
- No treatment (desalination)
- Provide important data
- Begin removing intruded seawater



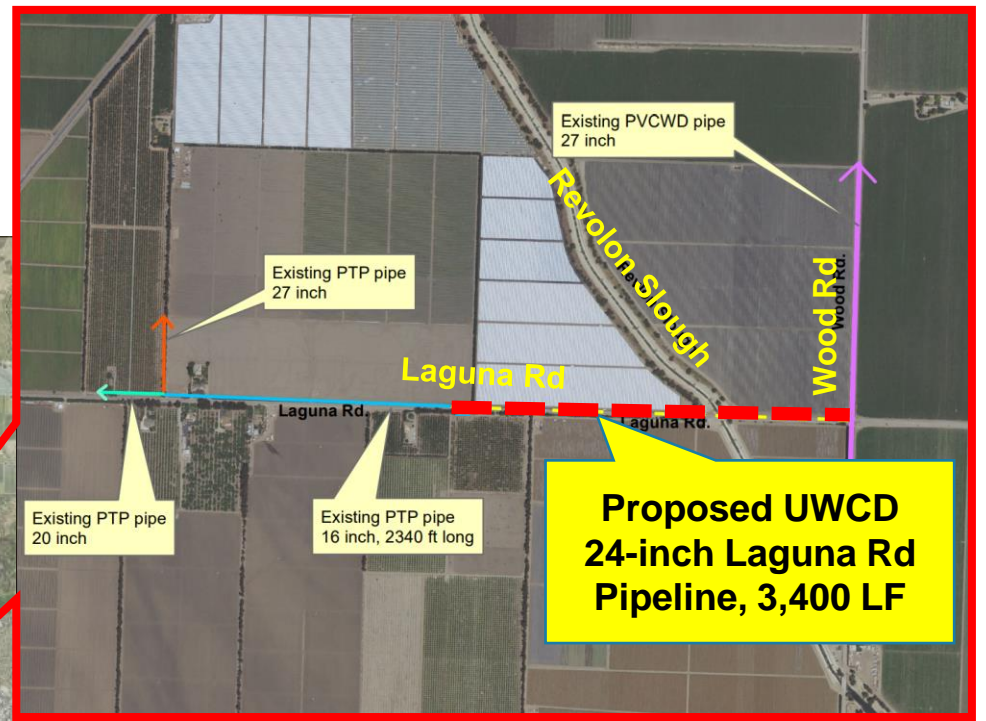
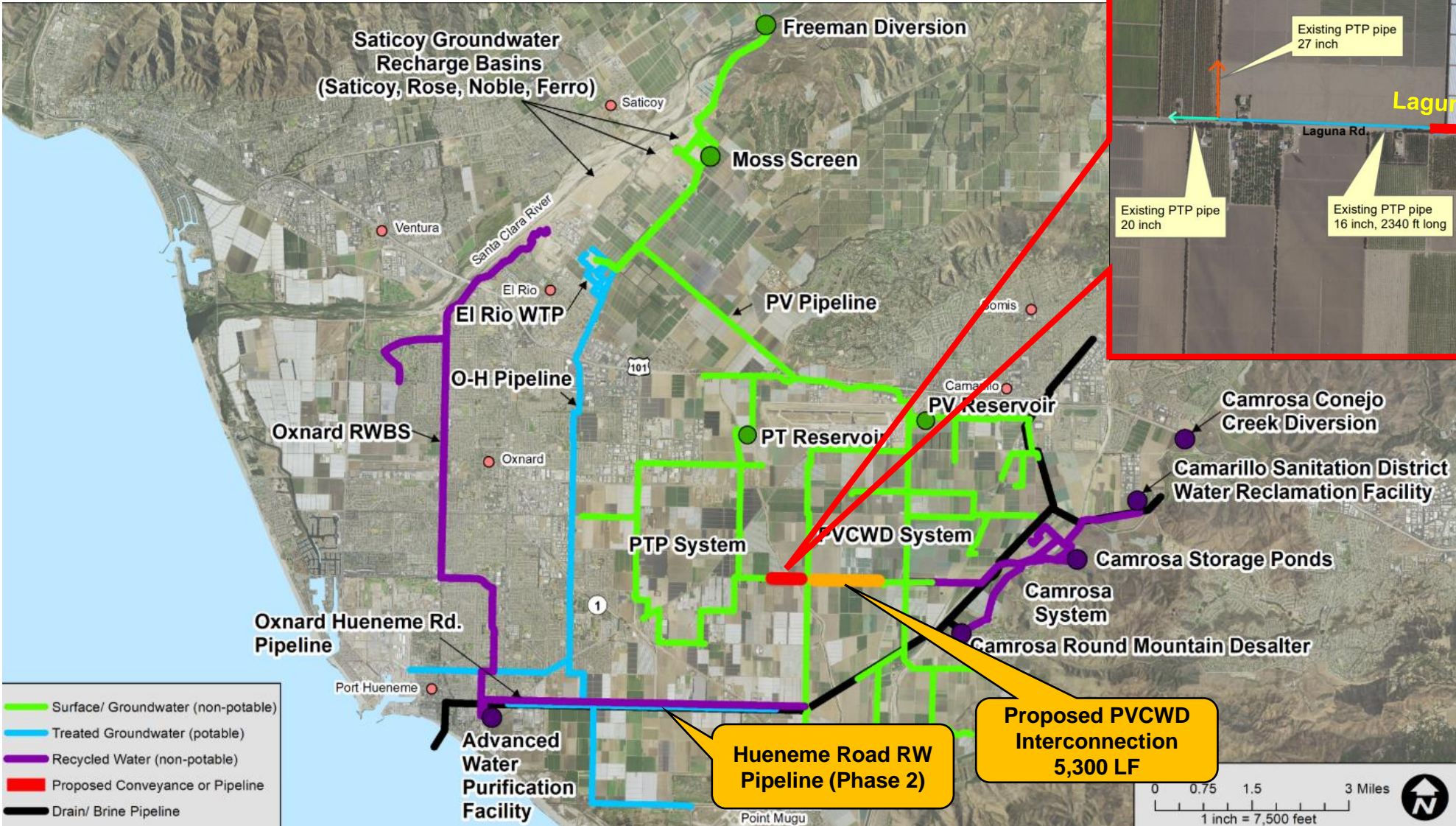
Extraction Barrier Concept



Extraction Barrier Concept

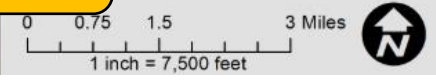


PTP Recycled Water Connection Laguna Road Pipeline (Completion 2025)



Hueneme Road RW Pipeline (Phase 2)

Proposed PVCWD Interconnection 5,300 LF



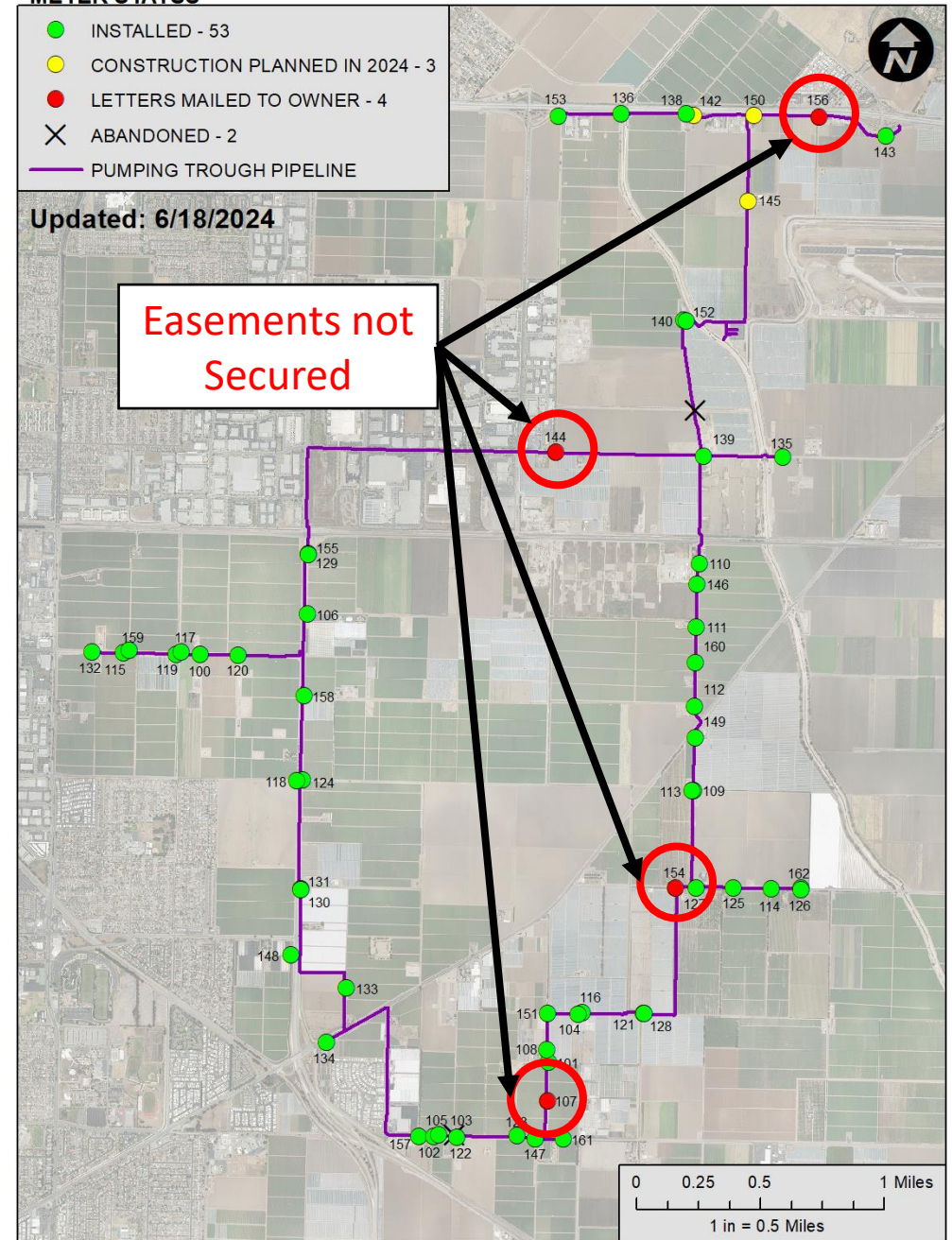
PTP Metering Improvement Project

Item	Status	Completion
Installed	53 out of 60	88%
Easements Obtained	36 out of 40	90%

METER STATUS

- INSTALLED - 53
- CONSTRUCTION PLANNED IN 2024 - 3
- LETTERS MAILED TO OWNER - 4
- ✕ ABANDONED - 2
- PUMPING TROUGH PIPELINE

Updated: 6/18/2024



| **Questions?**

