



Tulare Irrigation District

*Recharge – Above,
Below, and Beyond*



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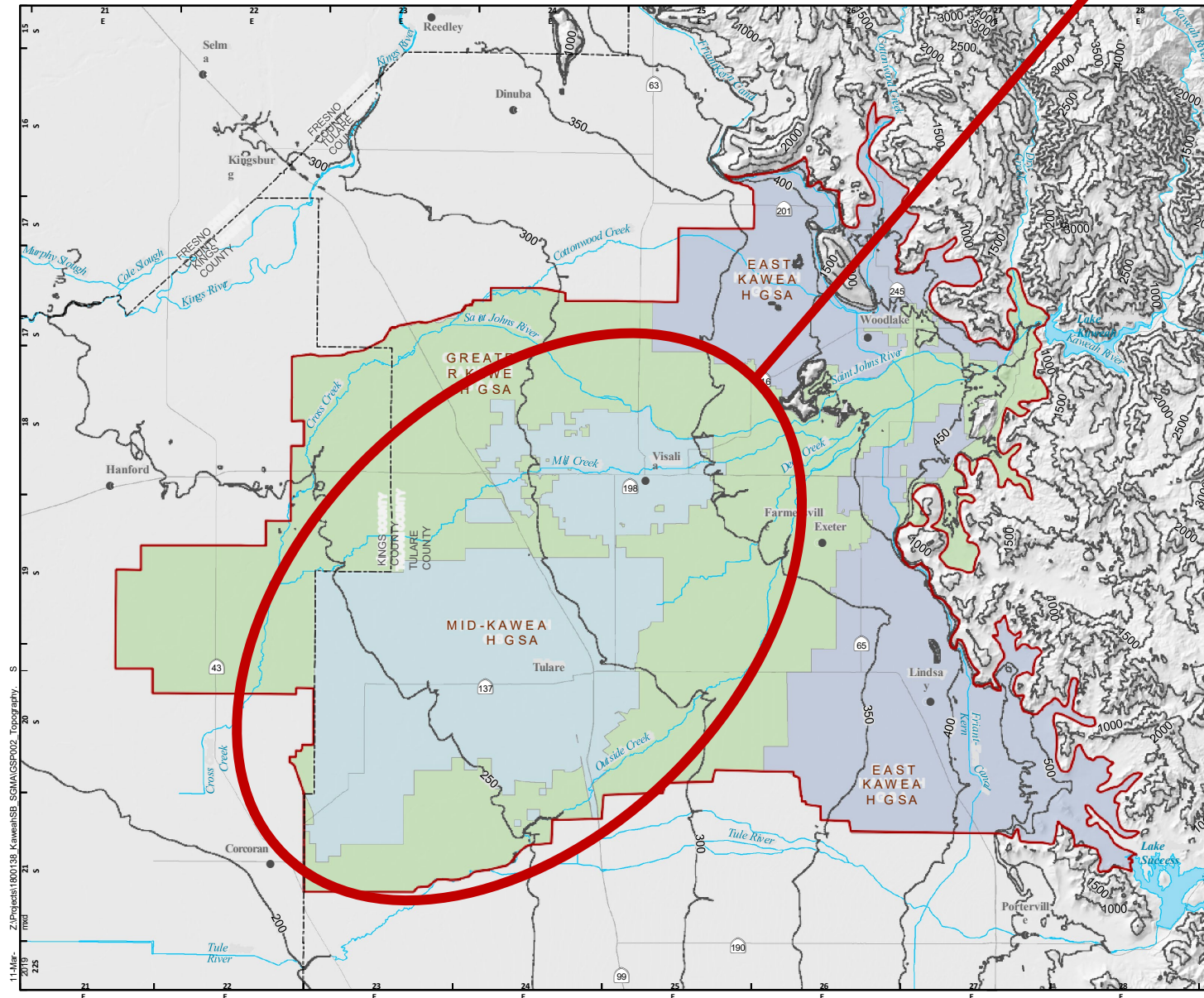
559-707-8928: Mobile

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Kaweah Sub Basin

Mid-Kaweah GSA



Who is the Tulare Irrigation District

- Formed in 1889
- Acreage: Approx. 65,000 Acres
- *300 miles of earthen canals*
- 30 miles of pipelines
- *1,300 Acres of Recharge Basins*
- *Average Annual Surface Water Supply of 150,000 AF*
- Kaweah River Pre-1914 Water Rights
- CVP Friant Supplies
 - Class 1: 30,000 AF
 - *Class 2: 141,000 AF*
- Approx. 200 Growers
- Main Crops
 - Corn
 - Wheat
 - Alfalfa
 - Walnuts
 - Almonds
 - Pistachios



Plan A / Plan B Story

2020 Plan

- Plan A – Projects
- Plan B – Demand Management (Allocations)

Current Plan

- Plan A – Demand Management (Allocations)
- Plan B - Projects

The Story Begins

SGMA Compliance on The Ground in 2022

We are here to help;

We are going to allocate;

We are going to restrict; and

We are going to charge

You for GROUNDWATER.

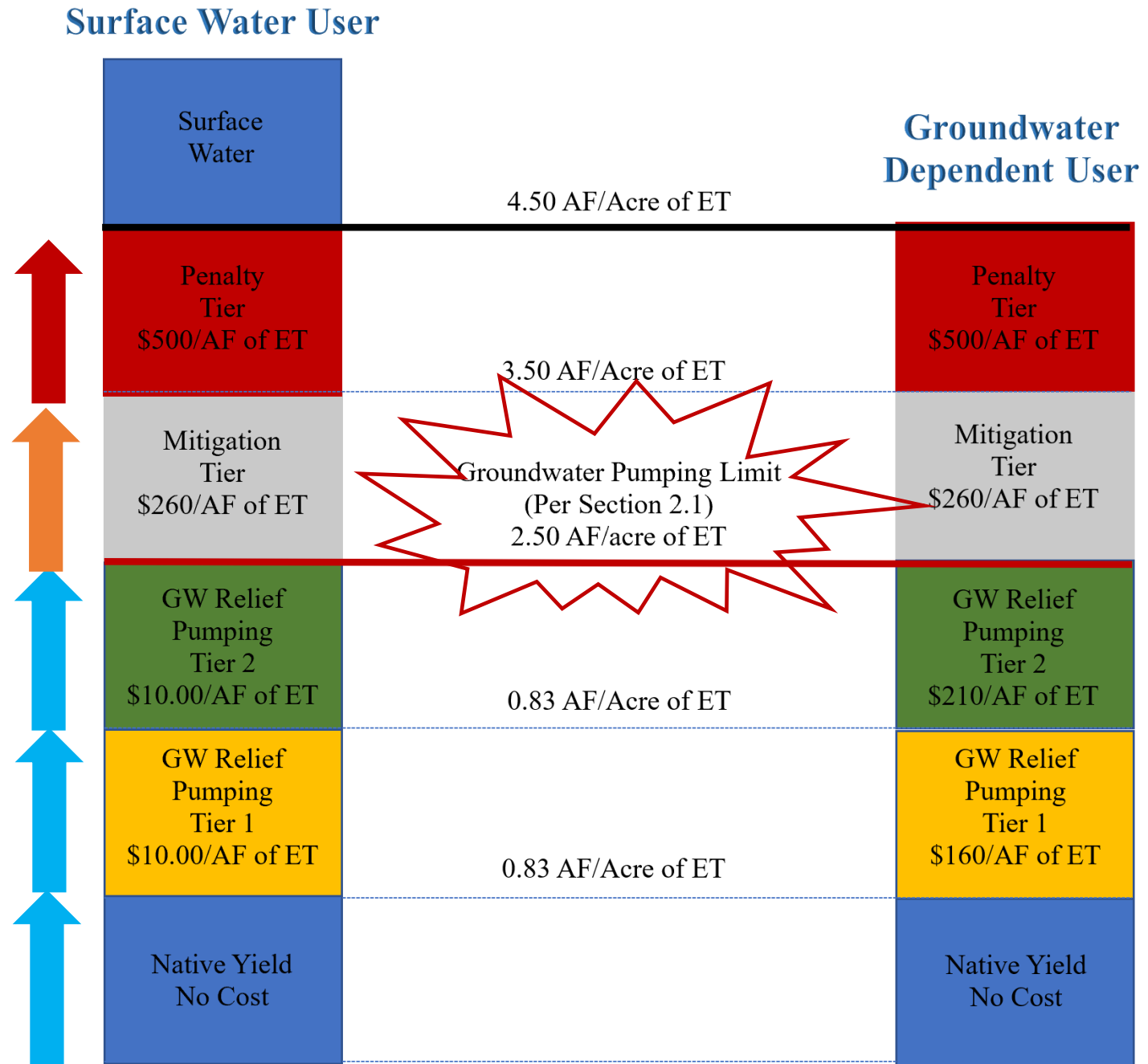


MKGSA Emergency Ordinance



Emergency Ordinance - Groundwater Pumping Limit

- Pumping Limit (“Cap”): 2.5 AF/acre as ET
 - Native Yield – 10”
 - Relief Pumping Tier 1 – 10”
 - Relief Pumping Tier 2 – 10”
 - Costs: Service Fees and Replacement Fees
- Mitigation Tier – 1 AF/Acre
 - Allows for buffer as we begin the program
 - Pricing based upon cost to replace water
- Penalty Tier – 1 AF/Acre
 - High Penalty Fees
 - Loss of future water allocation on a 1:1 ratio



Water Dashboard – Online Allocation/Usage Tool

WD1779

Tulare Irrigation District

Aaron Fukuda

(559) 686-3425

Member Menus

Home

Water Accounts

Farm Map

Explore Usage

Getting Started Guide

Contact Us

Roadmap

WA0000027: Tulare Irrigation District

P.O. Box 1920 Tulare, CA 93275

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Water Account Summary Table

Definitions

Mid-Kaweah GSA Emergency Groundwater Extraction Ordinance is in effect as of May 1, 2022.

East Kaweah GSA Emergency Groundwater Allocation Policy is effective retroactively from October 1, 2021, through September 30, 2022.

Greater Kaweah GSA approved Rules and Regulations setting a groundwater pumping cap for water year 2023 on September 27th, 2022. Call (559)302-9987 if you have any questions.

Groundwater Sustainability Agency	Billing Period	Billing Usage to Date	Water Supply	Usage to Date		Last Year's Usage		Parcel Acres	Field Acres
				Land IQ ET Oct 2021 - August 2022		Land IQ ET Oct 2020 - Sept 2021			
Mid-Kaweah GSA	May 22 - Sep 22	5.3 AF	251.15 AF	29.23 AF	0.52 AF/field ac	28.66 AF	0.51 AF/field ac	100.37	56.76
Greater Kaweah GSA	N/A	N/A	N/A	0.02 AF	0.00 AF/field ac	0.09 AF	0.00 AF/field ac	693.93	0.00

Water Supply Summary Table

Definitions

MKGSA 2022 (May 22 - Aug 22)

+ Total Water supply

251.15 AF

+ Precipitation

0.23 AF

Precipitation Credit

80% of total precipitation for (May 22 - Aug 22)

0.23 AF

+ Surface Water Deliveries

Not Currently Available

+ Groundwater Allocations (2.5 AF/Ac.)

250.93 AF

Native

SW: 0.84 AF/parcel ac

\$0/AF

SW: 84.31 AF

Tier 1

SW: 0.83 AF/parcel ac

\$10/AF

SW: 83.31 AF

Tier 2

SW: 0.83 AF/parcel ac

\$10/AF

SW: 83.31 AF

Mitigation Tier

\$260/AF

More Information

Penalty Tier

\$500/AF

More Information

+ Groundwater Credits

TBD

+ Recharge and Banking Credits and Debits

TBD

+ Prohibited Tier 3 Groundwater Pumping

Dairy Operations

Not Currently Available

WA0000027: Tulare Irrigation District Field & APN Map

+ -

Satellite

Street

Topo

APNs

Your Fields

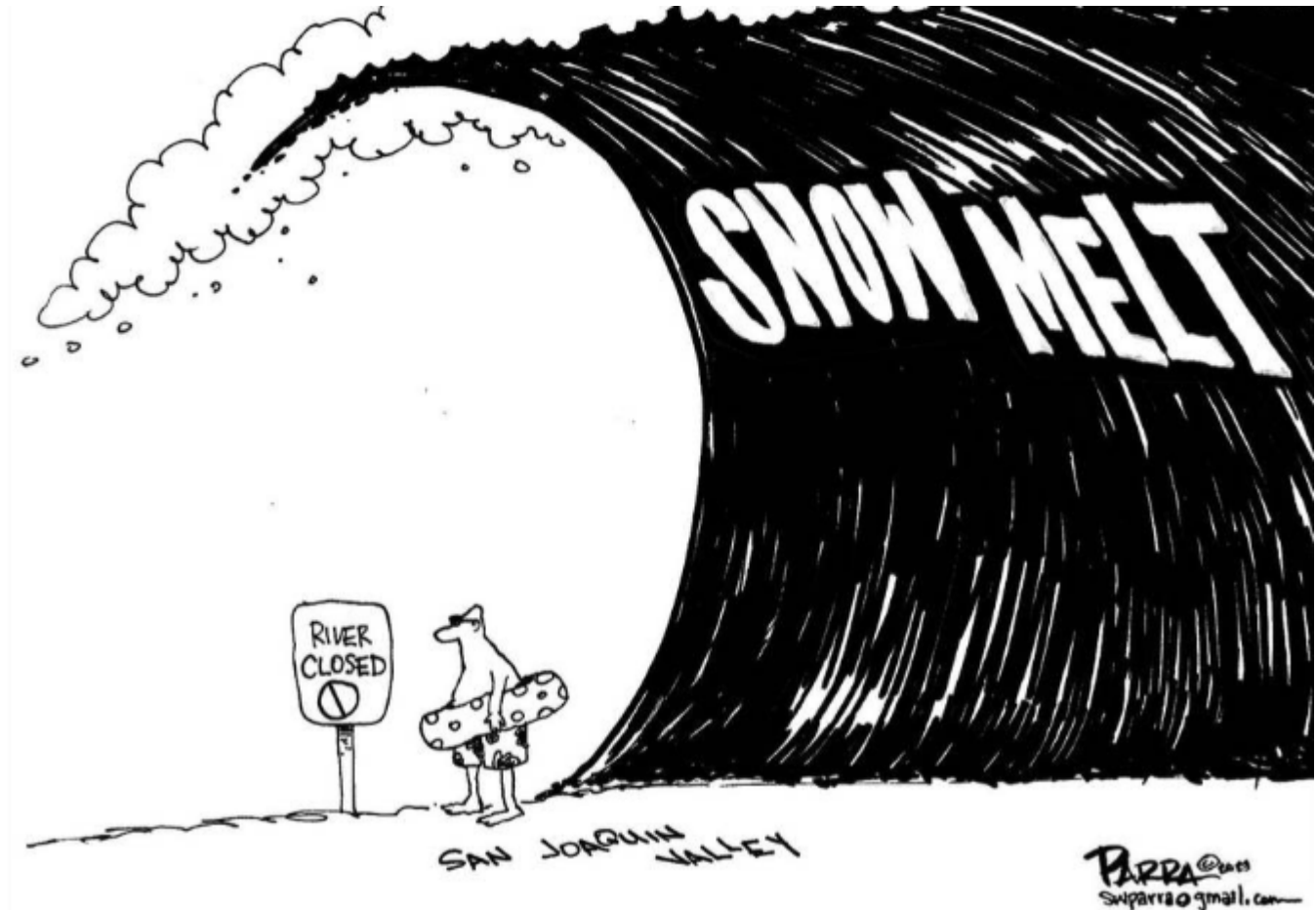
Mid-Kaweah GSA

Swall East Cell

Greater Kaweah GSA

Winter 2023 on the Ground Recharge Operations

- Early January started flows into the system but kept the system with room to accommodate ongoing Atmospheric Rivers
- Mid-January: After atmospheric river activity
 - Opened up for irrigation deliveries and immediately went to 80+ turnouts active and **750 cubic feet per second (1,500 AF per day)**
 - **Historically 350 CFS (700 AF per day)**
- Where is the water going:
 - Field irrigation (majority of irrigation going to groundwater)
 - Canal system losses (filling entire system)
 - Recharge Basin (1,300 acres of recharge basin)





One Recharge Entity to 200+ Recharge Entities

Cordeniz Basin (60 Acres)



Swall/Creamline Basin (265 Acres)



Martin Basin (27 acres)



Recharge Basins

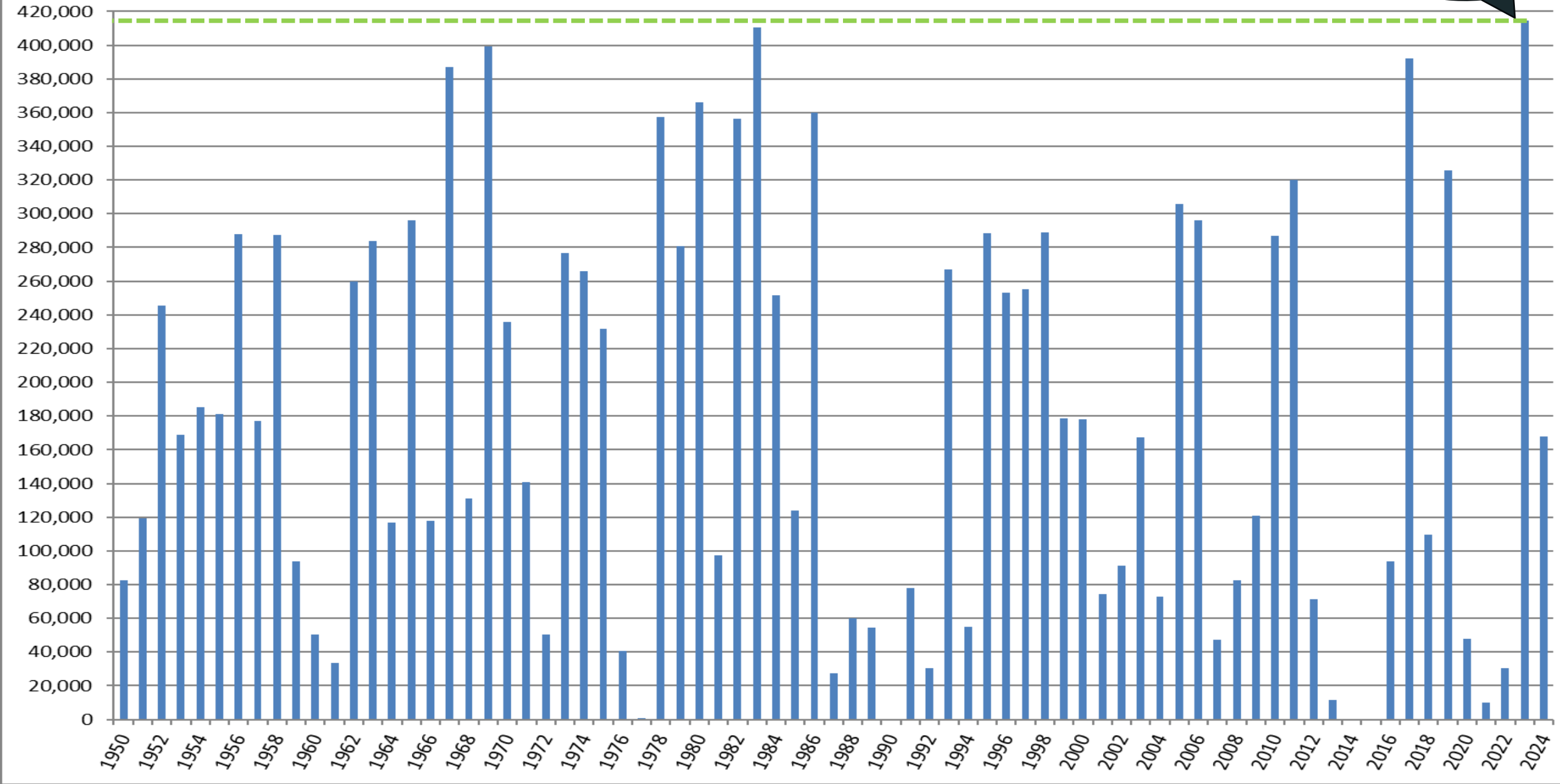


Winter Irrigation Recharge

Water Year Combined Diversions to TID Acre-Feet

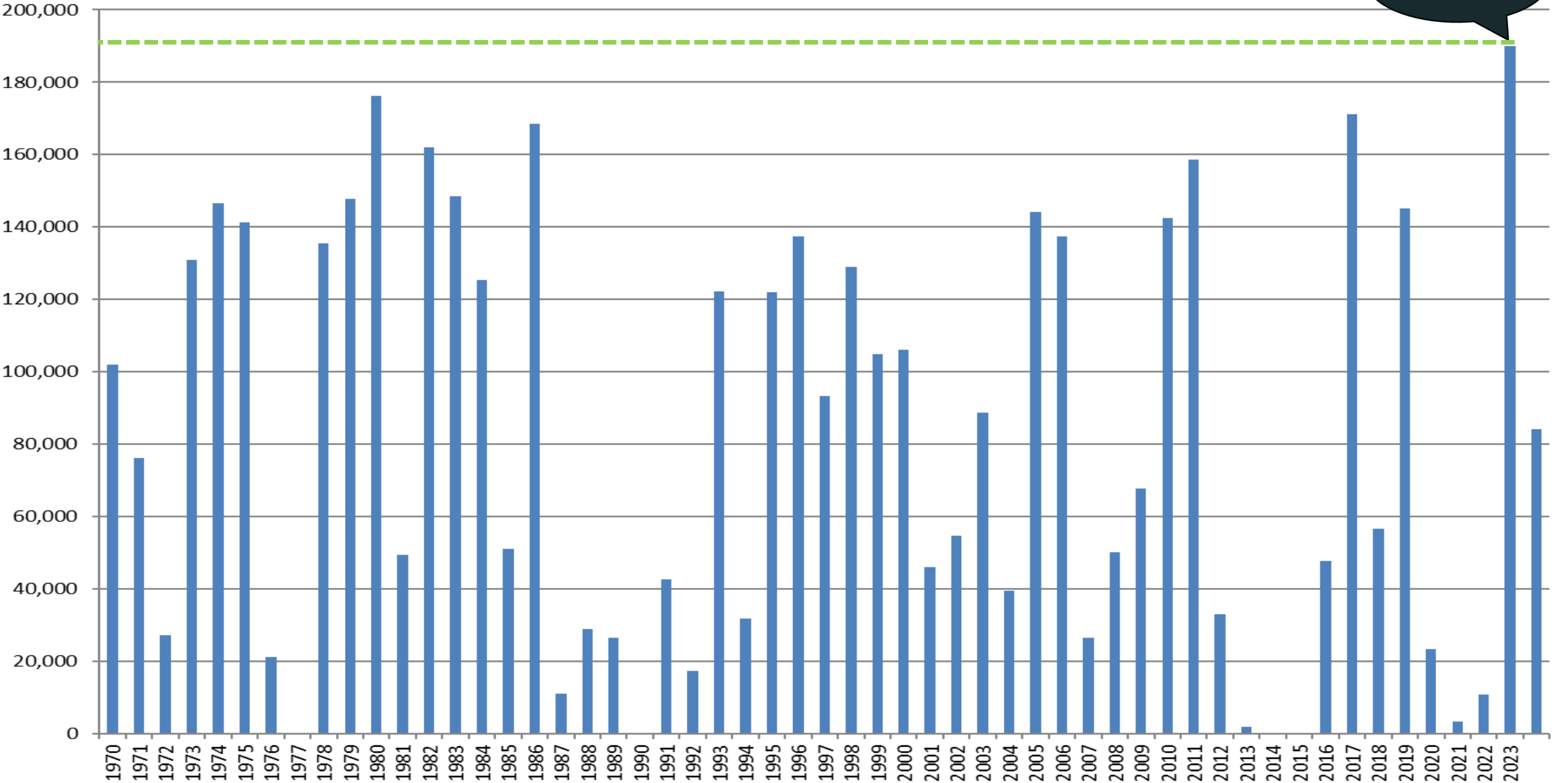
1950 - 2024

414,000 AF

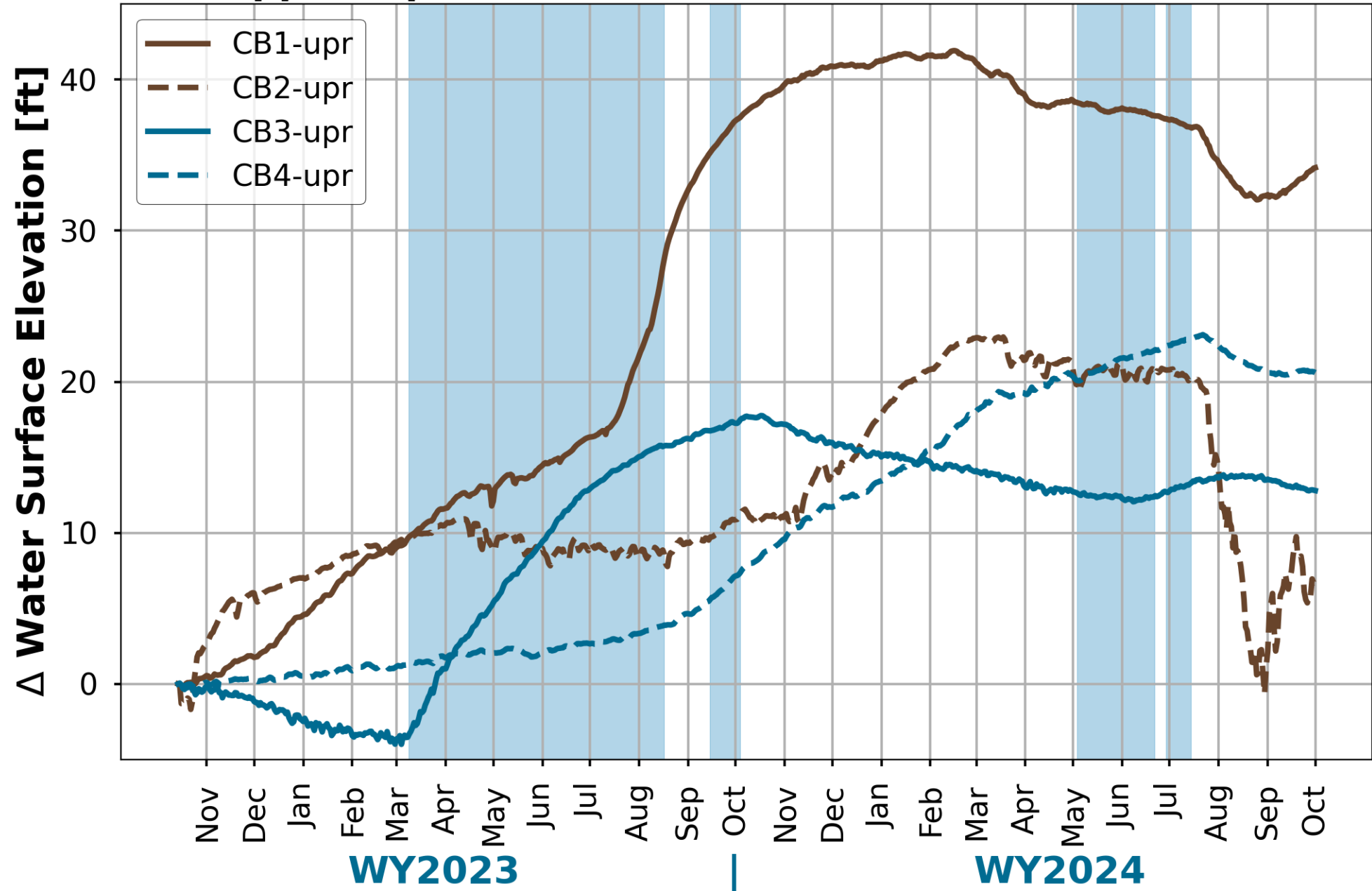


Water Year Deliveries to TID Farmers Acre-Feet

1970-2024



Upper Aquifer Water Levels: Cordeniz Basin Wells



SkyTEM – Recharge/Banking At Subbasin Level

Hydrogeologic Framework of Selected Areas of the Kaweah Subbasin Region

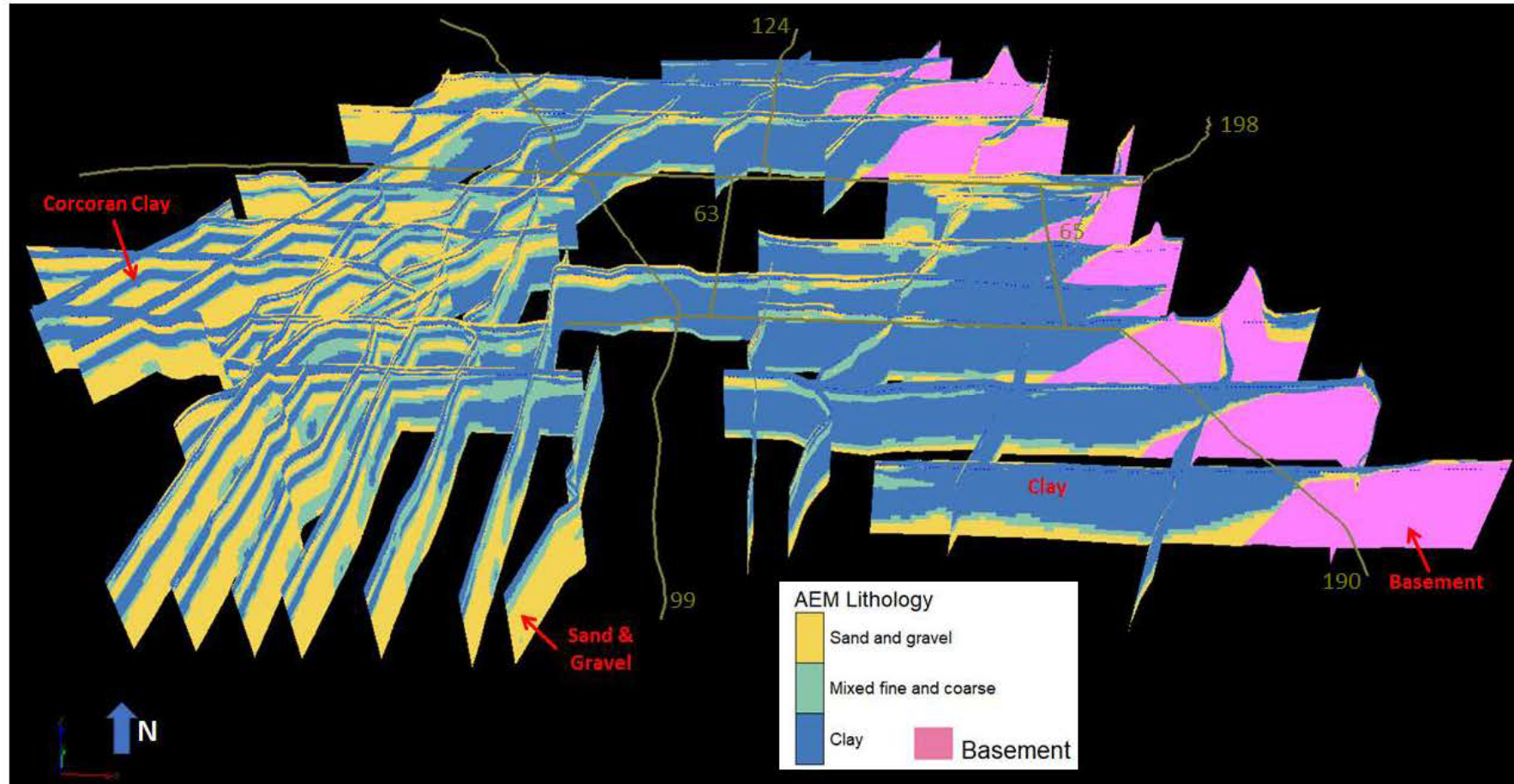


Figure 5-33. 3D lithologic interpretative fence diagram of the Kaweah Subbasin AEM inverted earth models, looking north. Greenish lines are local highways. Examples of the different lithologies are marked including the Corcoran Clay, undifferentiated Clay material, Sand and Gravel, and Basement materials.

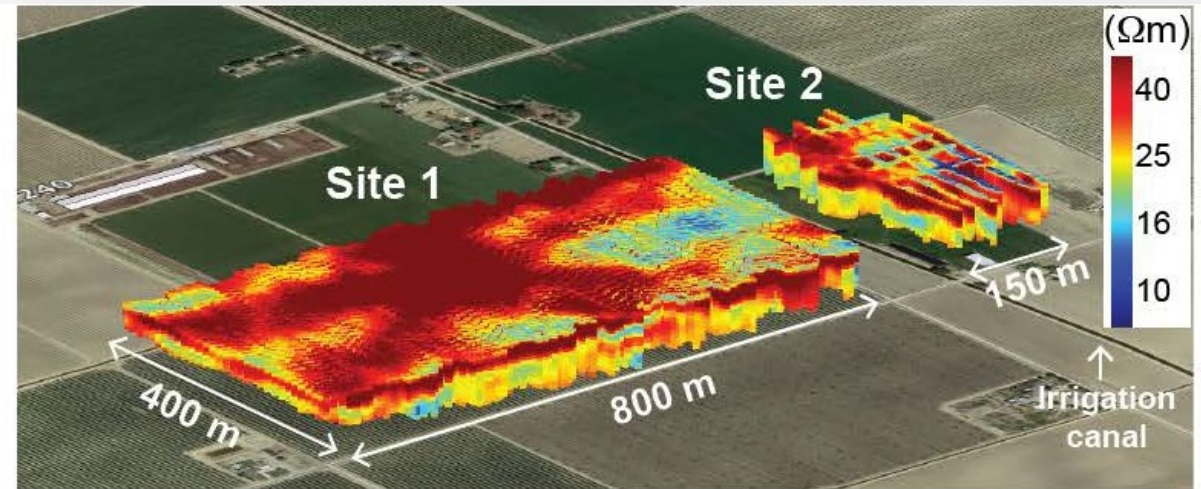


TowTEM - Recharge/Banking At Field Level



How do we use the information:

1. Confirmation
2. Inform site specific testing program
3. Assist with due diligence during lease/purchase agreements
4. Increase efficiency of on-farm recharge program
5. Increase existing recharge basin sinking capacity
6. Provide textural input to our groundwater models
7. Assist in citing new groundwater monitoring wells



The Recharge Game Plan



RECHARGE BASINS

Continue to use existing recharge basins – develop multibenefit projects (DAC/Habitat Priority)



WINTER IRRIGATION (ON FARM RECHARGE)

Continue to develop and enhance the program – target 1,000 CFS (2,000 AF per day) capacity



GSA/SUBBASIN GW BANKING

Small-Scale Banking in areas without subsidence impacts– recovery to feed areas of subsidence impacts

Water Blueprint for the San Joaquin Valley



REGIONAL GW BANKING

Large-Scale Subbasin Banking operations on retired farm ground – Recovery for banking partners

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& Mid-Kaweah GSA

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Thank You

