



GROUNDWATER ALLOCATION WEBINAR

EAST KAWEAH GSA

DECEMBER 9, 2022
12:00 - 1:00 PM
4:00 - 5:00 PM

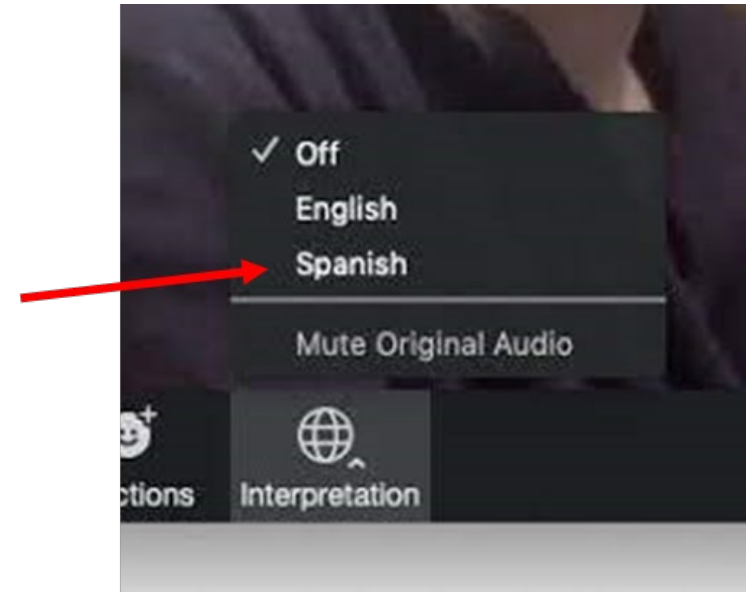


EAST KAWEAH
GROUNDWATER SUSTAINABILITY AGENCY

SPANISH INTERPRETATION / TRADUCCIÓN ESPAÑOLA

Linguistica Interpreting & Translation

- To listen to the presentation in Spanish, click the globe icon at the bottom of your screen and select Spanish.
- Para escuchar la presentación en español, haga clic en el ícono del globo terráqueo en la parte inferior de la pantalla y seleccione Español.





AGENDA

1. Logistics/Zoom housekeeping
2. Welcome & Introductions
3. SGMA 101 & Groundwater Conditions
4. Groundwater Allocation Program: Water Year 2022, Water Year 2023
5. Moderated Panel
6. Audience Q&A

ZOOM HOUSEKEEPING

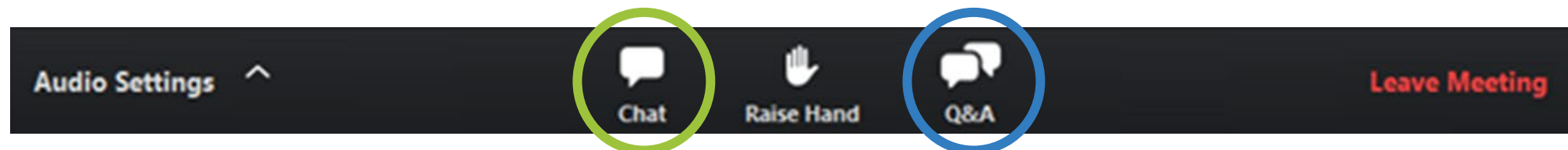
- Video and microphone is OFF for participants
- Webinar is being recorded and will be available online

Questions & Answers

- Use the Q&A to type a question at any time
- We will address questions at the end of the presentation

Technical difficulties

- Use the Chat feature for Zoom technical assistance



WELCOME & INTRODUCTIONS

Mike Hagman – East Kaweah GSA, *Executive Director & LID General Manger*

Chris Hunter – East Kaweah GSA, *Program Manager*

Craig Hornung, *East Kaweah GSA Board Director & Local Farmer*

Matt Klinchuch, Provost & Pritchard, *East Kaweah GSA Technical Consultant*

Breanna Hardy – Provost & Pritchard Consulting Group, *External Affairs Specialist*

Rebecca Quist - Provost & Pritchard Consulting Group, *External Affairs Specialist*

WEBINAR GOALS

1. Provide clear and transparent information on the Water Year 2022 groundwater allocations and billing timeline and the Water Year 2023 groundwater allocations
2. Provide landowners and stakeholders an opportunity to have their questions answered



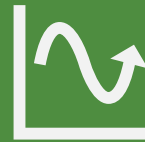
SGMA 101

SGMA 101

SUSTAINABLE GROUNDWATER MANAGEMENT ACT



**CALIFORNIA LAW
SIGNED IN SEPTEMBER
2014**



**SGMA MANDATES
GROUNDWATER
SUSTAINABILITY BY 2040**



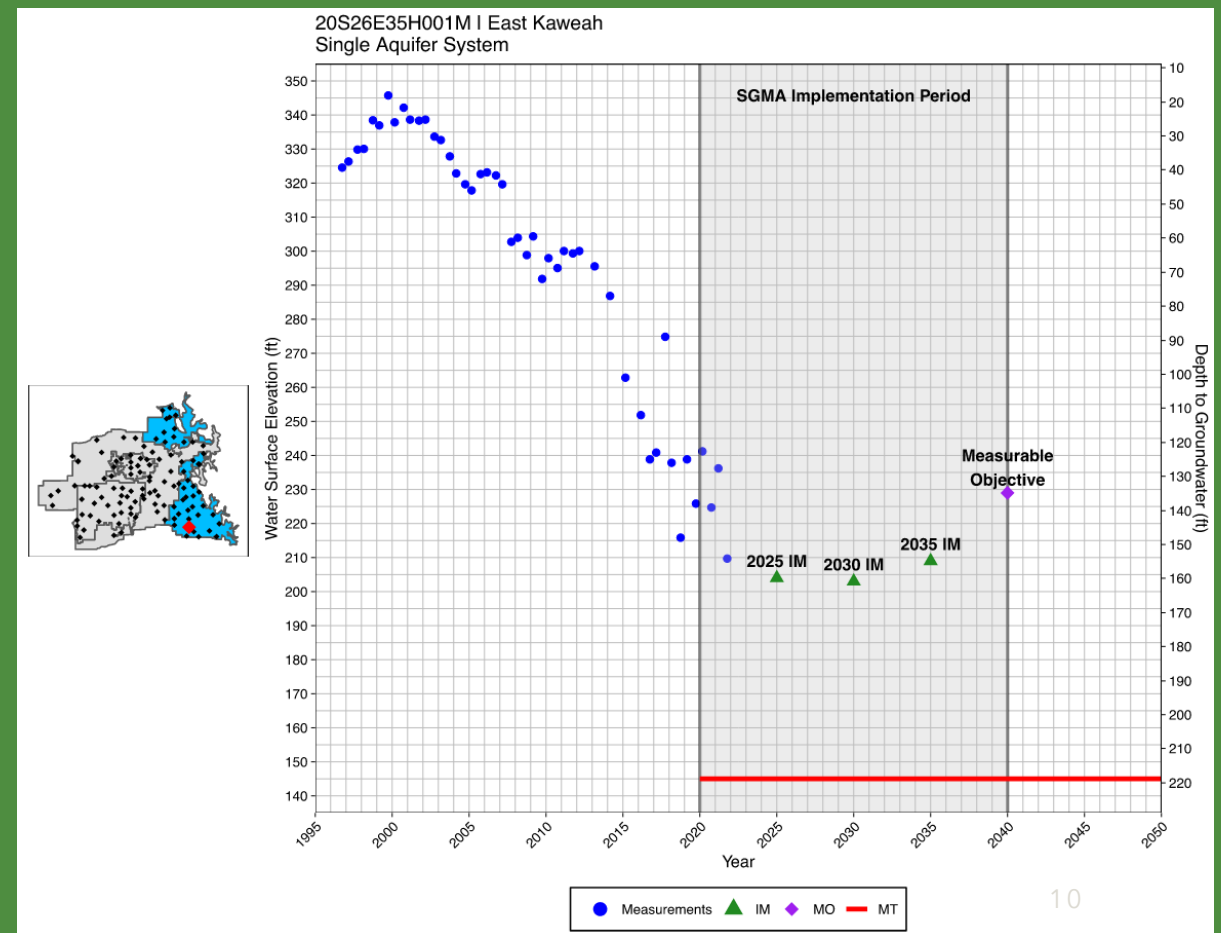
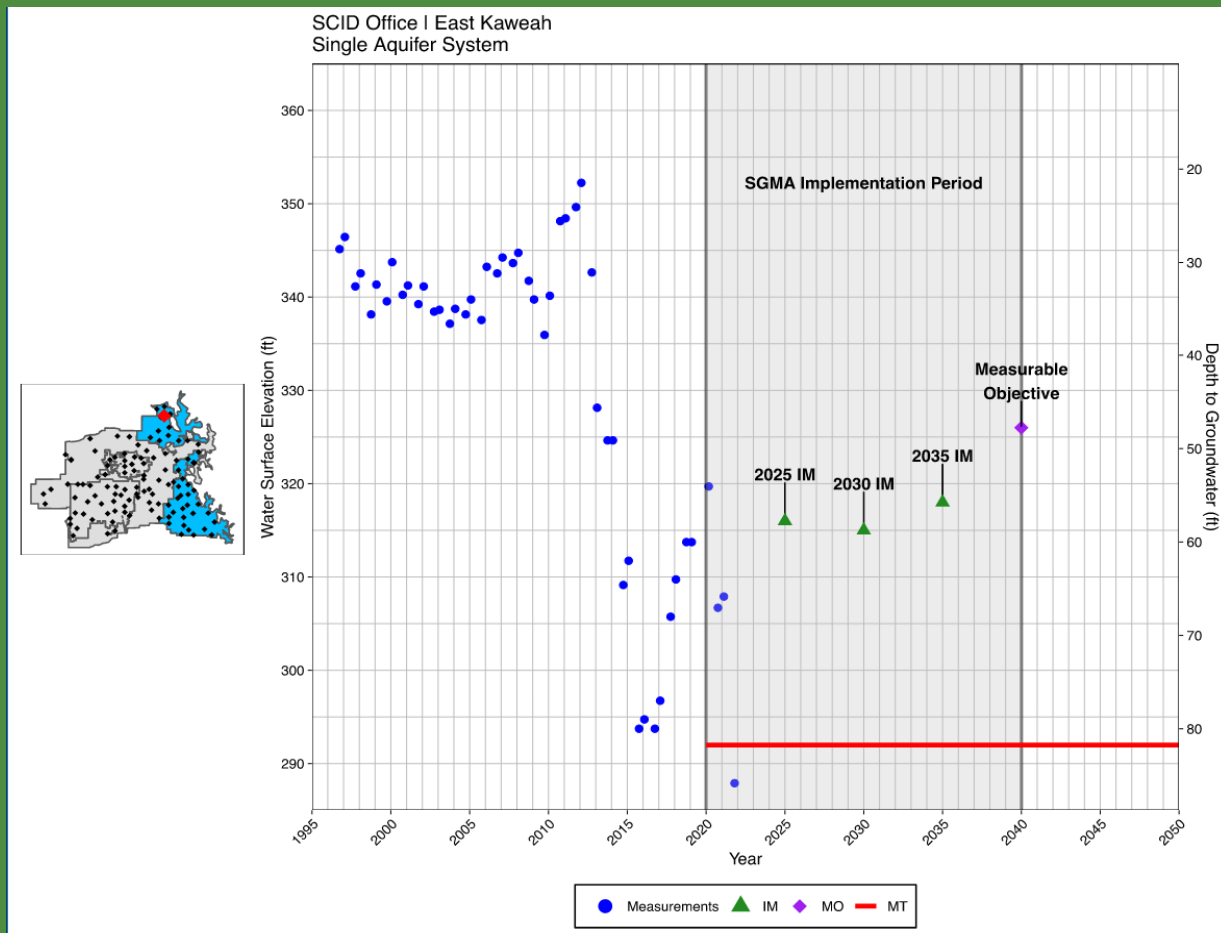
**GRANTS LOCAL CONTROL
TO GROUNDWATER
SUSTAINABILITY AGENCIES**



GROUNDWATER CONDITIONS

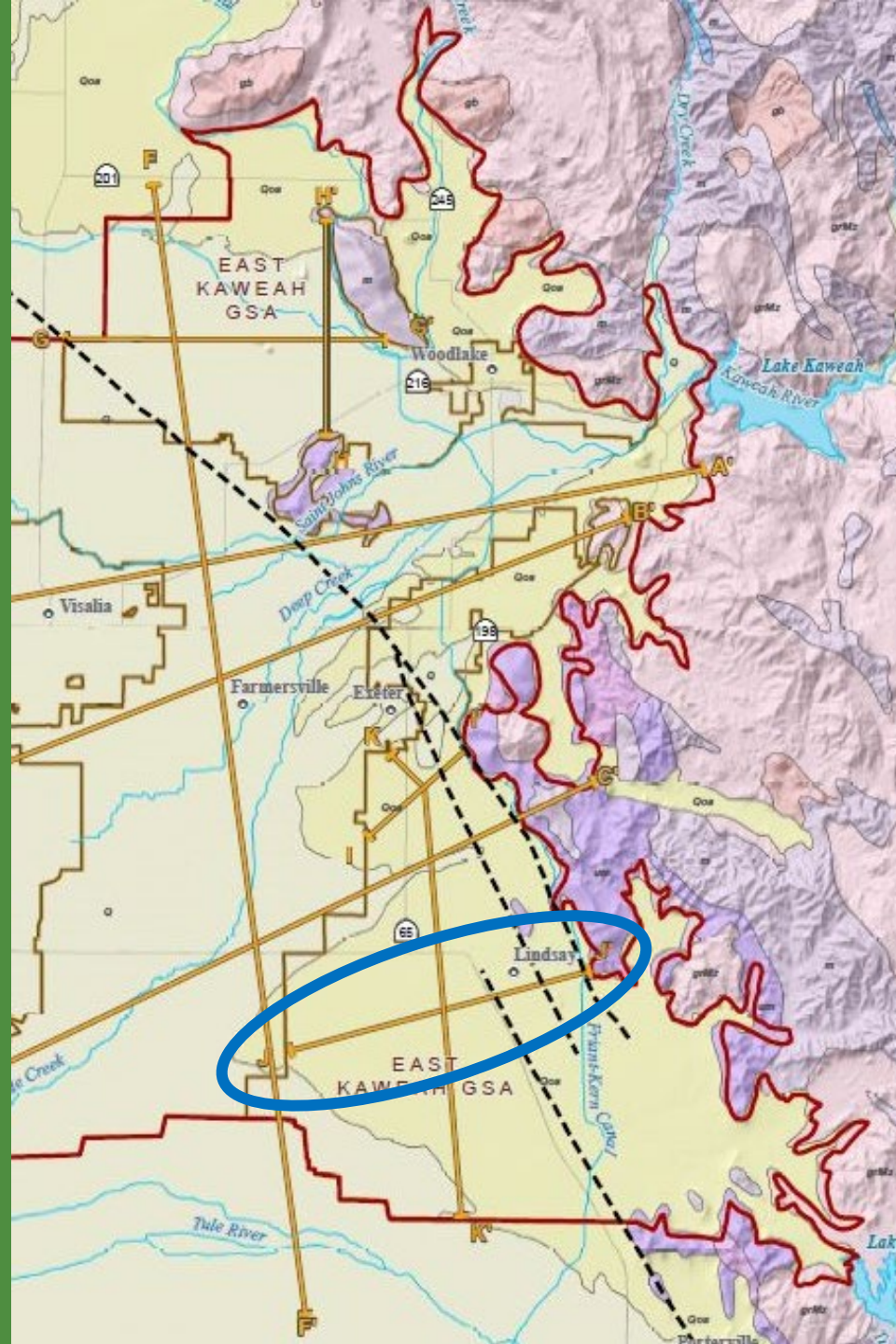
GROUNDWATER CONDITIONS

- Groundwater levels have been on the decline for many years
- Drought conditions over the last 15 years reducing imported surface water supply have contributed in addition to overdraft groundwater pumping
- East Kaweah also overlays a shallow depth to bedrock compounding issues with water level decline

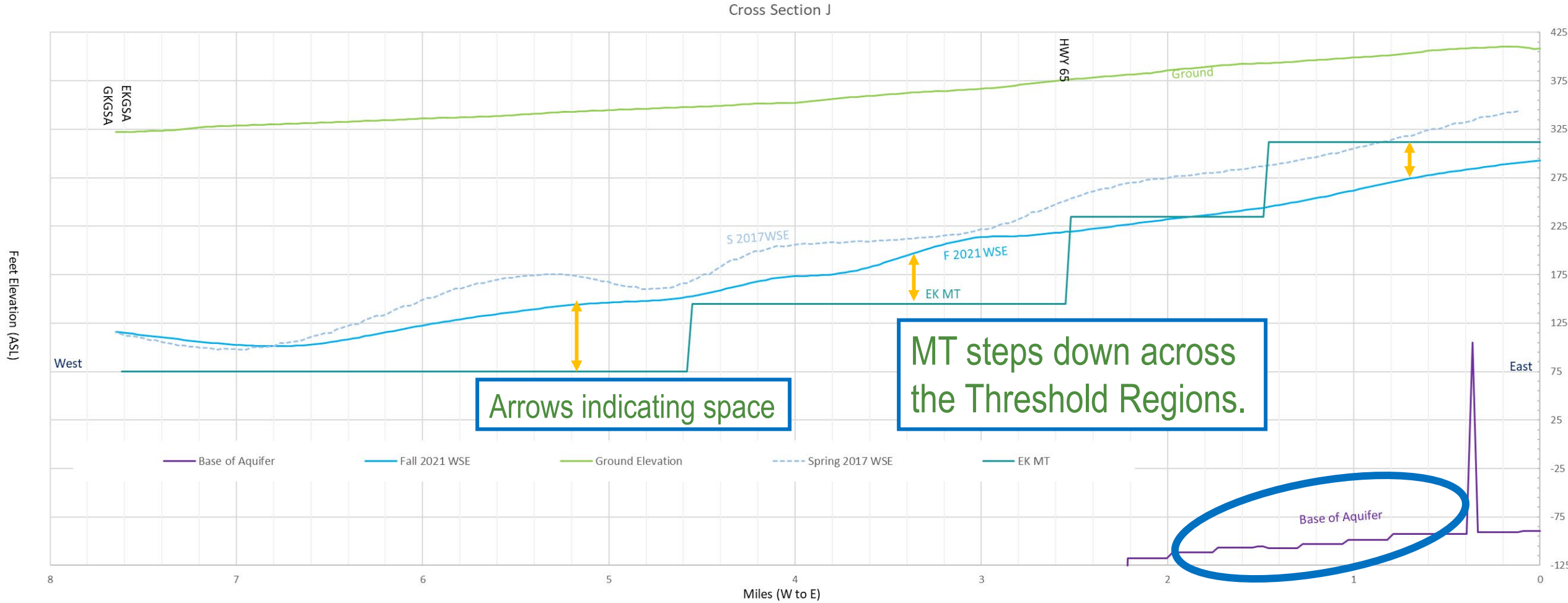


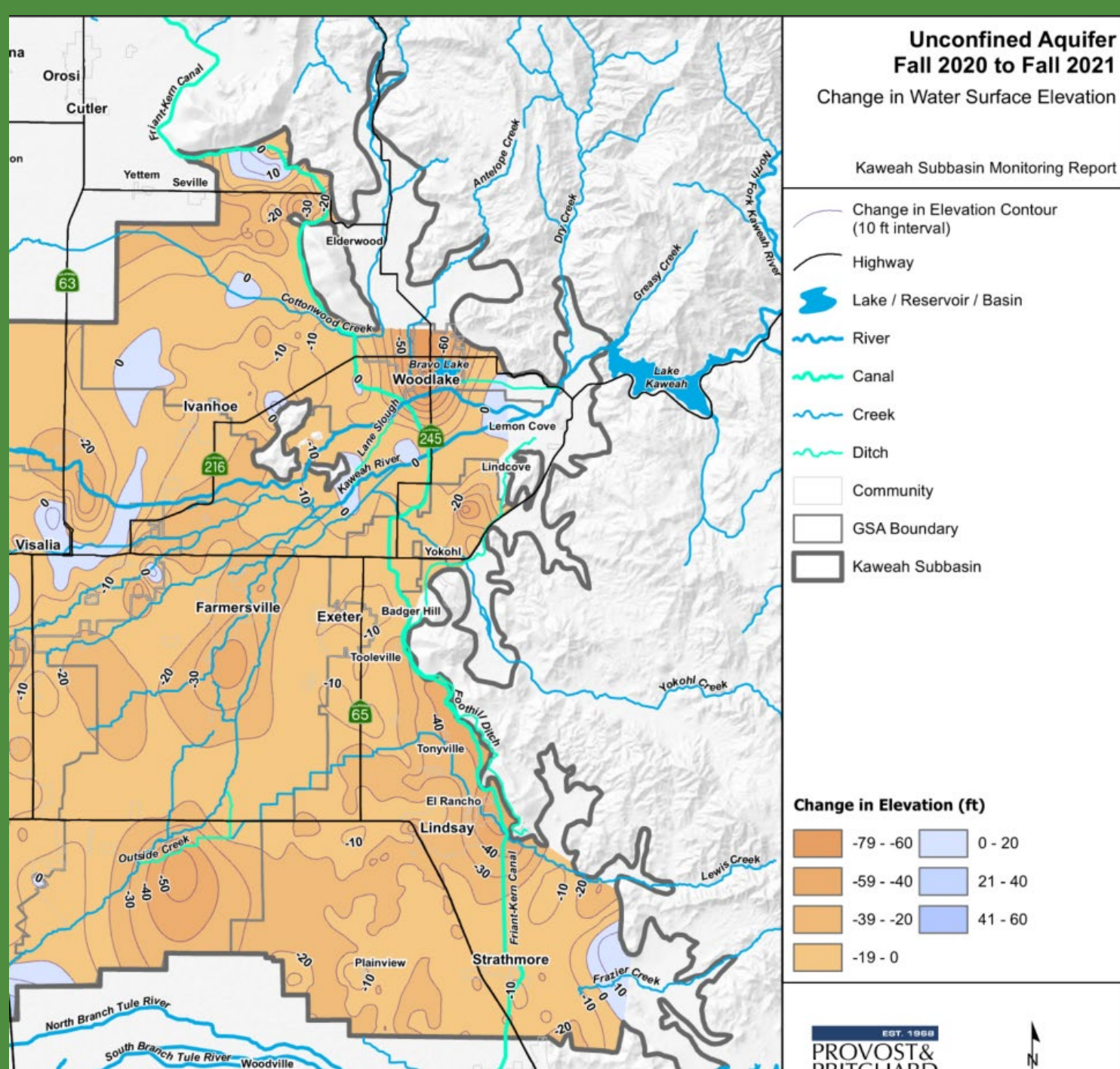
GROUNDWATER CONDITIONS

- East Kaweah also overlays a shallow depth to bedrock compounding issues with water level decline
- Cross Section J (circled at left) highlights the change in topography from the foothills to western boundary and significant drop off of bedrock around Highway 65



GROUNDWATER CONDITIONS





GROUNDWATER CONDITIONS

- Water Years 2020, 2021, and 2022 have been very dry
- Groundwater Levels dropped 10-40 feet between Fall 2020 to Fall 2021.
- Fall 2022 data is being gathered currently and are expected to have similar drop from Fall 2021 to Fall 2022



ALLOCATION YEAR 2022

October 1, 2021 - September 30, 2022

ALLOCATION YEAR 2022 - OVERVIEW

In **October 2021**, Board adopts Emergency Ordinance establishing a groundwater allocation for the first time in the East Kaweah GSA

ALLOCATION YEAR 2022 - EMERGENCY ORDINANCE



URGENT POLICY ANNOUNCEMENT

THE EKGSA BOARD OF DIRECTORS ANNOUNCES AN EMERGENCY GROUNDWATER ALLOCATION POLICY

Due to severe dry precipitation conditions and the enactment of the Sustainable Groundwater Management Act, actions must be taken immediately to eliminate unsustainable and detrimental over drafting of groundwater from lands within the EKGSA. Given these conditions, the EKGSA Board announces the following policy:

Effective retroactively to October 1, 2021 groundwater pumping will be limited to an allocation of groundwater supply as measured by consumptive use*. This allocation will be available from October 1, 2021 through September 30, 2022 as follows:

- All assessed lands are allocated 0.85 AF per acre of measured consumptive use
- All irrigated lands allocated planned overdraft of 0.30 AF per acre of measured consumptive use
- All irrigated lands allocated temporary overdraft of 0.50 AF per acre of measured consumptive use

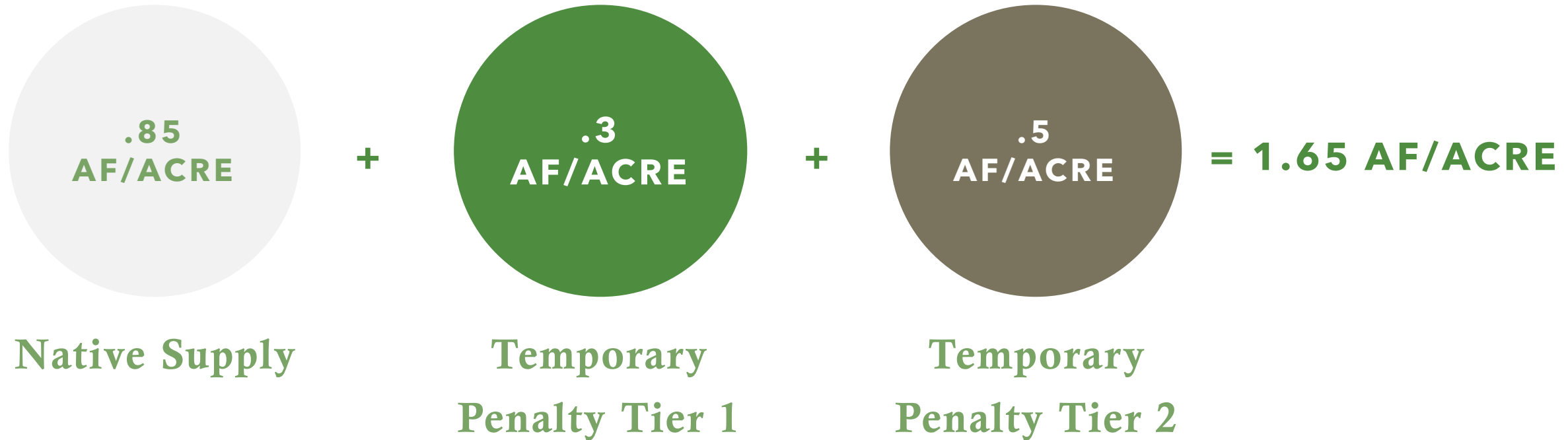
FURTHER INFORMATION ON FEES AND PENALTIES FOR THESE ALLOCATIONS WILL FOLLOW

* "Consumptive Use" is water that leaves your land due to evaporation or plant transpiration. EKGSA will measure and track this amount of water using a scientific method that combines satellite imagery and ground measuring stations of evapotranspiration of water from your land. You will receive credits against that for surface water applied.

For further information on SGMA and the EKGSA please visit EKGSA.ORG.

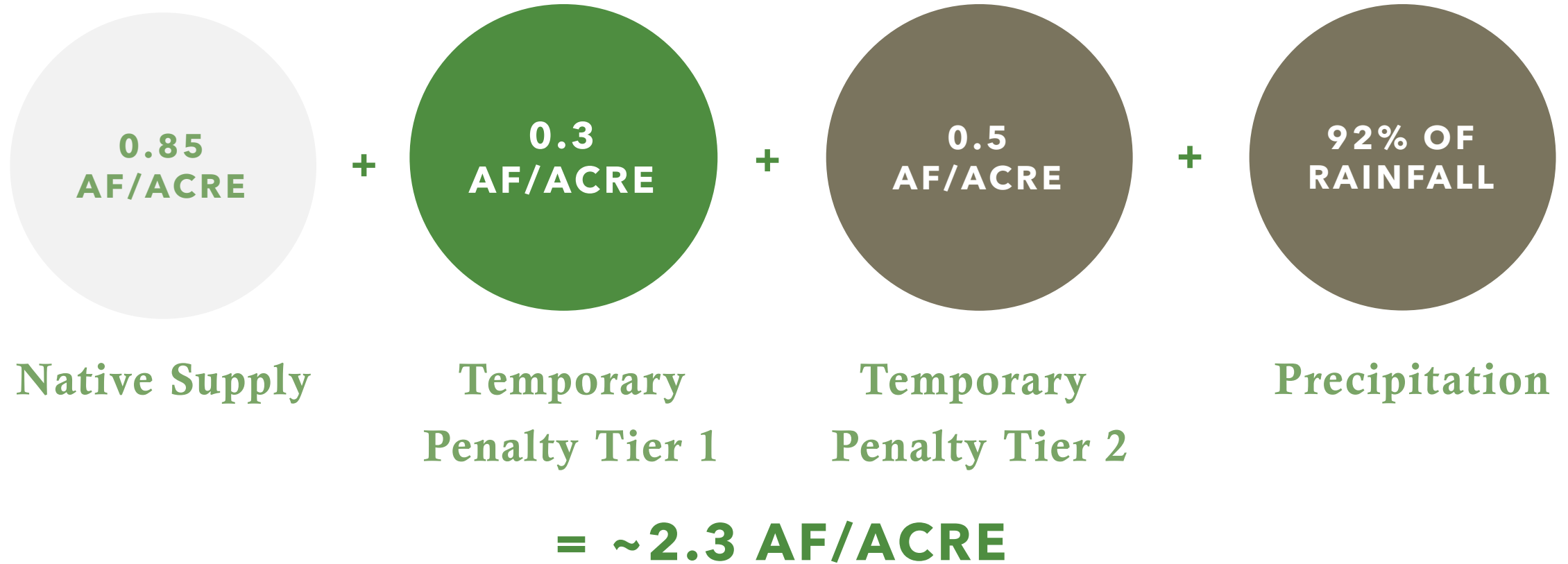
GROUNDWATER ALLOCATION

October 1, 2021 - September 30, 2022



GROUNDWATER ALLOCATION + PRECIPITATION CREDIT

October 1, 2021 - September 30, 2022



WHO IS INCLUDED?

ALLOCATION YEAR 2022

Allocation Type	Allocation Amount	Who receives the allocation?
Native Yield	.85 AF/acre	All land greater than 2 acres designated by Assessor Parcel Number (APN) in the EKGSA <i>Excludes land within city of Lindsay</i>
Temporary Penalty Tier 1	0.3 AF/acre	Irrigated land*
Temporary Penalty Tier 2	0.5 AF/acre	Irrigated land*
Precipitation	92% of rainfall	All land greater than 2 acres designated by Assessor Parcel Number (APN) in the EKGSA <i>Excludes land within city of Lindsay</i>

*Irrigated Land means land irrigated as of January 31, 2020, which is:

- (a) identified as enrolled in ILRP or other regulatory programs documenting historical irrigation use (e.g., Dairy General Order)
- (b) identified by other crop map datasets
- (c) shown with sufficient evidence to the reasonable satisfaction of the EKGSA to have been historically irrigated

WHAT IS THE COST?

ALLOCATION YEAR 2022

Allocation Type	Allocation Amount	What does it cost to pump?
Native Yield	.85 AF/acre	\$0
Temporary Penalty Tier 1	0.3 AF/acre	\$0
Temporary Penalty Tier 2	0.5 AF/acre	\$0
Consumed GW (ETa) exceedance	> 1.65 AF/acre	\$500/acre-foot

USING ET TO MEASURE GROUNDWATER USE


- Evapotranspiration (ET) = Evaporation + Transpiration
 - Evaporation: water evolved into the atmosphere from soil and plant surfaces after precipitation or irrigation (never goes through the plant)
 - Transpiration: water evolved into the atmosphere from translocation through the plant (goes from root to leaves)
- Land IQ delivers field-by-field ET
 - Consumed water vs. Applied water
 - Monthly results
 - Satellite imagery is calibrated and validated by ground-truthing stations
 - **ET data is available to landowners for their own fields on the Kaweah Water Dashboard:**
www.gsawd.com

MORE INFO ON ET AND LAND IQ

Visit ekgsa.org/allocation

- Outreach presentation recording
- PowerPoint slides
- FAQs

LAND IQ RESOURCES



Kaweah Subbasin Land IQ Workshops - March 2022

GROUNDWATER CONDITIONS

Under SGMA, the Kaweah Subbasin is tasked with ensuring this groundwater supply is available for future generations. This means balancing the estimated 80,000 acre-feet of groundwater overdraft occurring on average every year.

Watch on YouTube

ACCESS LAND IQ PRESENTATION SLIDES

LAND IQ DOCUMENTS

- LAND IQ PRESENTATION SLIDES
- LAND IQ FAQs
- 2022 LAND IQ WORKSHOP FLYER

WATER YEAR 2022 - GROUNDWATER ALLOCATION TIMELINE





ALLOCATION YEAR 2023

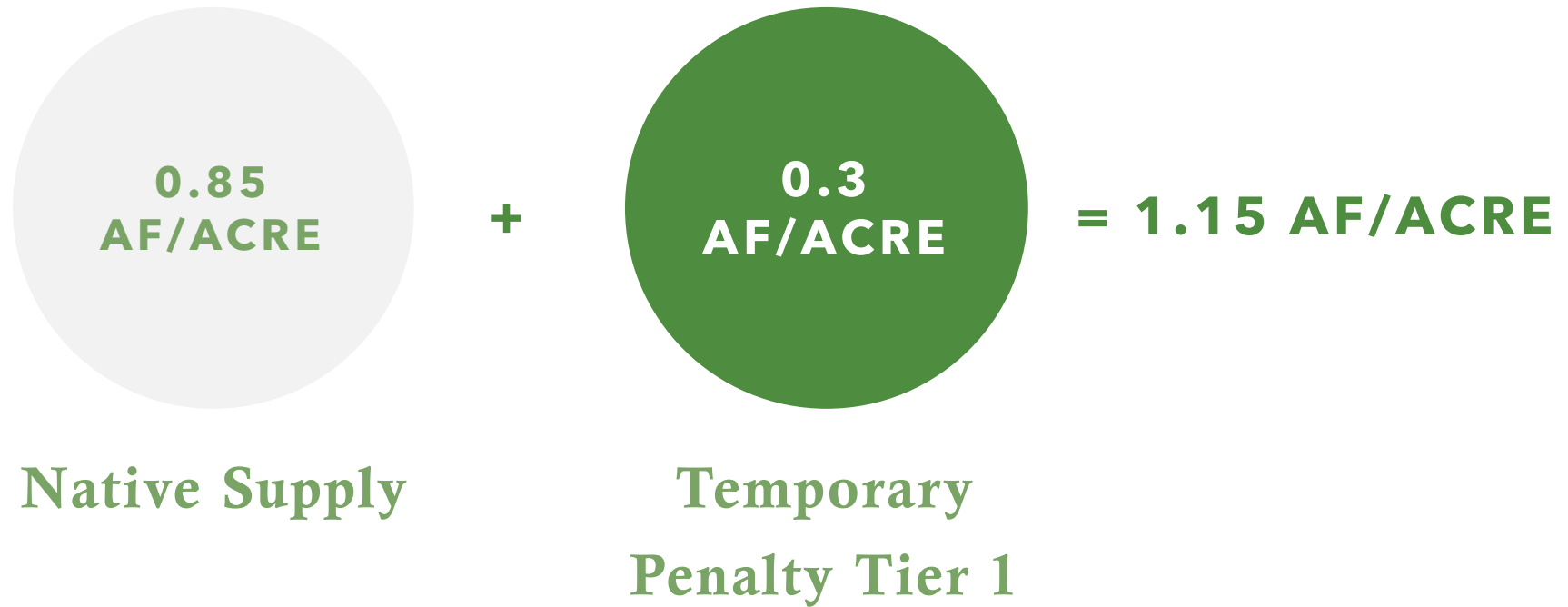
October 1, 2022 - September 30, 2023

ALLOCATION YEAR 2023

In **September 2022**, Board adopts Rules and Regulations establishing a groundwater allocation for Allocation Year 2023 (Oct 1, 2022 – Sept 30, 2023)

GROUNDWATER ALLOCATION

October 1, 2022 - September 30, 2023



GROUNDWATER ALLOCATION, GW CREDITS, PRECIPITATION

October 1, 2022 - September 30, 2023



*Groundwater credits can fill the gap between 1.15 allocation and hard cap at 2.5 AF/acre

**2.5 AF/acre plus precipitation (92% of rainfall)

WHO IS INCLUDED?

ALLOCATION YEAR 2023

Allocation Type	Allocation Amount	Who receives the allocation?
Native Yield	.85 AF/acre	All land greater than 2 acres designated by Assessor Parcel Number (APN) in the EKGSA <i>Excludes land within city of Lindsay</i>
Temporary Penalty Tier 1	0.3 AF/acre	Irrigated land*
Transferred GW credits		Irrigated land*
Precipitation	92% of rainfall	All land greater than 2 acres designated by Assessor Parcel Number (APN) in the EKGSA <i>Excludes land within city of Lindsay</i>

*Irrigated Land means land irrigated as of January 31, 2020, which is:

- (a) identified as enrolled in ILRP or other regulatory programs documenting historical irrigation use (e.g., Dairy General Order)
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- (c) shown with sufficient evidence to the reasonable satisfaction of the EKGSA to have been historically irrigated

WHAT IS THE COST?

ALLOCATION YEAR 2023

Allocation Type	Allocation Amount	What does it cost?
Native Yield	.85 AF/acre	\$0
Temporary Penalty Tier 1	0.3 AF/acre	\$500/AF
Transferred GW credits		Market Value – No GSA Fees

WHAT IS THE COST? SCENARIO 1

Landowner imports groundwater after using up Native Yield and Tier 1 supplies (1.15 AF/acre) and consumes (ETa) above 2.5 AF/acre cap

Allocation Type	Allocation Amount	What does it cost?
Native Yield	.85 AF/acre	\$0
Temporary Penalty Tier 1	0.3 AF/acre	\$500/AF
Transferred GW credits	1.35 AF/acre	\$0
Consumed GW (ETa) exceedance	> 2.5 AF/acre	\$500/acre-foot, 1:1 loss of Water Year 2024 allocation

WHAT IS THE COST? SCENARIO 2

Landowner uses Native Yield and Tier 1 supplies (1.15 AF/acre) and does NOT transfer groundwater credits

Allocation Type	Allocation Amount	What does it cost?
Native Yield	.85 AF/acre	\$0
Temporary Penalty Tier 1	0.3 AF/acre	\$500/AF
Transferred GW credits		\$0
Consumed GW (ETa) exceedance	> 1.15 AF/acre	\$500/acre-foot, 1:1 loss of Water Year 2024 allocation

CALCULATING THE COST: 10-ACRE RANCH

Landowner uses Native Yield and Penalty Tier 1 supplies (1.15 AF/acre) and does NOT transfer groundwater credits

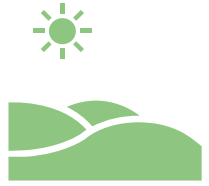
NATIVE YIELD USE - \$0 / AF

$$10 \text{ ACRES} \times 0.85 \text{ AF} = 8.5 \text{ AF}$$

PENALTY TIER 1 USE - \$500 / AF

$$10 \text{ ACRES} \times 0.3 \text{ AF} \times \$500/\text{AF} = \$1500 \text{ (3 AF)}$$

SPECIAL USE CASES



Fallowed Ground – All ET on fallowed ground will be credited back to 92% of precipitation



Graze Land (Non-Irrigated) - All ET on fallowed ground will be credited back to 92% of precipitation



Small Acres – All non-commercial agriculture parcels five acres or less will have ET credited back to 92% of precipitation

LANDOWNER NEXT STEPS



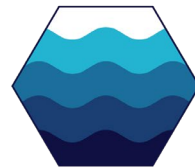


LANDOWNER NEXT STEPS

CREATE YOUR WATER DASHBOARD ACCOUNT

GSAWD.COM - 559-205-9065

**56% OF ALL FARMED ACRES IN EAST
KAWEAH GSA ARE USING THE WATER
DASHBOARD!**



Water Dashboard
Kaweah Subbasin

LANDOWNER NEXT STEPS - EKGSA EMAIL NEWSLETTER

SIGN UP AT: EKGSA.ORG/KEEP-INFORMED

THIS IS THE EASIEST
AND QUICKEST WAY
TO STAY-UP-TO-DATE
ON EAST KAWEAH
GSA'S ACTIVITIES AND
UPDATES!

LATEST UPDATES



November 14, 2022 | Groundwater Allocation Updates

Upcoming outreach on groundwater allocations

The East Kaweah GSA is hosting two webinars on Friday, December 9th with educational information on the Water Year 2023 allocations.

[Continue Reading](#)



November 14, 2022 | Groundwater Allocation Updates

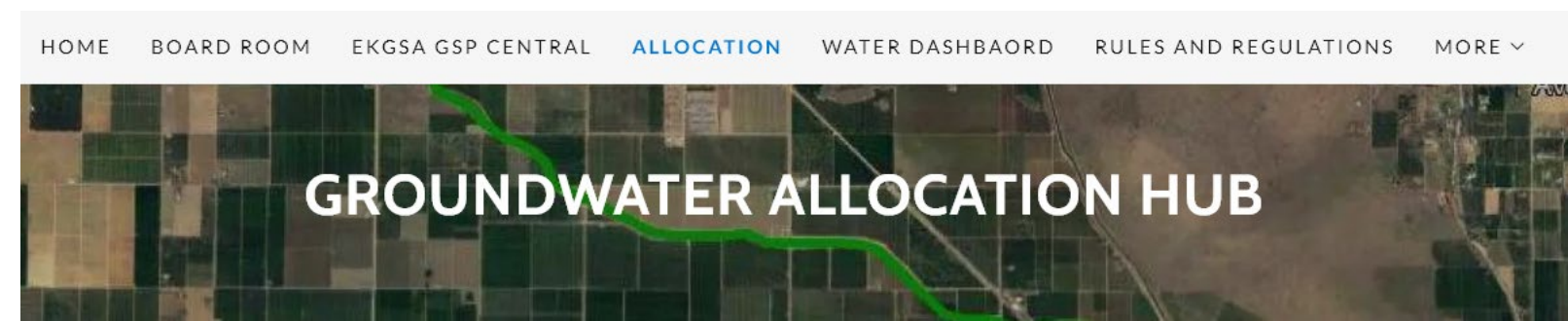
East Kaweah Water Year 2023 Allocations Finalized

At their October 24th meeting, the East Kaweah GSA Board voted in opposition to modifying allocations for Water Year 2023, previously adopted in Resolution 2022-04 on September 30, 2022, indicating the current allocatio...

[Continue Reading](#)

VISIT OUR WEBSITE AND YOUTUBE CHANNEL

GROUNDWATER ALLOCATION HUB: EKGSA.ORG/ALLOCATION



YOUTUBE: EAST KAWEAH GROUNDWATER SUSTAINABILITY AGENCY



East Kaweah Groundwater Sustainability Agency

@eastkawahgroundwatersusta2960


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2023 Water Allocation: FAQ on Allocated Groundwater...
34 views • 2 weeks ago



East Kaweah GSA Allocation - Water Year 2023
34 views • 2 weeks ago



East Kaweah GSA Emergency Ordinance
16 views • 3 weeks ago



Water Dashboard Overview
4 views • 3 months ago

A photograph of a rolling green landscape. In the foreground, several cows are grazing on a lush green field. The middle ground shows rolling hills with patches of trees and shrubs. In the background, a line of trees marks the horizon under a bright blue sky filled with wispy white clouds.

Q&A PANEL



Q&A

THANK YOU!



EAST KAWEAH
GROUNDWATER SUSTAINABILITY AGENCY

Email: groundwater@ekgsa.org

Ph: (559) 697-6095

www.ekgsa.org