



Kaweah Subbasin Water Marketing Strategy

Strategy Committee Meeting
October 19, 2022

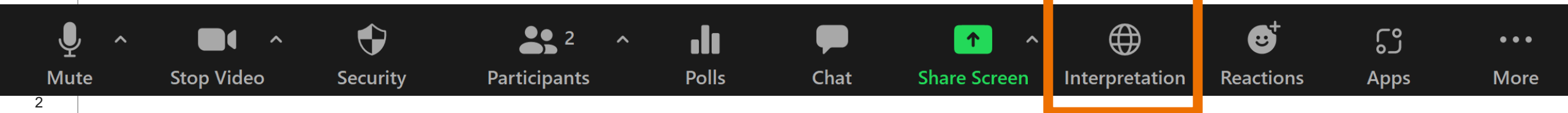
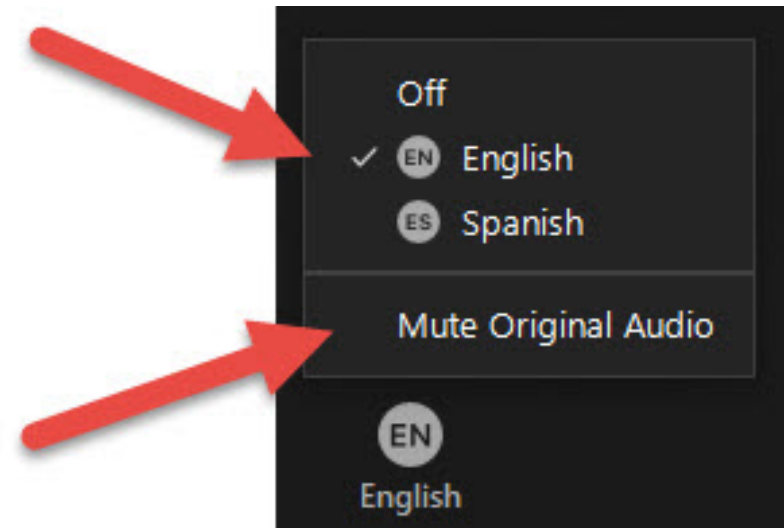
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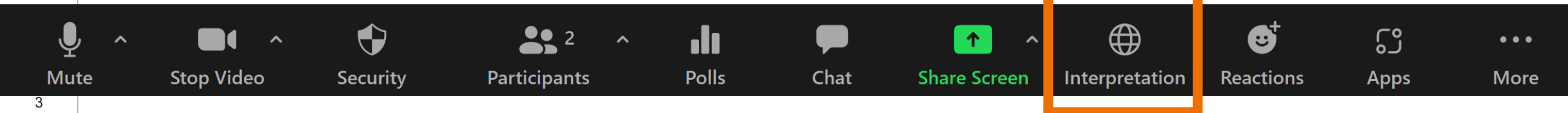
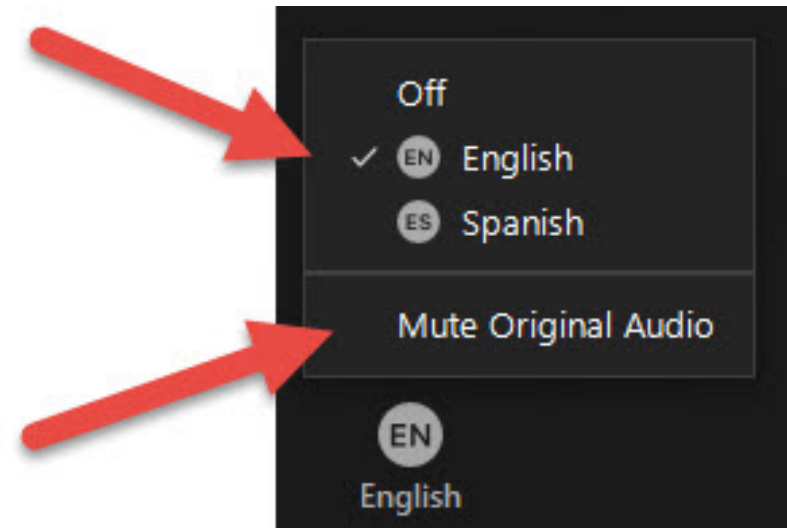
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We want to hear from you!

There will be a Question and Answer session at the end of the meeting:

In-Person Attendees: Fill-out a **comment card** and provide to staff. These will be relayed to the presenters.

Virtual Attendees: Submit a question or comment to the **Chat box** at any time. These will be relayed to the presenters.

As time is available we will ask or live questions. To request, raise your hand here in the room or use the **hand raise function** in the Zoom room.



Mute



Stop Video



Security



Participants



Polls



Chat



Share Screen



Interpretation



Reactions



Apps

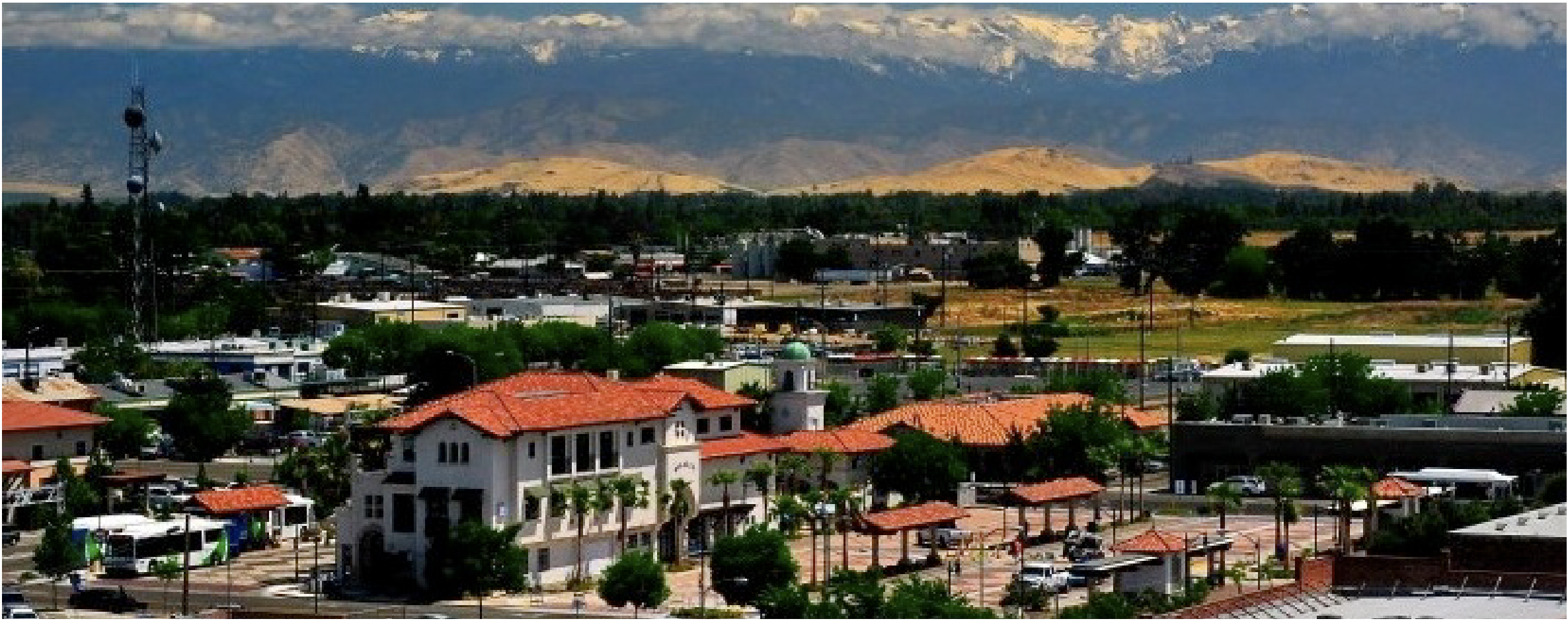


More



Agenda

1. Welcome and Introductions
2. Recap of Previous Public Workshop
3. Guiding Principles for Kaweah Subbasin Water Marketing Strategy
4. Water Market Progress
5. Next Steps and Key Decision Points
6. Q&A

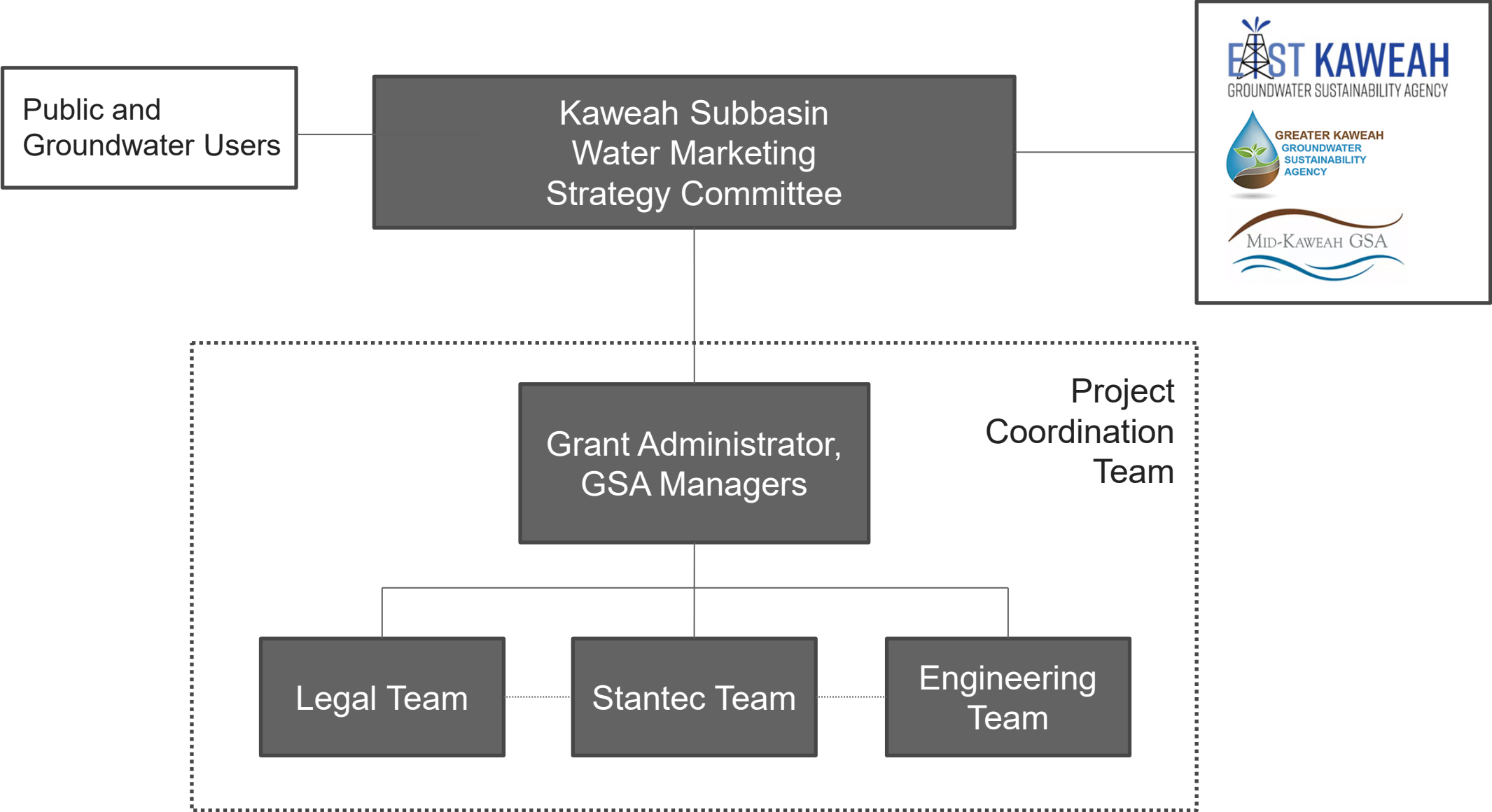


Welcome & Introductions



Recap of Previous Public Workshop

Organizational Framework



Kaweah Subbasin Water Marketing Strategy Committee

Joe Cardoza	• Grater Kaweah GSA
Steve Nelson	• Mid-Kaweah GSA
Brian Watson	• East Kaweah GSA
Scott Rogers	• Tulare Irrigation District
David Cardoza	• Ag Seat – Cardoza Co.
Manuel Leon	• DAC Seat – Self-Help Ent.
Soapy Mullholand	• Environmental Seat
James Silva	• Water Seat – Various Kaweah Ditch Companies
Chuck Nichols	• Industrial Seat – Nichols Farms
Craig Wallace	• Water Seat – LSID
Matthew Watkins	• Ag Seat – Bee Sweet Citrus

Scope of Work

- **Research Existing Markets and Strategies**
- **Identify Buyers & Sellers and Water Market Exchange Quantities**
- **Develop Terms, Standards, Rules & Procedures for version 1.0 Kaweah Subbasin Water Market**
- **Analyze Water Rights and Develop a Legal Framework for Kaweah Subbasin Water Market**
- **Produce Kaweah Subbasin Water Marketing Strategy Document**

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Water User and Public Participation To Date

- **Strategy Committee Meetings**
 - Ten, publicly noticed meetings to date
- **Public Workshops**
 - Previous: October 27, 2021
- **Office Hours**
 - Previous: November 10, 2021
 - Next: 4:30-6 p.m., October 26, 2022

<https://stantec.zoom.us/j/99325316362>

Previous Public Workshop recordings and meeting materials available at:
<https://tulareid.org/kaweah-subbasin-water-marketing-strategy-committee>



Recap: Existing Water Markets (Key Features)

	Market Origin		Method of Allocation		Allocation Flexibility				Monitoring of Water Use				
	CA Adjudicated Basin	Legal Settlement	Historical Use	Equal Shares	Carryover	Borrowing	Rolling Average	Well Aggregation	Metering			Aerial Imaging	Satellite Remote Sensing
									metering w/self-report	metering or pump test & electrical rec.	metering w/telemetric monitoring		
Central	•		•		•	•							
Goleta	•		•										
Mojave	•		•							•			
Puente	•			•									
Santa Paula	•		•				•		•				
Scott River	•			•									
Tehachapi	•		•			•							
W San Bernardino	•		•				•						
Buena Vista			•										
Pajaro Valley*			•										
Westlands			•										
Fox Canyon			•		•			•			•		
Twin Platte		•		•								•	
Central Kansas					•				•				
Edwards Aquifer		•	•										
OR Freshwater Trust													
Murray-Darling			•						•				

*Note: Pajaro Valley fallowing auction is in planning stage and has not been conducted

Recap: Existing Water Markets (Key Features)

	Market Structure						Price Information			Term of Transfers	
	Formal		Informal				None	Transaction specific	Aggregate Prices	Temporary	Permanent
	Clearinghouse	Auction	Coffee Shop	Bulletin Board	Brokerage	Co-Op					
Central			•						•	•	
Goleta			•			•				•	
Mojave			•				•		•	•	
Puente			•			•			•	•	
Santa Paula			•			•			•	•	
Scott River	•		•			•			•	•	
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Twin Platte	•	•	•	•	•			•		•	
Central Kansas	•							•	•		
Edwards Aquifer			•	•	•	•			•	•	
OR Freshwater Trust	•					•			•	•	
Murray-Darling	•		•	•	•		•		•	•	

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Recap: Existing Water Markets (Key Features)

	Mitigation of Adverse Impacts				Market Testing	
	Geographic Boundaries	Directional Restrictions	Exchange Rates	Screening of transfers	Reducing Market Power	Pilot Markets
Central						
Goleta						
Mojave	•					
Puente						
Santa Paula				•		
Scott River						
Tehachapi				•		
W San Bernardino				•		
Buena Vista						
Pajaro Valley*						
Westlands						
Fox Canyon	•	•			•	•
Twin Platte	•		•		•	
Central Kansas			•			
Edwards Aquifer		•				
OR Freshwater Trust						
Murray-Darling	•					

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	CA Adjudicated Basin	Legal Settlement	Formal		Informal			None	Transaction specific	Aggregate Prices	Temporary	Permanent	Geographic Boundaries	Directional Restrictions	Exchange Rates	Screening of transfers	Reducing Market Power	Pilot Markets	Historical Use	Equal Shares	Carryover	Borrowing	Rolling Average	Well Aggregation	Metering			Aerial Imaging	Satellite Remote Sensing
			Clearinghouse	Auction	Coffee Shop	Bulletin Board	Brokerage	Co-Op																	metering w/self-report	metering or pump test & electrical rec.	metering w/ telemetric monitoring		
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Guiding Principles for Kaweah Subbasin Water Marketing Strategy

Water Market Guiding Principles: JamBoard

What should the water marketing strategy ACCOMPLISH?

Be very low cost to conduct and administer transactions 	Should provide Equitable trading policy 	Equitable water market that is protective of drinking water users 	Align the Human Right to Water with water market 	Adequate inclusion of the needs of DAC/SDACs re: drinking water and water quality protection 	Minimalistic approach to achieve sustainability goals	Identify potential benefits to DAC/SDAC communities	
Simplicity 	Create a component of the marketing strategy to move water between all 3 GSA's in the Kaweah basin 	Transparency 	Strive to develop a Market to provide the most flexibility to landowners to develop their business plans and be a landowner driven process. 	Allowable movement of water should be directly tied to groundwater levels in monitoring program to avoid undesirable results	Anonymous trading 	Provide a market in which landowners can mitigate financial impacts of following by the sale of excess water assets	Transfer distances regulated on a case by case basis rather than an one size fits all. ie: (1 mile for a user transferring allocation to a location near a municipal well and 3+ miles for a user transferring allocation where there are no municipal wells)
Buffer zones around disadvantaged communities: private & community wells 	Robust stakeholder engagement 	Clearly defined water carryover policy 	Disadvantaged communities need to be engaged in shaping groundwater markets (these types of meetings need to be held in the communities, bilingual educational materials) 	Incorporation of Following Program into market	Protection of groundwater dependent ecosystems	Daily reporting of water trades 	InterBasin and InterGSA Trading Policy along borders
Electronic clearinghouse for both viewing and making trades.	Include an emergency drinking water mitigation plan	Blockchain based Market using DAO Smartcontracts	Groundwater level monitoring near vulnerable groundwater areas, like communities that rely on shallow wells 	Open platform allowing direct communication between buyer and seller. Platform should still require reporting to GSA.	Identifying groundwater allocations that adequately address community needs now and into the future 	should not only detect the status and trends of groundwater conditions, but must also be deployed to ensure that the market is running well and is not resulting in adverse impacts to groundwater quality and/or groundwater	Use the emergency program to test some features of the permanent program

Water Market Guiding Principles: JamBoard

What should the water marketing strategy AVOID?



Water Market Guiding Principles: JamBoard

Accomplish/Avoid	Original Comment	For	Against	Guiding Principle	Secondary Principles	Notes
Accomplish	Create a component of the marketing strategy to move water between all 3 GSAs in the Kaweah basin	4		Flexibility	Adaptability	
Avoid	A transaction process to move water out of the GSP	3		Do no harm	Adaptability	
Accomplish	Strive to develop a market to provide the most flexibility to landowners to develop their business plans and be a landowner driver process	2		Adaptability		
Avoid	Avoid permanent transfers with the initial program	2		Do no harm	Adaptability	
Accomplish	Transferability that is evaluated on a case by case basis rather than an one size fits all		5	Flexibility	Do no harm	
Accomplish	Interbasin and InterGSA trading policy along borders			Flexibility	Adaptability	
Accomplish	Blockchain based market using DAO			Transparency	Ease of Use	
Accomplish	detect the status of trans of groundwater conditions but must also be deployed to ensure that the market is running well and is not resulting in adverse impacts to groundwater quality			Do no harm	Transparency	
Accomplish	Use the emergency program to test some features of the permanent program.			Adaptability	Flexibility	
Accomplish	Allowable movement of water should be directly tied to groundwater levels in monitoring program to avoid undesirable results			Do no harm	Adaptability	

Water Market Guiding Principles: Public Input

Examples identified at public Office Hours

- Provide water users with flexibility under reduced access to water
 - Provide flexibility within White Areas
 - Provide users flexibility during the current drought
 - Lease pumping allocations separate from the land
- Avoid unintended consequences for the environment (e.g. ET-based monitoring may drive farmers to forego cover crops, harm soil health)
- Adaptive approach
 - Start broad and get more restrictive as impacts arise
 - Start simple, learn as you go and get more complex over time
- Provide access to information about the market / marketing strategy in Spanish

Water Market Guiding Principles

- **Flexibility**
Provide water users with the flexibility to comply with new regulations and to respond to changing water availability.
- **Adaptability**
The Water Market Strategy should promote adjustments in practices, rules and procedures as conditions change and as the experience of market participants grows and new information becomes available.
- **Transparency**
The process of developing the Water Market Strategy and for conducting market activities should be visible and understandable to interested stakeholders. Transparency includes the availability of accurate and reliable water use data and the timely reporting of water market activity.
- **Do No Harm**
The Water Market Strategy should anticipate and avoid adverse impacts to water users and uses (CWC §10721(x)).
- **Equity & Inclusion**
The Water Market Strategy should be developed with an open process that includes the full range of potential market participants and other interested parties. Implementation of the Water Market Strategy should be relatively simple and understandable to interested parties.
- **One Basin-wide Strategy**
The Water Market Strategy will develop a common framework available to all Kaweah Subbasin GSAs.

Water Market Guiding Principles

- **Flexibility**

Provide water users with flexibility to comply with new regulations and to respond to changing water availability

Water Market Guiding Principles

- **Adaptability**

The WMS should promote adjustments in practices, rules and procedures as conditions change and as the experience of market participants grows and new information becomes available.

Water Market Guiding Principles

- **Transparency**

The process of developing the Water Marketing Strategy and for conducting market activities should be visible and understandable to interested stakeholders. Transparency includes the availability of accurate and reliable water use data and the timely reporting of water market activity.

Water Market Guiding Principles

- **Do No Harm**

The WMS strategy should anticipate and avoid adverse impacts to water users and uses (including DACs, GDEs, and small farms)

CWC §10721(x)

Water Market Guiding Principles

- **Equity & Inclusion**

The Water Market Strategy should be developed with an open process that includes the full range of potential market participants and other interested parties. Implementation of the Water Market Strategy should be relatively simple and understandable to interested parties.

Water Market Guiding Principles

- **One Basin-wide Strategy**

The Water Market Strategy will develop a common framework available to all Kaweah Subbasin GSAs.



Water Market Progress

Kaweah Subbasin Water Marketing Strategy version 1.0

Existing Water Markets

Relevant Principles

- Flexibility
- Transparency
- Equity & Inclusion

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Water Market v1.0

Basics

Program Period: October 1, 2022 – September 30, 2023.

Unit Traded – one acre-foot of allocation (measured as ET) to be used during the Program Period

Water eligible for trade – a participant's allocation of *Native Yield*

Type of allowable trades – temporary transfer of up to *100% of unused Native Yield*

Eligible Participants – agricultural landowners within a given GSA who hold allocation and who are current with all GSA fees and in compliance with all GSA ordinances, rules and regulations

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Water Market v1.0

Type of Exchange

Monthly auction

Facilitated by Third-party Administrator

Price Information

Price and quantity for each transfer (anonymous; identities of counterparties not revealed)

Mitigation of Adverse Impacts

GSA-designated analysis zones aggregated into a small number of Trading Zones

- Minimum Threshold trigger
(individual zone drops out of group when threshold is crossed)
- DAC trigger
(trading within individual zone ceases when public well is within certain feet of bowl)

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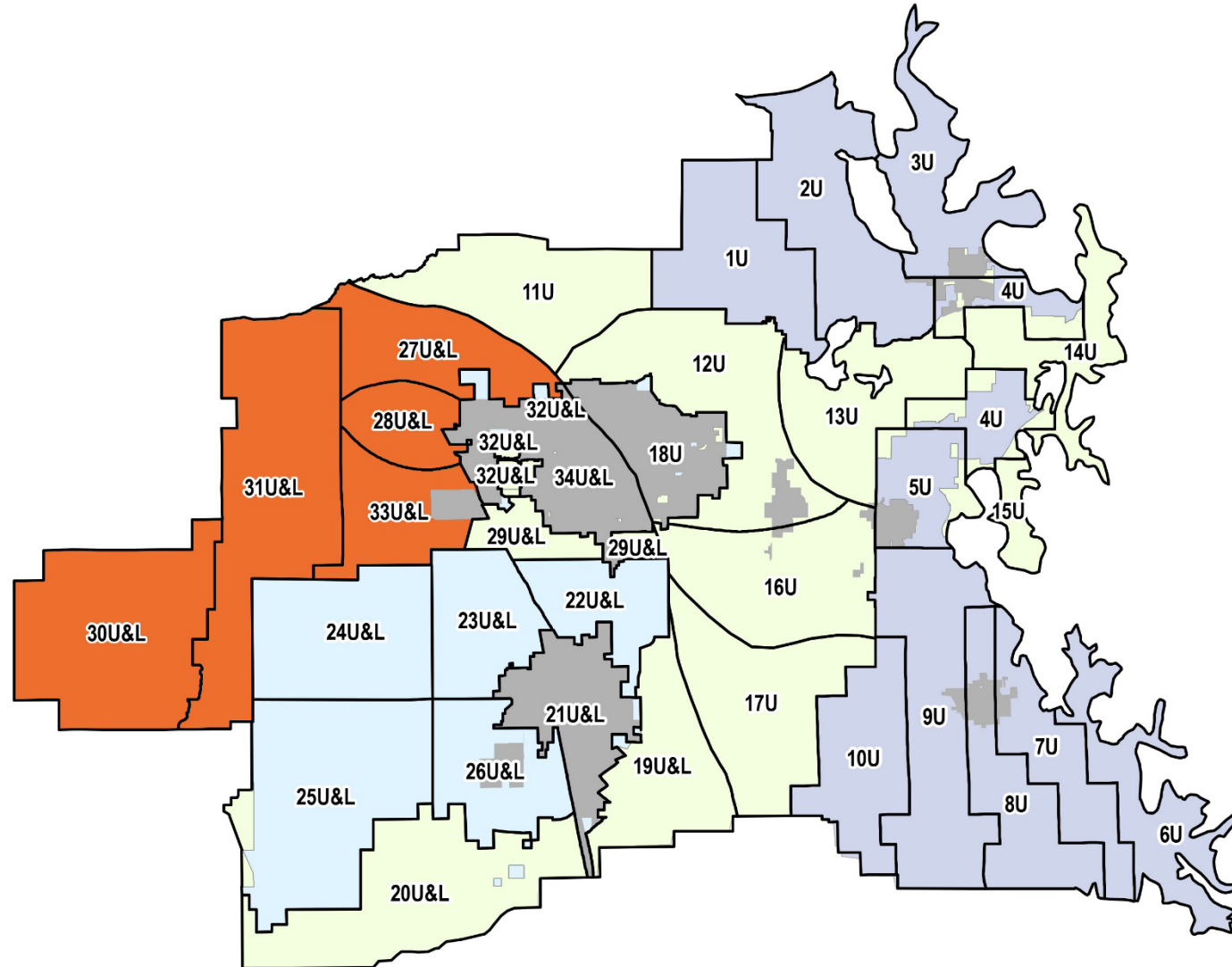
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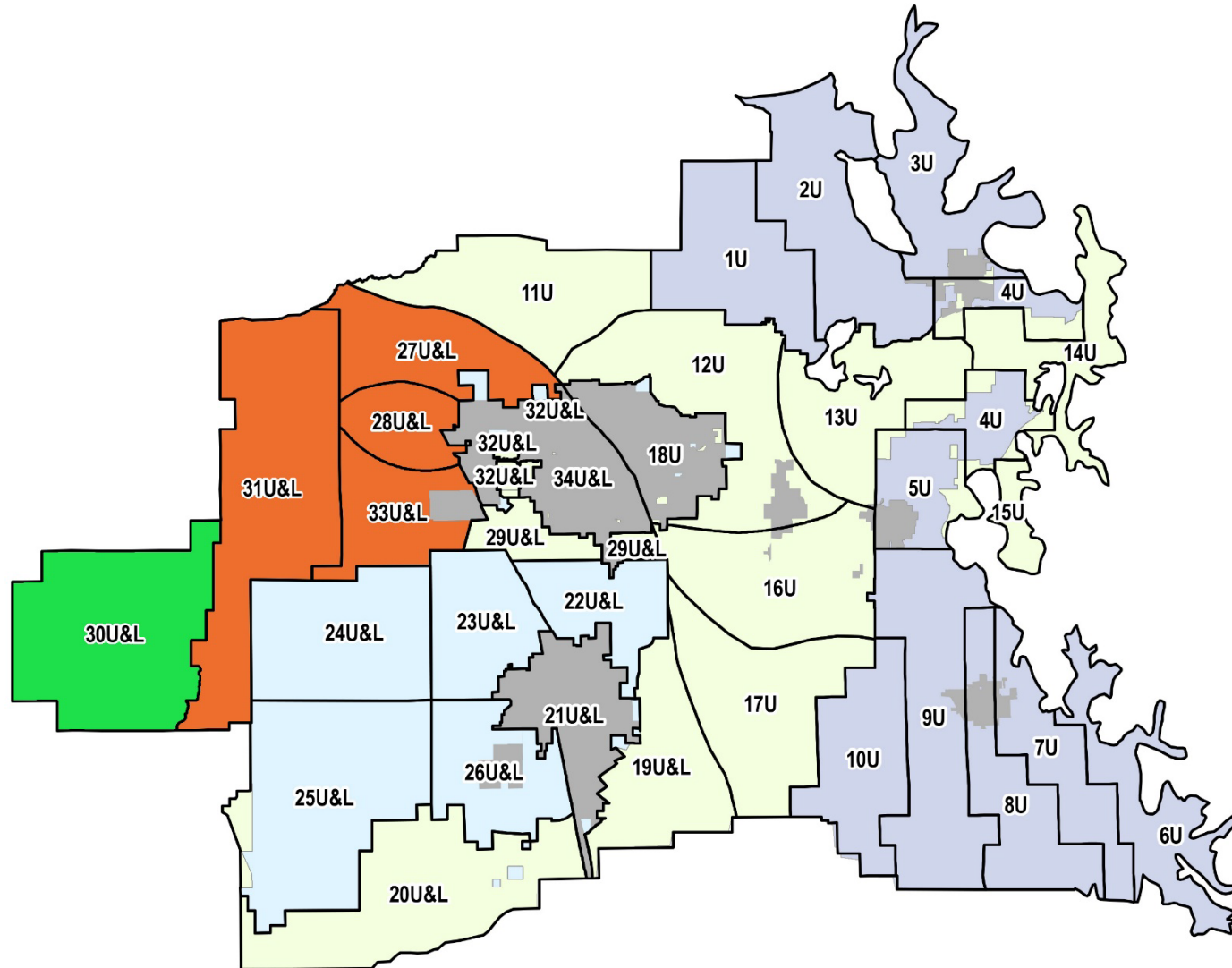
Water Market v1.0

Mitigation of Adverse Impacts – TRADING ZONES



Water Market v1.0

Mitigation of Adverse Impacts – TRADING ZONES





Next Steps and Decision Points

Next Steps & Decision Points

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Engage Legal and Engineering Teams

Engineering Team

Triggers consistent with existing Sustainable Management Criteria
How many Analysis Zones are already at or below MT?

Legal Team

Legal Guidance regarding details of v1.0
Ordinances, agreements, and other administrative actions of GSAs

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Goal

Implement Kaweah Subbasin Water Marketing Strategy version 1.0
by early next year



Q&A