Madera County Water Market Informational Webinar

Understanding Concerns

Meeting #2

April 30, 2020

Agenda

- Welcome & Introductions/Roll Call
- Meeting Objectives
- Ground Rules
- February 25th Partner Workshop 1 Review
- Water Market Strategy Project Timeline
- *Presentation*: Water Trading Allocations under Markets and SGMA
- *Presentation*: Water Market Structure and Options
- Recap, Next Steps and General Comments

Introduction

- Opening remarks by Stephanie Anagnoson and Jeannie Habben
- Facilitation team and staff introductions
- Facilitator and interpreter will conduct participant roll call

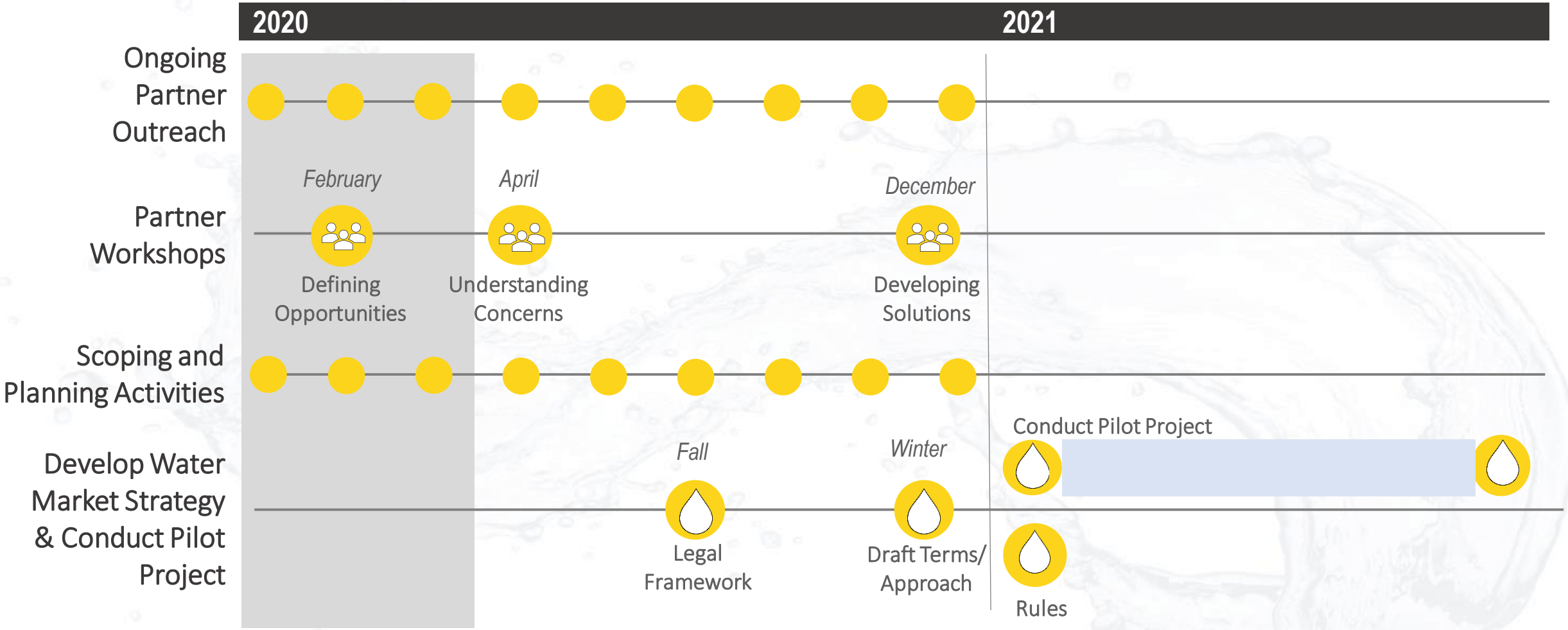
Meeting Objectives

- Provide project updates
- Share information on water trading allocation under market strategy and SGMA
- Review water market structure and options to understand concerns
  - Solicit written partner feedback
- Discuss next steps and partner solutions workshop

Ground Rules

- Mute your audio and remain on mute throughout the webinar
- *If participating by webinar*, use chat function for any clarifying questions or webinar troubleshooting issues.
- *If participating by phone*, contact Kim Witten at (559)598-0301 or Kim.Witten@MaderaCounty.com for clarifying questions or audio troubleshooting issues.
- Submit written feedback/questions *after* webinar via:
  - Survey Monkey: https://www.surveymonkey.com/r/PPRL7WX
  - Email to County: Stephanie.Anagnoson@MaderaCounty.com
  - Mail to County: Water and Natural Resources, 200 West Fourth Street Madera CA 93637 (c/o Stephanie Anagnoson)

Proposed Water Market Project Timeline



Partner Workshop 1 – Key Issues

- Setting, managing and tracking tradable allocations
  - Year-to-year carryover
  - Irrigated vs. non-irrigated land
  - Geographic trading zones
  - Water supply and quality protections for domestic and residential wells

Follow Presentations and Provide Comments/Feedback Using this Questionnaire:

https://www.surveymonkey.com/r/PPRL7WX

Access all webinar documents here:

https://www.maderacountywater.com/county-gsa-advisory-committees/

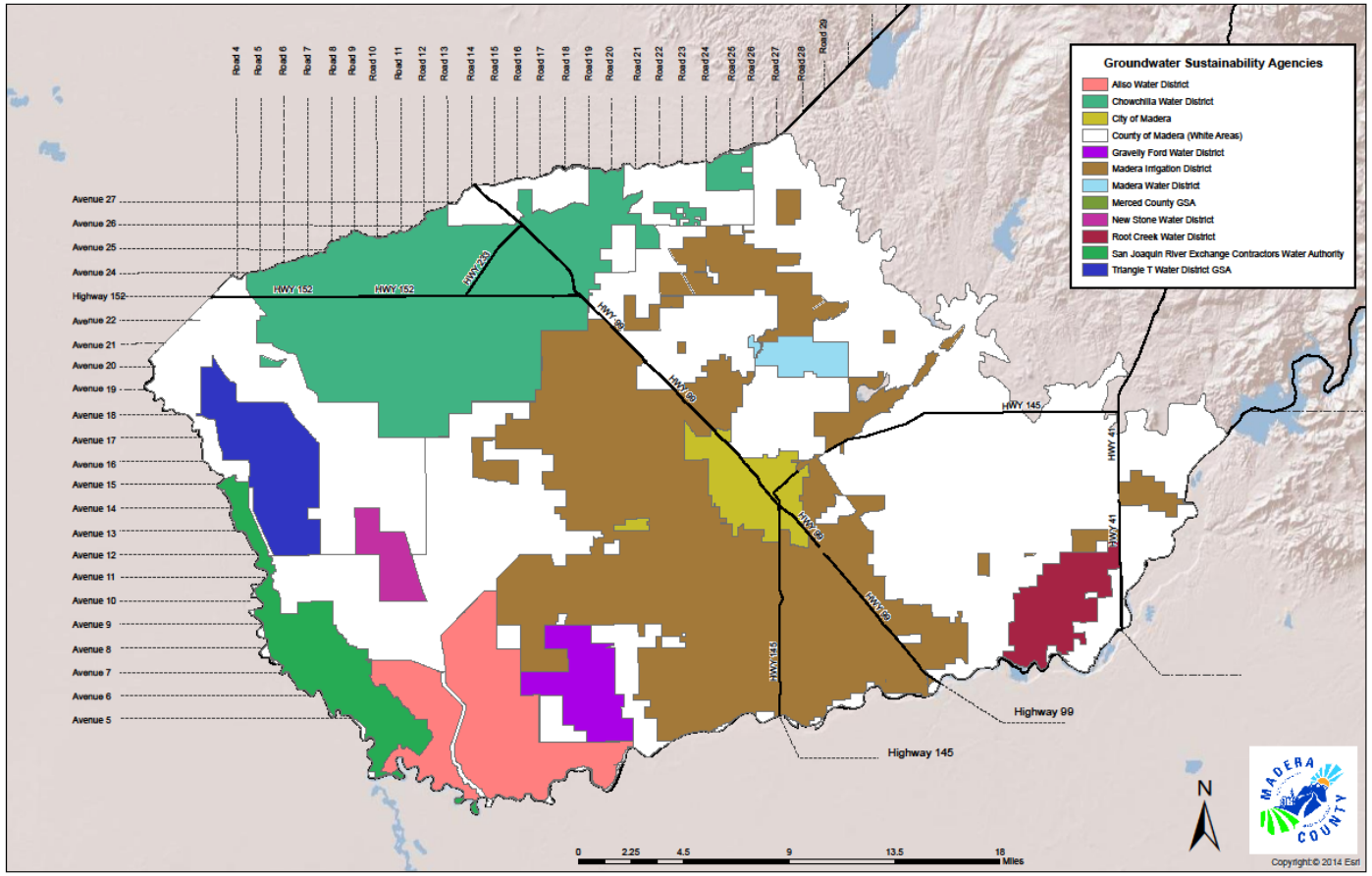
WATER TRADING ALLOCATIONS UNDER WATER MARKETS AND SGMA

Stephanie Anagnoson

Greg Young

April 30, 2020

SUBBASINS WITHIN MADERA COUNTY



In Chowchilla Subbasin:

- 42,500 acres total
- 35,000 irrigated acres

In Madera Subbasin:

- 178,000 acres total
- 85,000 irrigated acres

In Delta Mendota Subbasin:

- 3,334 acres total
- 981 irrigated acres

MADERA COUNTY AND MADERA COUNTY GSAs

- Counties were chosen by the state to represent undistricted areas
- Madera County GSAs have the least amount of surface water and the most amount of demand reduction
- The grant itself was applied for by the County for the entire County
- The pilot project is intended to be small and may just be County GSA

Native Groundwater in County GSAs

Native Groundwater (NG) for each subbasins:
= total infiltration of rainfall + natural water seepage in streams/channels

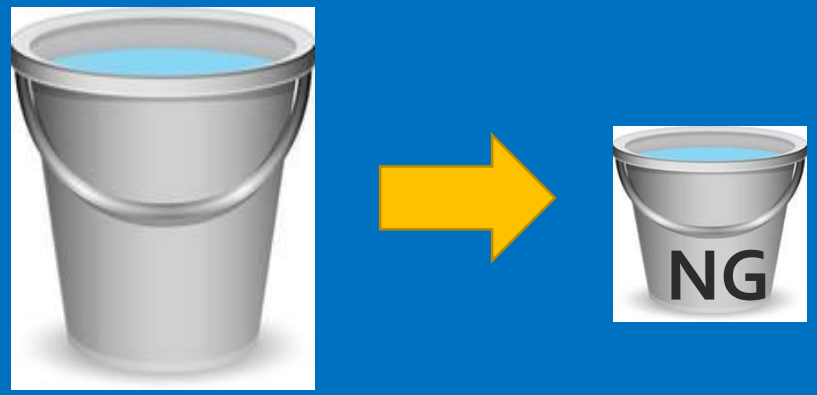
County GSA in Chowchilla Subbasin 21,000 af/yr

County GSA in Madera Subbasin 90,000 af/yr

Problem: Current use exceeds sustainable NG

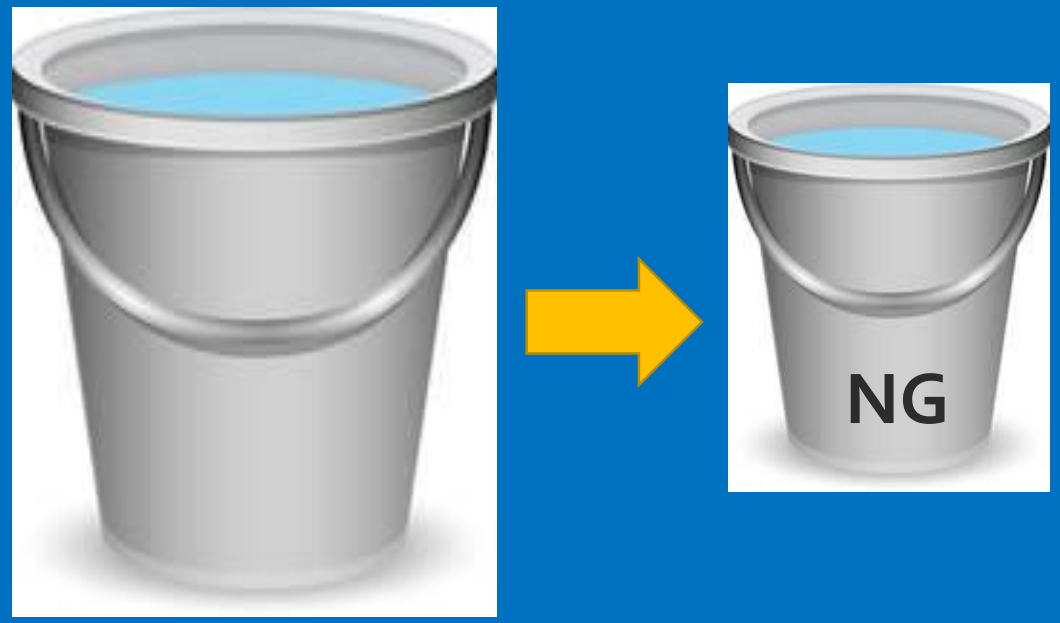
County GSA in Chowchilla Subbasin

Current Use	Native GW
82,000 af/yr	21,000 af/yr

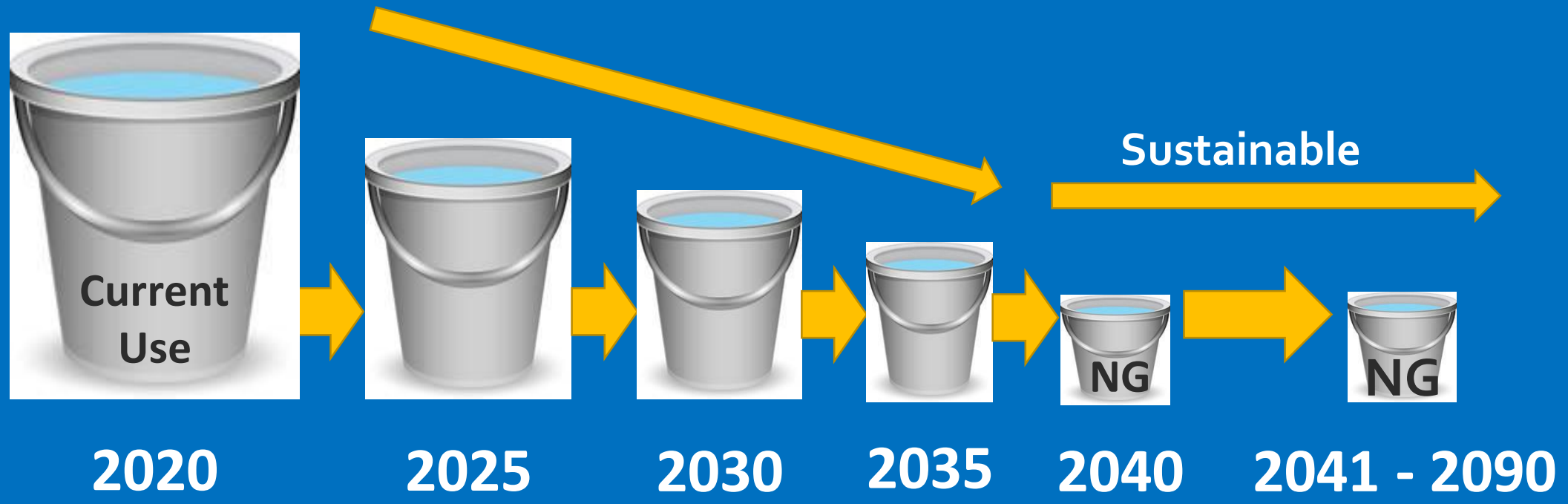


County GSA in Madera Subbasin

Current Use	Native GW
190,000 af/yr	90,000 af/yr



Reduction in total County GSA groundwater pumping in each subbasin from current to NG will occur by 2040



Options to achieve the reduction could include one or combination of:

- Allocations with no trading
- Allocations with trading ← **For this study**
- Easements
- Pumping fees
- Land use restrictions
- Well moratorium

In 2019, the County GSAs Advisory Committee recommended each acre in the GSAs would be allocated 0.5 af/yr of NG

- Chowchilla = 21,000 af/yr ÷ 42,500 acres
  = 0.47 af/ac/yr
- Madera = 90,000 af/yr ÷ 178,000 acres
  = 0.50 af/ac/yr

This is for County GSAs only – other GSAs plan to manage their NG portion differently

Allocations with trading require a market to facilitate the trading

- A market is where allocations are bought and sold
- Requires rules, monitoring, tracking, and administration
- Bottom line, it requires a defined allocation to be provided to each acre

WATER MARKET STRUCTURE AND OPTIONS

Janet Clements, Corona Environmental Consulting

April 30, 2020

OVERVIEW

- **Market Basics**
  - Key Prerequisites
  - Role of Market
  - Structure and Rules
    (e.g., Domestic Well Protection – What rules ensures domestic well protection?)
- **Decision Input:** Rules for Addressing Additional Concerns
- **Decision Input:** Carryover – Would carryover be allowed?
- **Decision Input:** Market Exchange – What will it look like?
- **Decision Input:** Anonymity/Confidentiality
  (e.g., will trader/buyer and price be known?)

MARKET BASICS - KEY PREREQUISITES

- GSA water budget
- Individual trading allocations
- Measurement of groundwater use
- Stakeholder buy-in

MARKET BASICS - ROLE OF MARKET

- Facilitate transfer of water from ***willing*** sellers to ***willing*** buyers.
- Enable **more efficient reallocation of limited resources** among agricultural users (e.g., compared to regulations alone).
- **Decrease negative impacts** associated with SGMA water use reductions.
- Establish rules to protect domestic water supplies.
- Empower and provide flexibility to landowners to make appropriate business decisions.

MARKET BASICS - STRUCTURE AND RULES

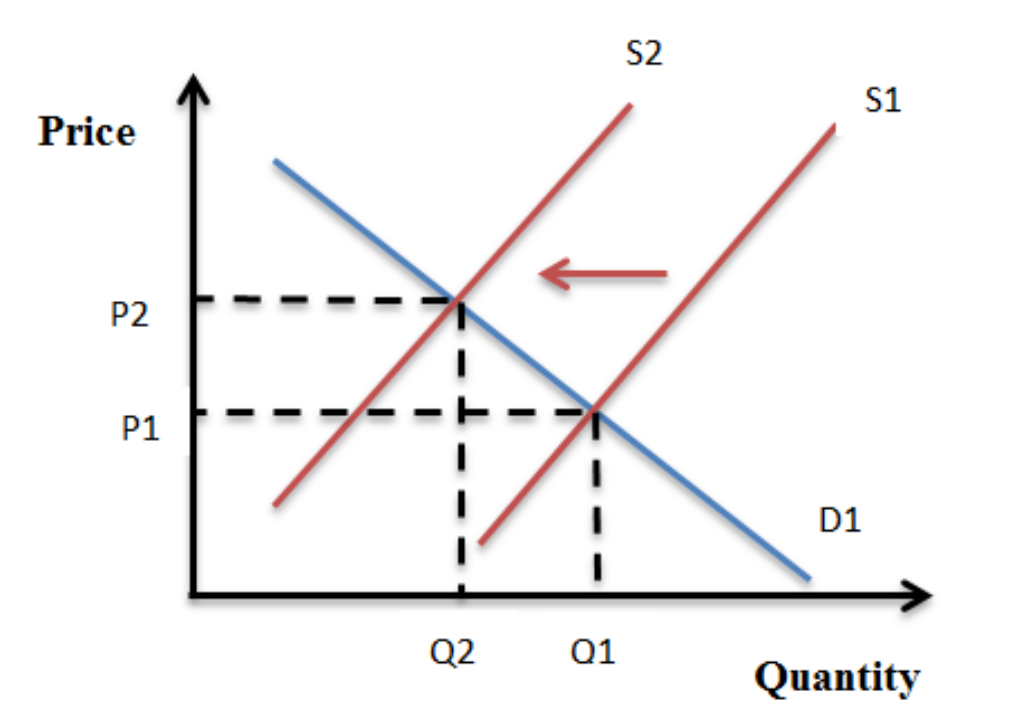
Three market decisions:

- **Buy** (higher-value crops)
- **Sell** (lower-value crops, non-irrigators)
- **Don't participate**

Trades not permanent

Trading allocations, not rights

Prices not set; open market



MARKET BASICS – TRADING ZONES

- Trading can only occur in hydrologically connected areas
  - No trading outside of sub-basin or outside of County
- Potential for trading across GSAs ?
  (may be legal considerations)
- Establish sufficient supply and demand

MARKET BASICS – IDENTIFYING POTENTIAL IMPACTS

Spatial

Changing location of groundwater pumping can change its impacts

Buyers pump more

Sellers pump less

Temporal

Impacts vary in time (wet v. dry years)

Impacts may not be immediate

Change in method or purpose of use

Quality and quantity concerns

Agricultural trades only in this market

MARKET BASICS - RESIDENTIAL/MUNICIPAL WELL PROTECTION

- Protecting residential and municipal water from potential impacts
- Water quantity
  - Potential to exacerbate lowering groundwater levels where additional pumping occurs
  - High cost for most domestic well owners if groundwater levels drop and well fails
- Water quality
  - Potential to exacerbate contamination migration where additional pumping occurs
- Understand effects with and without market

MARKET BASICS - UNDERSTANDING POTENTIAL IMPACTS

Understand potential changes in pumping (e.g., spatially)

Identify potential impacts/hot spots associated with SGMA's 6 undesirable results and third party impacts

Existing data and models for GSP and Groundwater Management Plan

Establish sustainability indicators that trigger action before reaching a threshold

Water quality • Depletions of interconnected surface water • Lowering of groundwater levels • Surface water •

MARKET BASICS – RULES FOR PROTECTING RESIDENTIAL/MUNICIPAL WATER SOURCES

Trading ratios – e.g., allow buyer to pump more water than seller would have pumped (incentivize selling); buyers buy at higher ratio

Directional restriction – create "sell only" zones around wells. This would reduce pumping around the wells because buyers are pumping the water elsewhere.

Limit total extractions – limit pumping near sensitive areas

Prohibit trading when a defined parameter reaches a predefined threshold. Thresholds will be designed to identify the potential for adverse effects before they occur.

QUESTION 1

1. Please describe any concerns you may have related to strategies for protecting residential and municipal water sources.

DECISION INPUT: MARKET RULES TO ADDRESS ADDITIONAL CONCERNS

"Cornering the market"?	• **Strategy:** Cap amount purchased per irrigated acre • Decisions on disclosure of market information can alleviate concerns
Profiteering or "flipping" water	• **Strategy:** No resale of water
Facilitating development	• Trading allocations, not water rights • Trades are not permanent • Development must obtain permit; fit into SGMA compliance
Annual v. multi-year trades	• Will multi-year trades entice more people to enter the market? • Other concerns?

QUESTIONS 2 AND 3

2. Please indicate whether you have concerns related to any of the following potential pilot Market rules or strategies for protecting against these adverse effects (select all that apply):

3. Please describe your concerns associated with the Market rules you selected above.

DECISION INPUT: CARRYOVER

Should NG Allocation have carryover component
(with some limitations?)

Potential Benefits

- Provide greater flexibility for buyers and sellers
- Can raise groundwater levels (temporarily)

Potential Consequences

- Impacts of using allocation now v. later year can be different.
- Carryover storage could accumulate to high levels and have adverse impacts
- Carryover storage could compete with storage for recharge or NG

QUESTIONS 4 AND 5

4. Please indicate whether you have concerns related to any of the following potential pilot Market rules related to carryover (select all that apply):

5. Please describe your concerns associated with the Market rules you selected above.

DECISION INPUT: MARKET EXCHANGES

- **Exchanges:** Connecting buyers and sellers
- **Anonymity and Confidentiality:** Information available to potential buyers, sellers, and/or the public
- **Goal is to reduce transaction costs and market biases/information asymmetry**

DECISION INPUT: OPTIONS FOR MARKET EXCHANGES/TRADING

- Bilateral contracts or "coffee shop" markets
- Brokerage
- Bulletin boards – "Craig's list for water;" registry (e.g., Mojave)
- Auctions and reverse auctions
- Electronic clearinghouses/ "smart markets" (e.g., Fox Canyon, Twin Platte, NB)

QUESTIONS 6 AND 7

6. Which of the following methods for conducting trades do you prefer or think should be established/allowable for the Market?

7. Do you have other comments or concerns regarding the way that market exchanges could be made?

DECISION INPUT: ANONYMITY AND CONFIDENTIALITY

- Few environmental markets make information available on individual transactions, including negotiated price (although some do)
- Can be viewed as confidential business/sensitive financial information
- Price disclosure can discourage trading
- Price disclosure can reduce information asymmetry (e.g., Mojave Water Agency)

DECISION INPUT: ANONYMITY AND CONFIDENTIALITY, LESSONS FROM TWIN PLATTE (NB) SMART MARKET

- Anonymous trades can remove emotion from deals and enable more trades.
- Small/rural areas often have strong interpersonal relationships – this can hurt or help deals.
- Anonymity can remove biases.
- Confidentiality from other participants and regulating agency.
- Reporting aggregated data and anonymizing individual transactions can provide needed information while maintaining confidentiality of participants.

DECISION INPUT: ANONYMITY AND CONFIDENTIALITY: LESSONS FROM FOX CANYON GROUNDWATER MARKET

- Concerns over regulator having access to water use data (viewed as confidential business information)
- Ranch Systems (metering infrastructure) maintains water use data
- Third party administrator only sees annual water use (enough to know if grower has exceeded allocations)
- Third party reports violations to regulator

QUESTIONS 8 AND 9

8. Do you have any comments or concerns about public disclosure of price or other information on individual Market transactions? Please explain.

9. Do you have comments or concerns regarding any of the strategies outlined above related to confidentiality and anonymity in the Market?

WATER MARKET ADAPTIVE MANAGEMENT

- SGMA requires GSAs to periodically evaluate "whether the actions under the plan are meeting the plan's management objectives and whether those objectives are meeting the sustainability goal in the basin."
- Continuously monitor and review sustainability indicators to ensure against adverse effects/third party impacts
- Starting with Market 1.0 as Pilot Project under grant

"Trading programs are only as good as their governance systems and rules. Strong governance requires transparency, oversight, monitoring, enforcement, and protections for third parties, which includes existing water rights holders, disadvantaged communities, and groundwater dependent ecosystems. "

Source: Babbit et al. (undated)

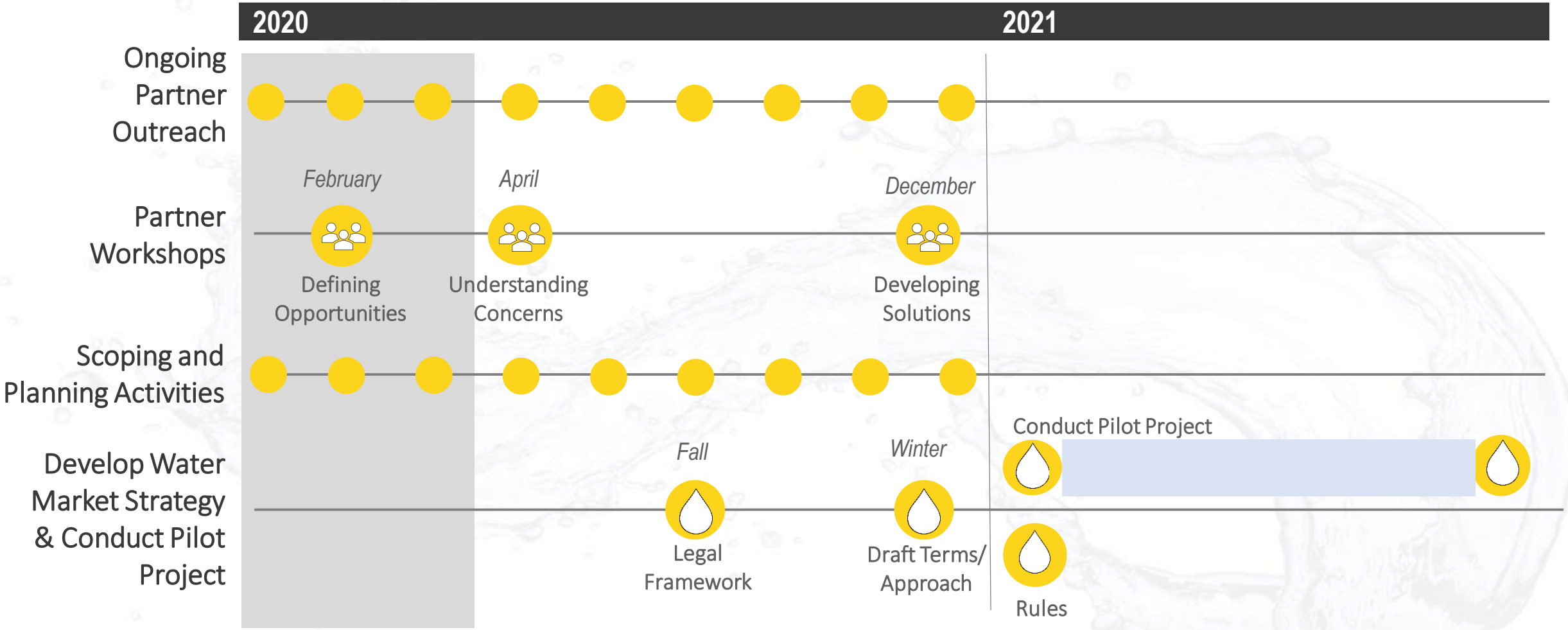
QUESTION 10

10. Do you have other comments or feedback on the market structure and options, as presented in this informational webinar? Do you have comments or feedback on any other aspects of the pilot Market or Market in general?

Recap, Next Steps and General Comments

- What we learned today
- Partner Workshop #3: *December 1, 2020*
- Review Water Market Project Timeline
- We invite you to submit *written* comments
- General comments

Proposed Water Market Project Timeline



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Thank you for participating!

Submit written feedback/questions via:

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