



Kaweah Subbasin Water Marketing Strategy

Public Workshop No. 3
May 24, 2023

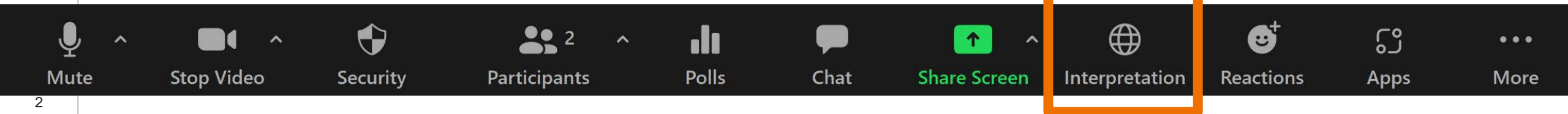
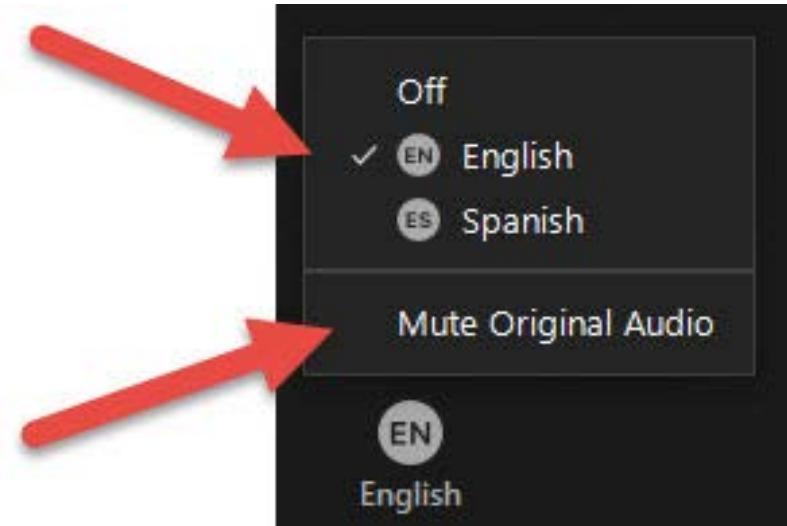
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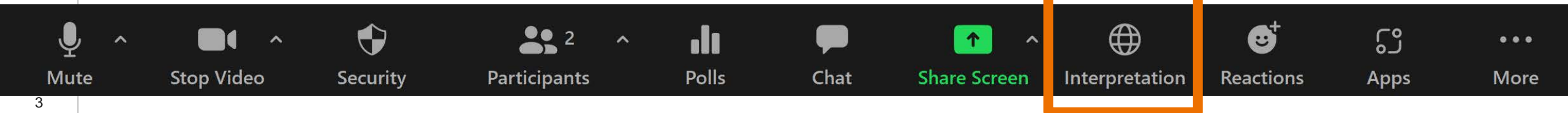
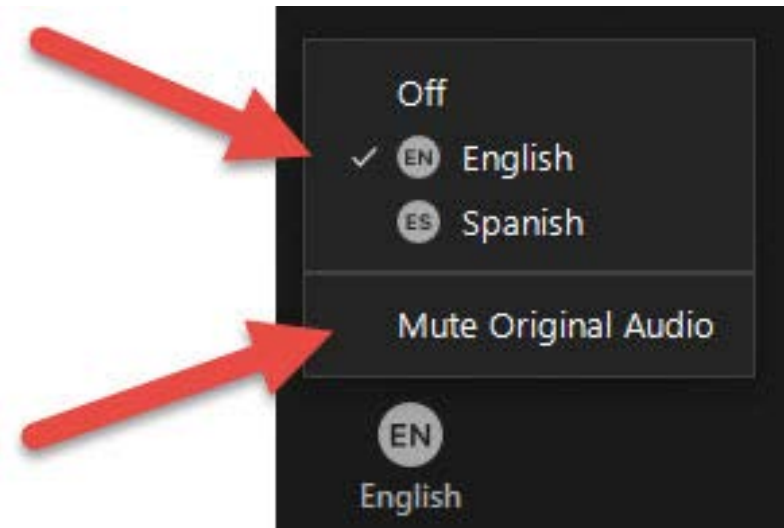
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We want to hear from you!

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



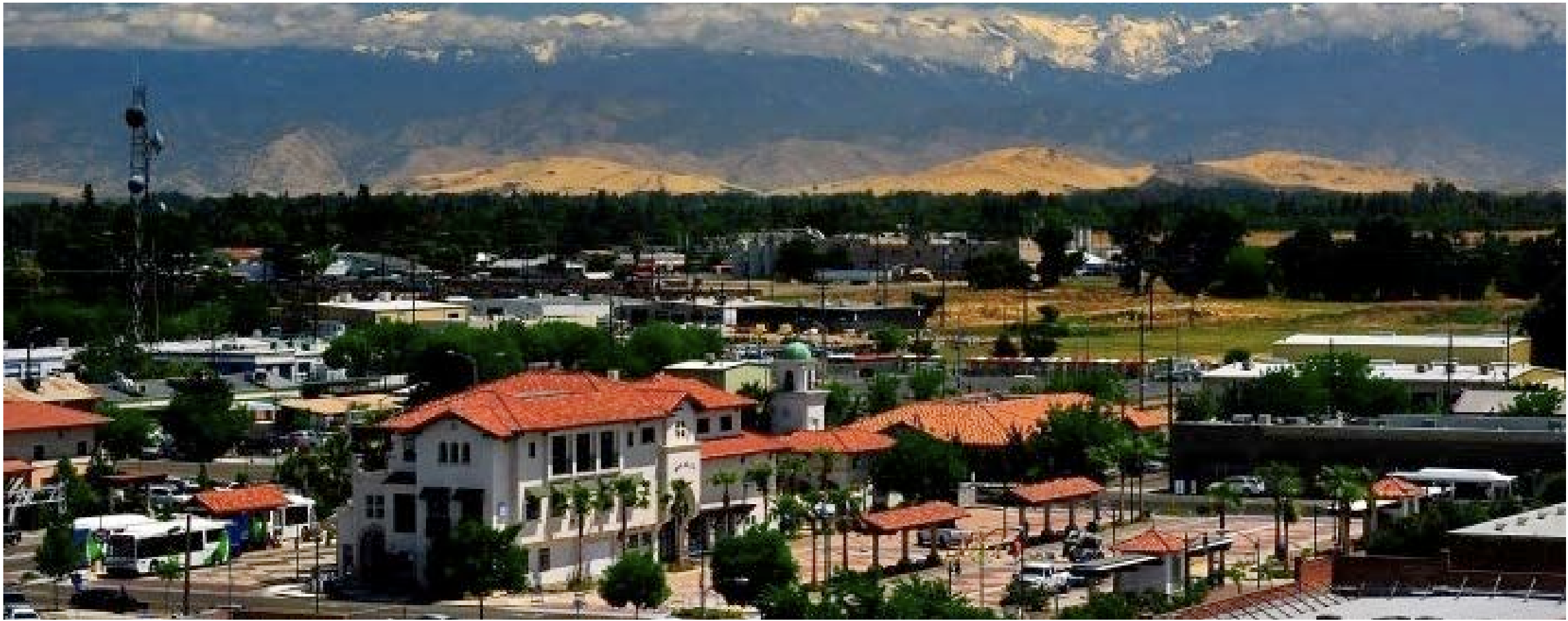
Reactions



Apps



More



Welcome & Introductions



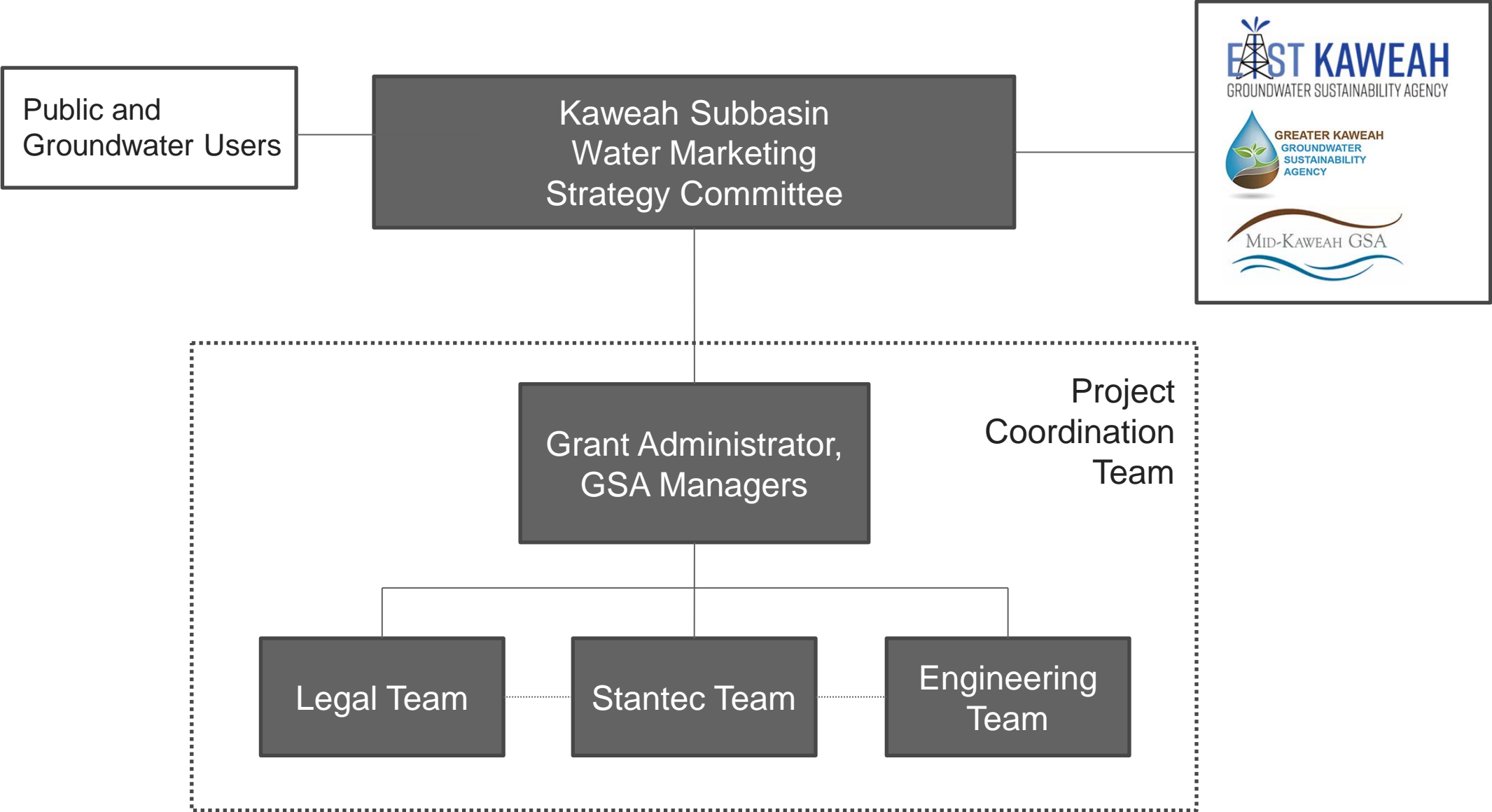
Agenda

1. Welcome and Introductions
2. Previous Workshop Recap
3. Overview of Water Marketing Strategy Development Progress
4. Nex Steps and Pilot Market Implementation
5. Q&A



Previous Workshop Recap

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**
- **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**

How the public can participate

- **Strategy Committee**
 - Fifteen meetings to date
- **Public Workshops**
 - Two workshops held to date
 - Two “public office hour” meetings
 - Next workshop: May 24, 2023
 - Next public office hour: 5:30 p.m., May 30, 2023
 - Join us at: <https://tinyurl.com/KaweahWaterMarket>

Existing Water Markets (Key Features)

	Market Origin		Market Structure					Price Information			Term of Transfers		Mitigation of Adverse Impacts				Market Testing	Method of Allocation		Allocation Flexibility				Monitoring of Water Use					
	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		
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																		•											








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. i.e. (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?

<p>A transaction process to move water out of the GSP</p> 	<p>Trading where large entities can control large quantities of water holding rest of market hostage</p> 	<p>Water speculation</p> 	<p>market where pricing is bid up to a point where small farmers are left out</p> 	<p>Avoid permanent transfers with the initial full scale (not pilot) program</p> 	<p>Excessive management zones and excessive management zone restrictions</p>
<p>unintended consequence of raising prices of water to unreasonable point</p>	<p>Harmful/unintended consequences to communities drinking water resources</p>	<p>Impacts to Surface Water Right Holders.</p> 	<p>Avoid Impacting existing programs that are already defined.</p> 	<p>Negative impacts to private well communities and community water systems</p>	<p>All permanent Transfers</p>

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 Intent and Participation

- **Market Acceleration**

Ongoing drought and implementation of allocation/demand reduction policies led Strategy Committee to promote a limited pilot water market:

- Transfer native yield between willing buyers and sellers

- **Voluntary**

Participation in the water market is voluntary and offered as a best management practice option for growers, ranchers, Disadvantaged Communities, and managers of open space lands.

- **GSP Relation**

Implementation by a Kaweah Subbasin GSA is up to the governing body of each agency.

Each Agency can evaluate the WMS to determine their level of use from full implementation, no implementation or something in between.



Water Marketing Strategy Development Progress

Water Market v1.0

Basics

- Program Period: Current Water Year, ending September 30
- Unit Traded – one acre-foot of allocation (measured as ET)
- Type of allowable trades – one-time transfer of up to up to 10 inches per acre (measured as ET)
- Eligible Participants – 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

Type of Exchange

- Monthly, auction, conducted in December, January, and last 2 months of water year as well as 45 days after end of water year (purchased water must be used in current water year)
- Third-party facilitated – exchange platform integrated with Water Accounting Dashboard
- Anonymous market (participants do not know the identity of counterparties)
- Price information: price and quantity for each transfer

Mitigation of Adverse Impacts

- Trading Zones
 - Minimum Threshold trigger (individual zone drops out and directional restriction applies)
Trigger: 12 feet from MT
 - DAC trigger (trading within individual zone ceases until impact is mitigated)
Trigger: TBD by engineering team
Location of DACs: ArcView map

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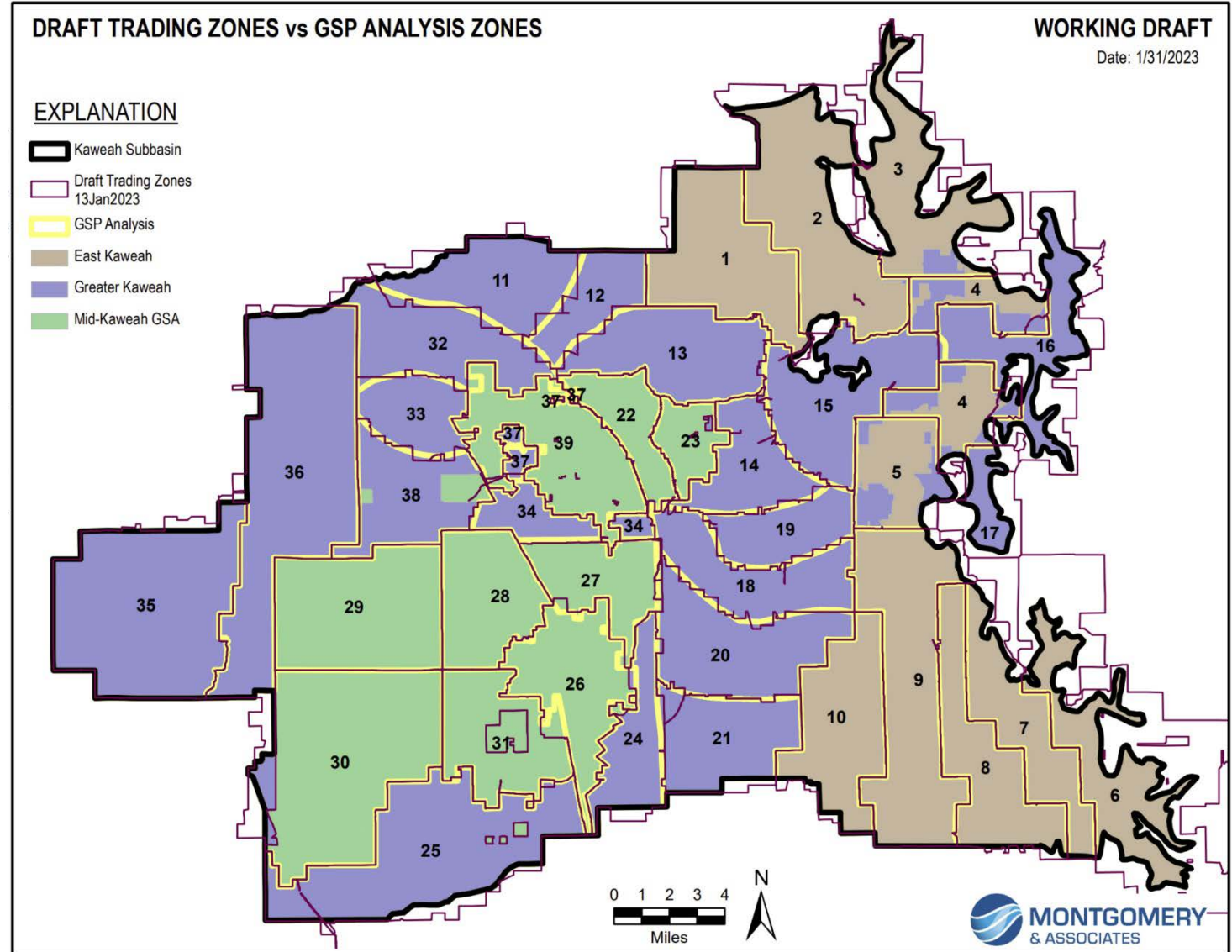
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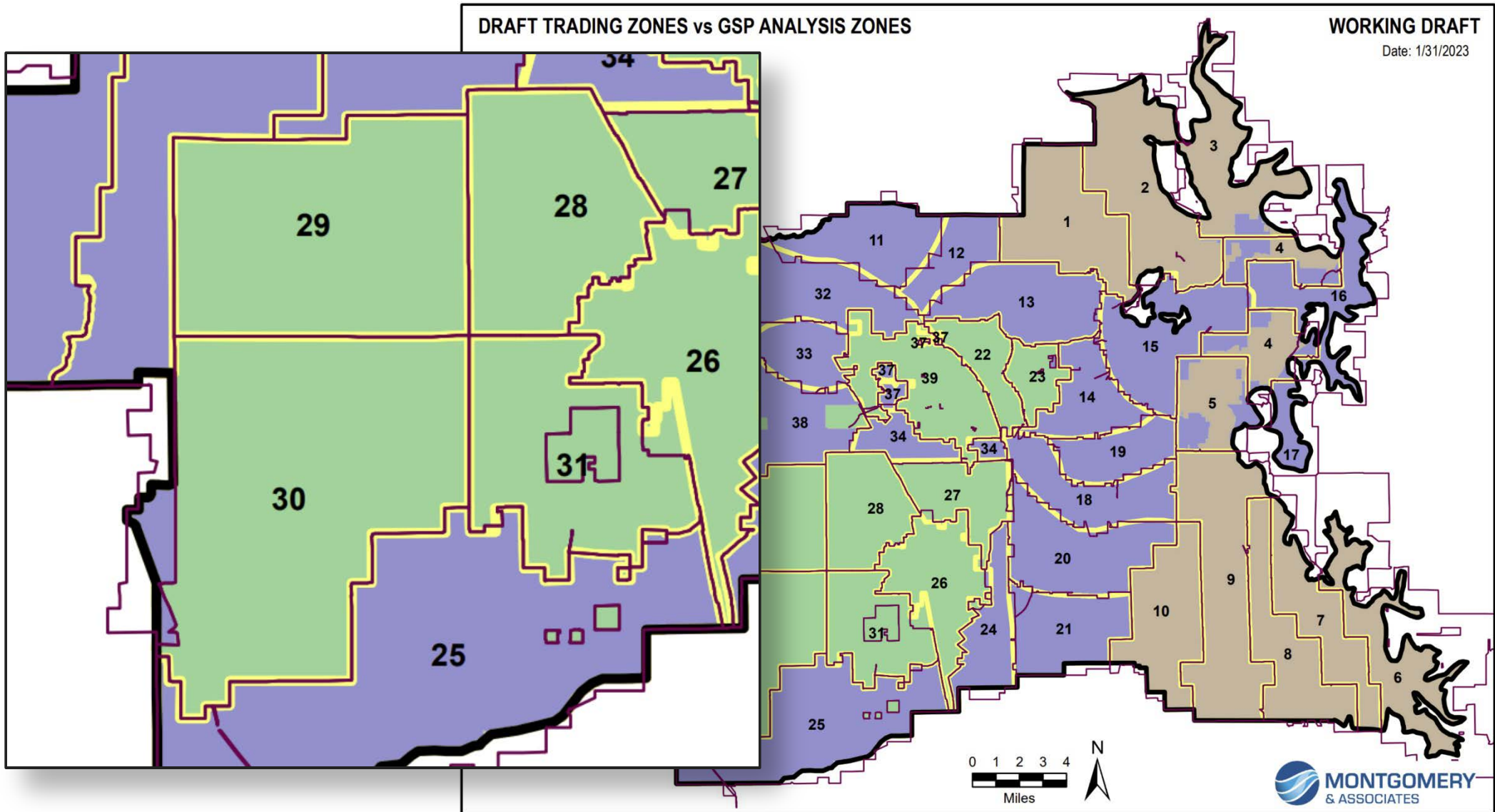
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Trading Zones – Mitigation of Adverse Impacts

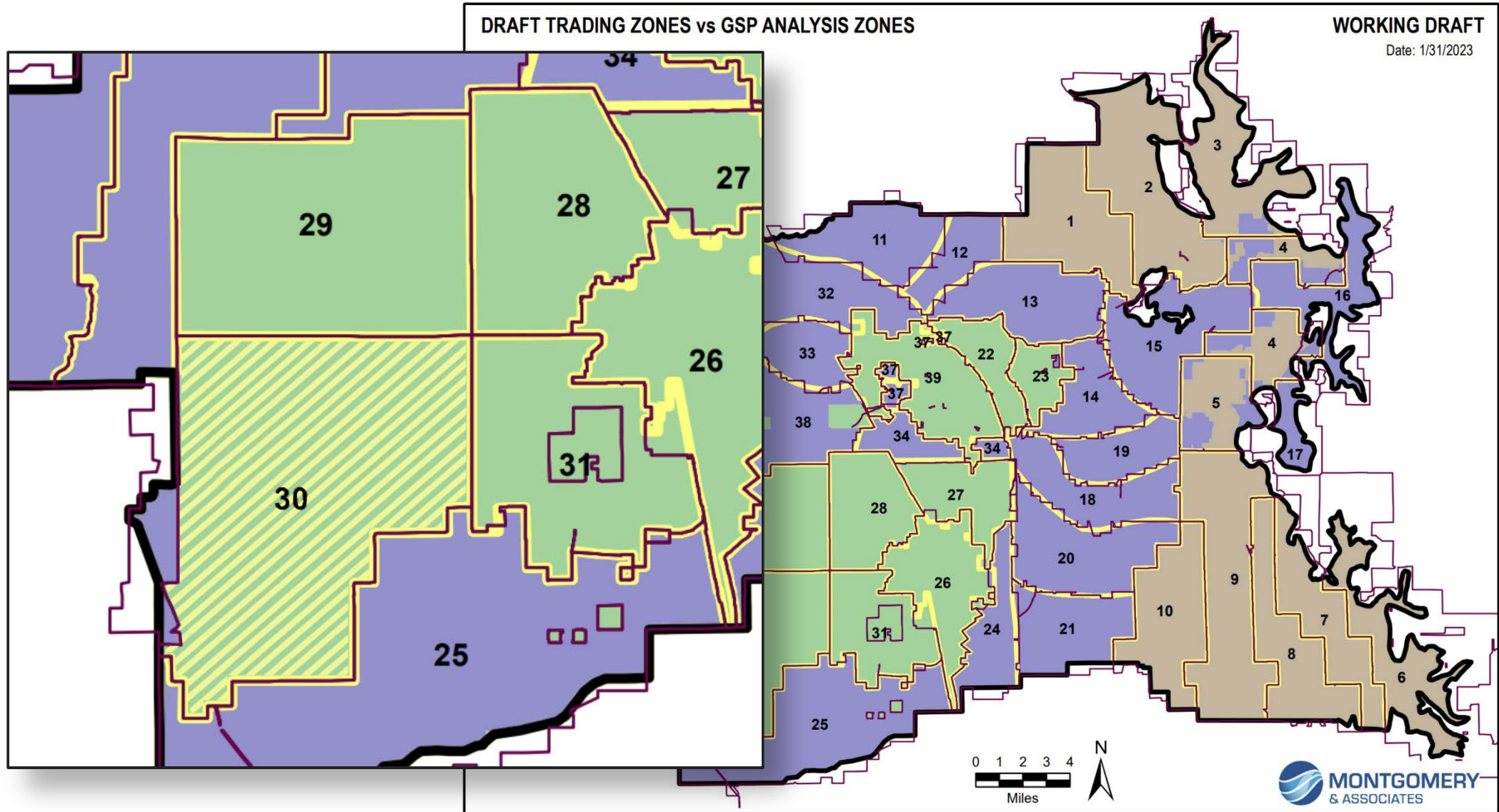
- Trigger levels monitored in Fall reading. Notification of any triggers provided in December, prior to first auction.
- Triggers may be lifted following Spring reading (or anytime if growers cover cost of mitigation to alleviate trigger)



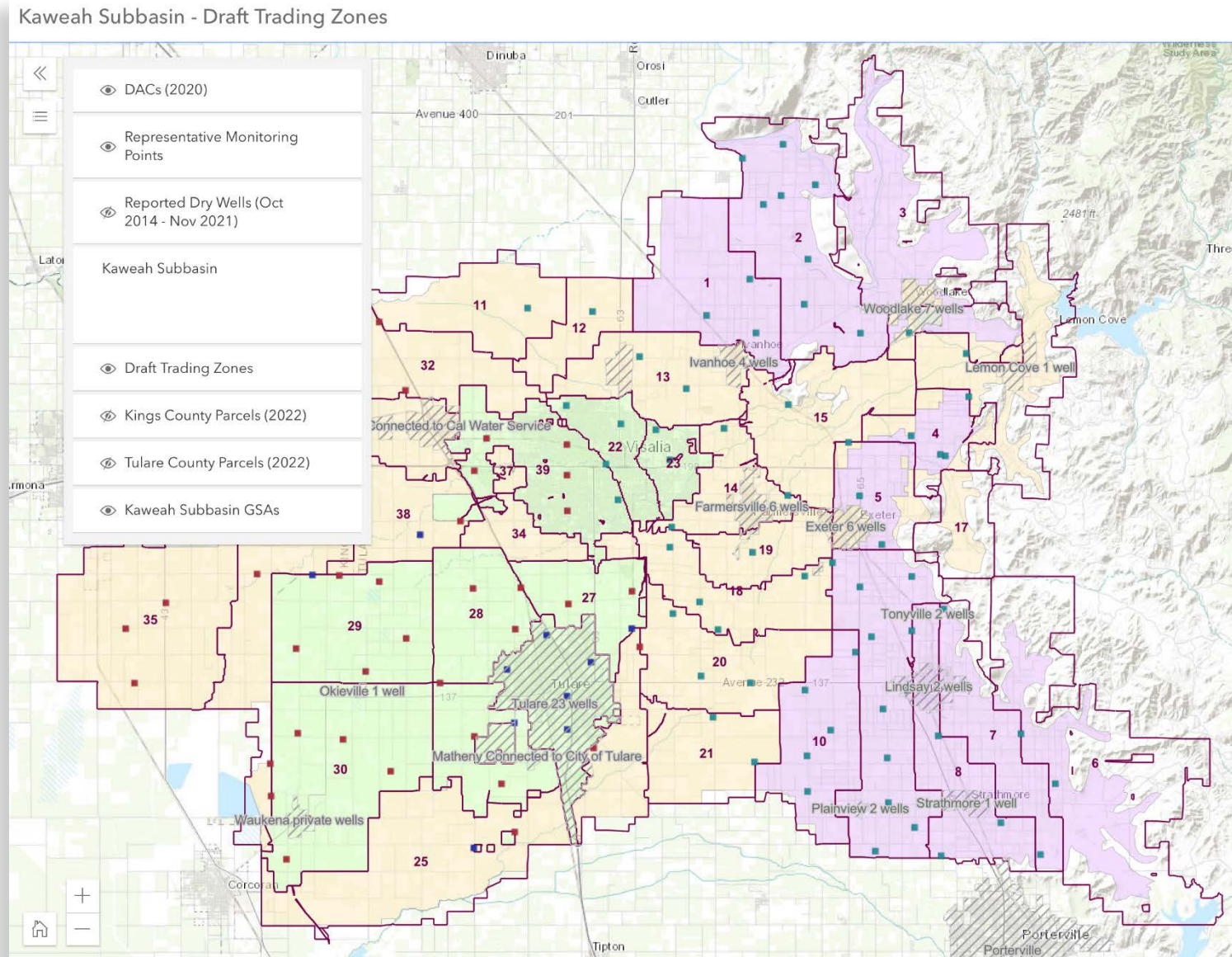
Trading Zones – Mitigation of Adverse Impacts



Trading Zones – Mitigation of Adverse Impacts



ArcView map – trading zones, DACs, monitoring wells



[Link: ArcView map](#)

Water Market v1.0 – Additional Details

Transfer Bucket – market participants move allocation to/from specific APNs

Review Committee – evaluates market performance

Water Accounting Dashboard & Trading Software Integration

v1.0 Transfer Bucket



APN 1



APN 2



APN 3

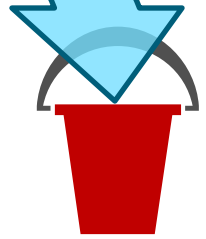


APN 4

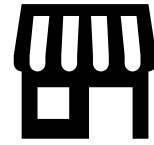
Step 1: Grower establishes the amount of allocation to sell (no greater than 10" x acreage)

Step 2: Grower moves allocation from specific APN(s) into Transfer Bucket. Dashboard verifies water is available and less than max.

Step 3: Offer(s) to sell allocation submitted to Exchange Platform. Platform automatically sees amount in Transfer Bucket



Transfer Bucket



Water Market

Step 4: Exchange Administrator matches offer(s) w/buyer(s) and notifies parties

Step 5: Buyer submits payment to Exchange Admin for transfer of allocation

Step 6: Exchange Admin moves allocation from seller's Transfer Bucket to buyer's Transfer Bucket and submits payment to seller

Next Step: Buyer moves allocation from Transfer Bucket to specific APN(s)

GSA-Specific Review Committee

Membership: subset of Strategy Committee

Including at least GSA, Agriculture, Environmental, and DAC representative

Meeting Frequency: semi-annually and if needed

**Responsibilities: evaluate market performance and suggest policy adjustments;
dispute resolution**

***Review Committee has *advisory* role, makes recommendations to GSA Board**



Next Steps and Pilot Market Implementation

Next Steps & Decision Points

Engineering Team

Triggers

Legal Team

Legal Guidance regarding details of v1.0

Final documents:

Resolution Adopting Water Market v1.0

Rules & Regulations

Participant Agreement

Exchange Administrator Agreement

Stantec Team

Final Water Marketing Strategy Document

Water Accounting Dashboard / Trading Software Integration

Water Dashboard Update

- GSA Review
- Member Menus
- Home
- Water Accounts
- Farm Map
- Explore Usage

Getting Started Guide

- Contact Us
- Roadmap

Please inform MKGSA of any edits, errors, or challenges no later than 3/03/2023. Payment is due March 31, 2023.

Table 1. Summary of measured water supply and usage in water year 2022 (May 01, 2022 - September 30, 2022)

Column Number	1	2	3	4	5	6	7	8	9	10
	Water Allocation Acreage		Water Usage		Water Supply				Balance	
Land Parcels APN #	Assessed Area (APN Ac.) [acre]	Irrigated Area (Irr Ac.) [acre]	Total ET [AF]	Precipitation [AF]	Surface Water [AF] *Irr. Efficiency	Allocation [AF]	Available for Transfer [AF]	Transferred [AF]	Balance [AF]	Balance / Acre [AF/Ac.]
154-150-000	155.77	151.65	340.03	0.36	0.00	389.43	0.00	-1.07	+48.69	+0.31
154-140-002	40.10	39.51	106.95	0.09	0.00	100.24	0.00	+6.62	+0.00	+0.00
154-140-012	101.64	100.34	268.65	0.24	0.00	254.10	0.00	+14.31	+0.00	+0.00
154-150-011	34.28	32.24	54.86	0.11	0.00	85.70	0.00	-1.75	+29.20	+0.85
154-140-007	160.23	155.50	272.80	0.52	0.00	400.57	0.00	+3.23	+131.52	+0.82
160-050-002	67.00	66.48	158.46	0.27	0.00	167.50	0.00	-1.07	+8.24	+0.12
160-050-003	122.60	119.96	212.51	0.59	0.00	306.50	0.00	+5.71	+100.29	+0.82
160-050-006	38.40	36.89	81.24	0.18	0.00	96.00	0.00	-1.09	+13.85	+0.36
160-060-002	218.10	206.90	413.33	0.87	0.00	545.24	0.00	-1.09	+131.69	+0.60
160-060-003	19.78	19.41	45.10	0.10	0.00	49.46	0.00	-1.10	+3.36	+0.17
164-020-000	13.83	11.60	18.33	0.09	0.00	34.58	0.00	-2.13	+14.21	+1.03
174-100-001	29.71	28.90	51.01	0.14	0.00	74.28	0.00	-0.23	+23.18	+0.78
174-100-008	11.74	11.14	19.37	0.05	0.00	29.34	0.00	-1.76	+8.26	+0.70
224-020-001	141.53	138.76	331.14	0.45	0.00	353.83	0.00	-1.03	+22.11	+0.16
224-020-007	7.00	3.68	0.73	0.02	0.00	17.50	0.00	-7.69	+9.10	+1.30
224-020-024	167.59	163.83	195.88	0.53	0.00	418.98	0.00	-6.63	+217.00	+1.29
224-020-029	111.13	108.26	283.45	0.36	0.00	277.83	0.00	+5.26	+0.00	+0.00
224-020-034	160.00	157.13	305.75	0.52	0.00	400.00	0.00	-1.03	+93.74	+0.59

Sample data for discussion purposes only

Help

Next Steps & Decision Points

Public Office Hours

Time and Date: 5:30 p.m. May 30, 2023

Place: <https://tinyurl.com/KaweahWaterMarket>



Questions