

MANAGING OUR GROUNDWATER  
FOR THE FUTURE



TEHAMA COUNTY  
FLOOD CONTROL AND WATER CONSERVATION DISTRICT

# Tehama County Well Registration Community Workshop

Los Molinos Veterans Hall  
September 28, 2023 (6:00 – 8:30 PM)

[TehamaCountyWater.org](https://TehamaCountyWater.org)

# Workshop Objectives

## COMMON TERMS

SGMA (“Sigma”): Sustainable Groundwater Management Act

GSA: Groundwater Sustainability Agency

GSP: Groundwater Sustainability Plan

Provide the public an opportunity to understand the Well Registration Program:

- Purpose and connection to achieving long-term groundwater sustainability
- Resources and support
  - Assistance completing Well Registration Forms
  - One-on-one Q&A

Workshop Design:

Beginning in full group presentation followed by Q&A

Assistance stations available at any time.



# Meet The Project Team

Convener: Tehama County Flood Control and Water  
Conservation District

- Nichole Bethurem

Groundwater Commission

- Todd Hamer

Technical Consultant: Luhdorff & Scalmanini Consulting  
Engineers (LSCE)

- John McHugh

Facilitation Support: Consensus Building Institute (CBI)

- Stephanie Horii and Sophie Carrillo-Mandel

# Agenda

- 6:00 pm Open and Welcoming Remarks
- 6:05 pm Workshop Orientation
- 6:10 pm Context: Achieving Long-Term Groundwater Sustainability
- 6:20 pm Tehama County Well Registration Program and Fee Schedule
- 6:40 pm Open Q&A
- 7:00 pm Assistance Stations:  
Well Registration Form Assistance | Groundwater Management Info | Getting Involved
- 8:00 pm Adjourn



Reminder: You can go to the assistance stations at any time.



Short Presentations Followed by Q&A



Raise Hand for the Queue or Submit Comments Sheets



Focus on Topic



Share the Air (take turns and ~2 minutes)

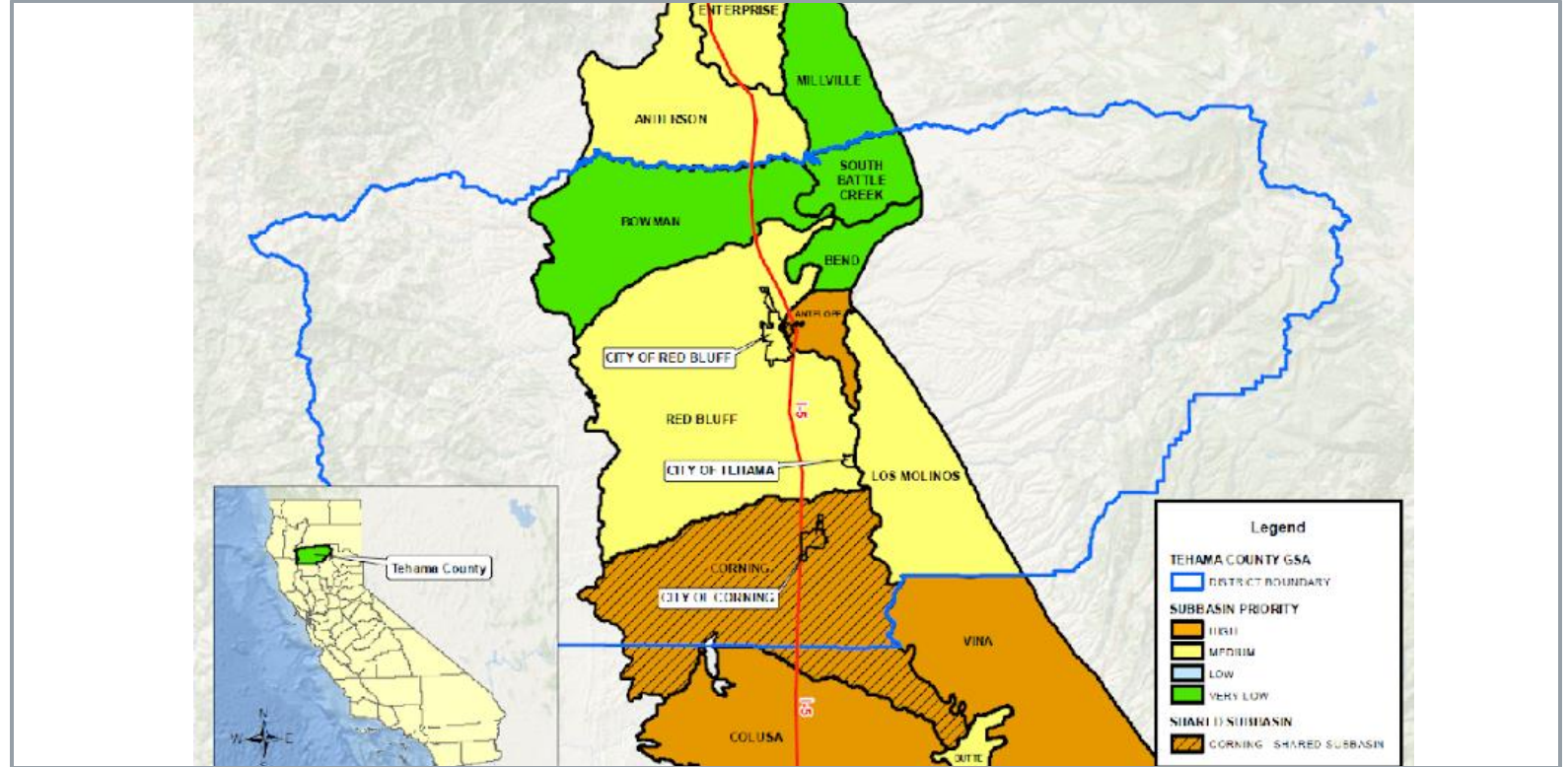


Respectful Space Where All Points Have Value



Need Assistance? Reach out to Staff at Anytime

## Participating In The Workshop



# Achieving Groundwater Sustainability

## Context for the Well Registration Program

## Show of Hands:

*How Familiar Are You with SGMA?*



The Sustainable Groundwater Management Act (SGMA) -- law was passed in 2014



Values Local Control  
Groundwater Sustainability Agencies (GSAs)



Management plans = Groundwater Sustainability Plans (GSPs)

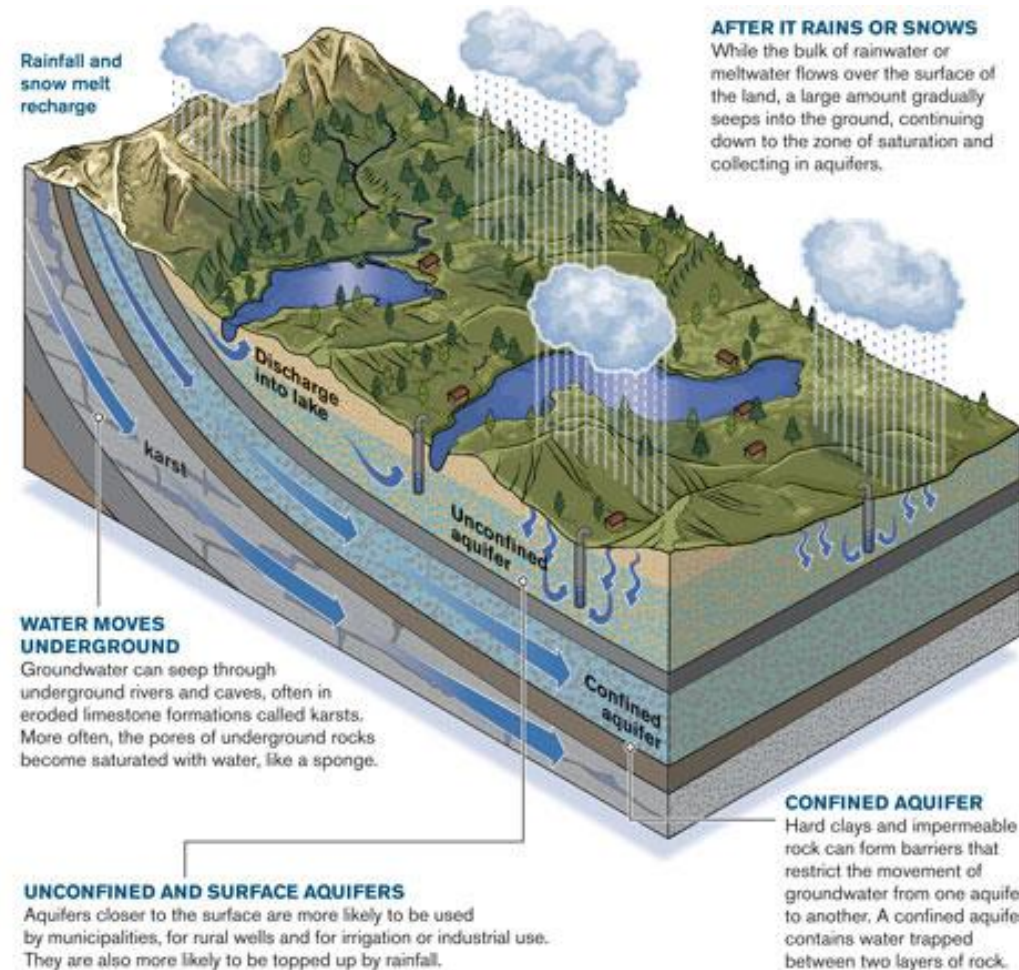
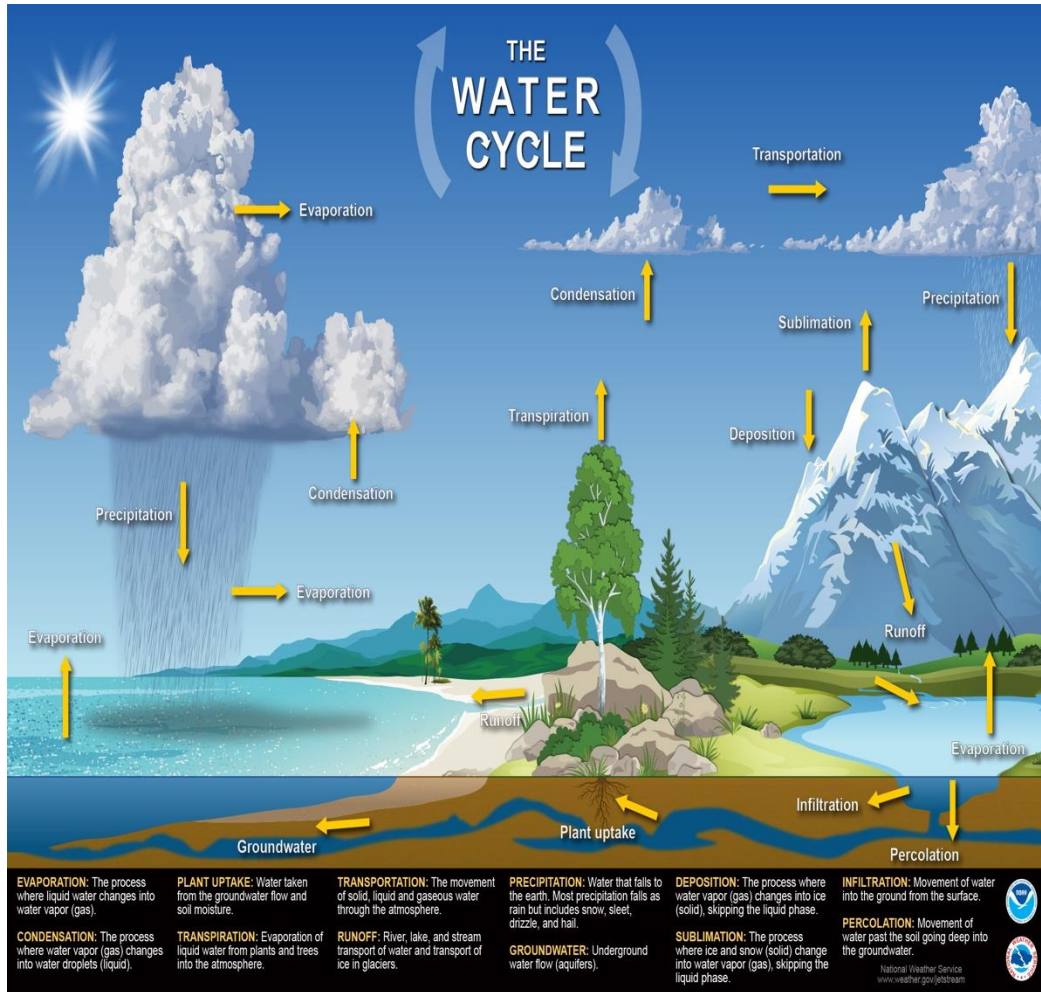


GSPs submitted to the State by January 31, 2022



Sustainability must be achieved within 20 years  
(by 2042)

# WHERE DOES YOUR WATER COME FROM?



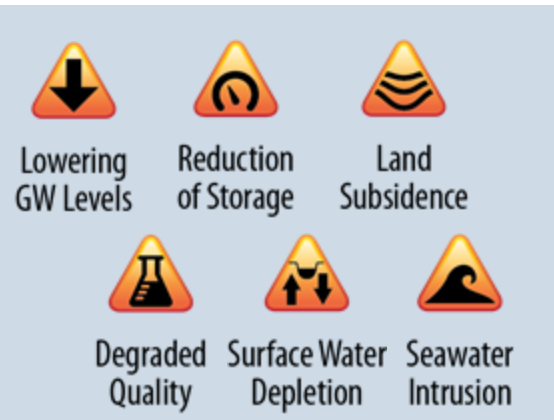


# What Is the Purpose of SGMA?

- Promote sustainable management of groundwater basins
- Enhance local management of groundwater, State will step in if necessary
- Improve data collection and understanding of groundwater resources and management
- Avoid or minimize undesirable results to groundwater



## Undesirable Results



# Groundwater Conditions



Lowering GW Levels



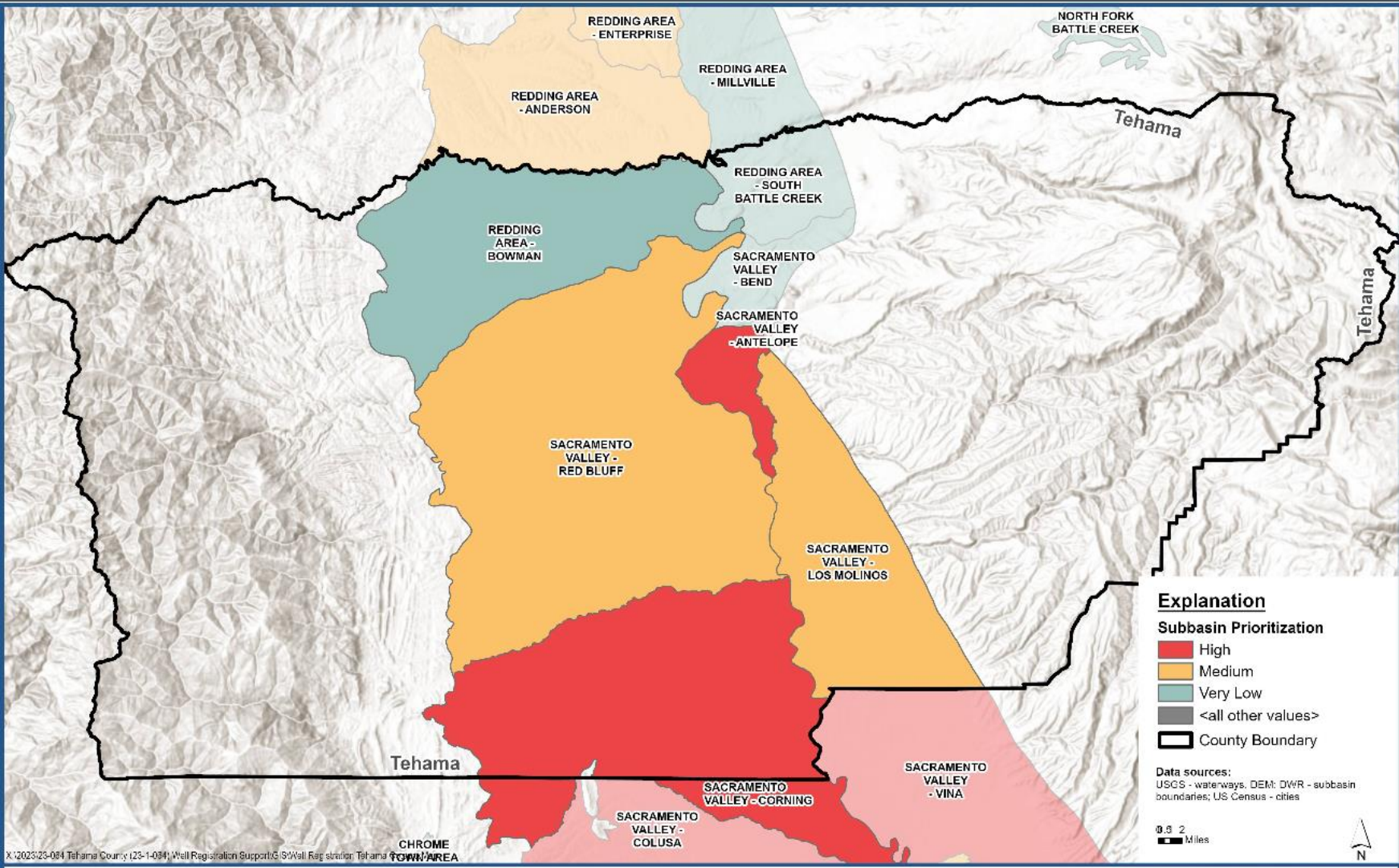
Reduction of Storage



Degraded Quality



Surface Water Depletion



# Groundwater Conditions – Groundwater Elevations Los Molinos Subbasin

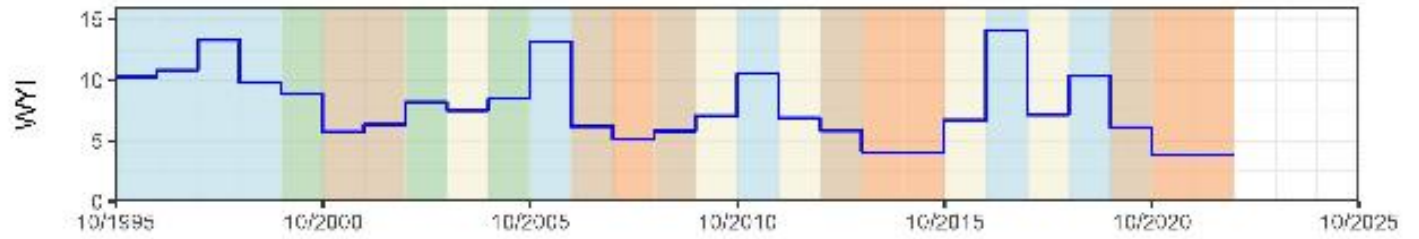
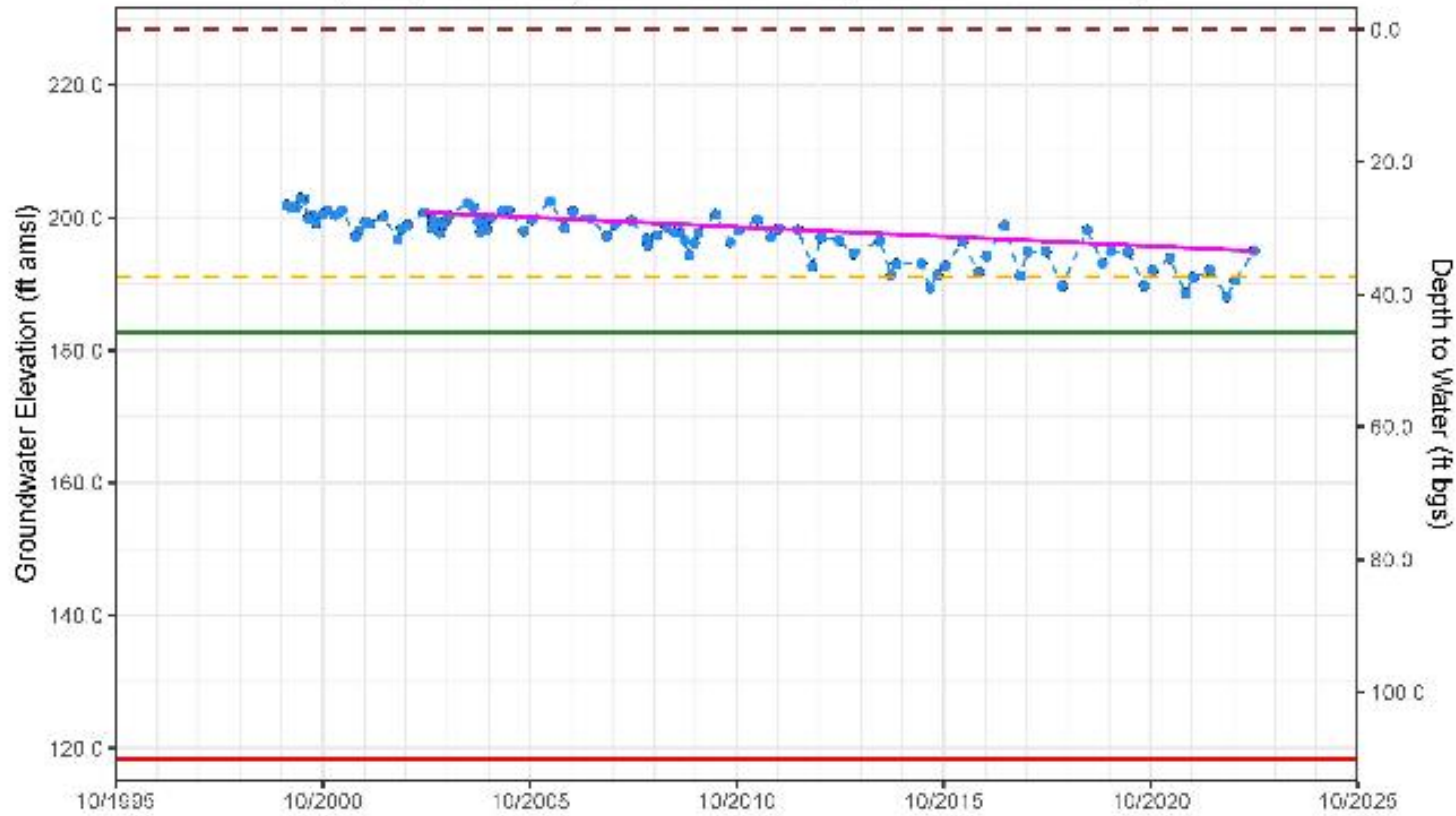


**Sustainable Management Criteria**  
 IM (2027) = 191.1 ft amsl  
 MO = 182.7 ft amsl  
 MT = 118.4 ft amsl

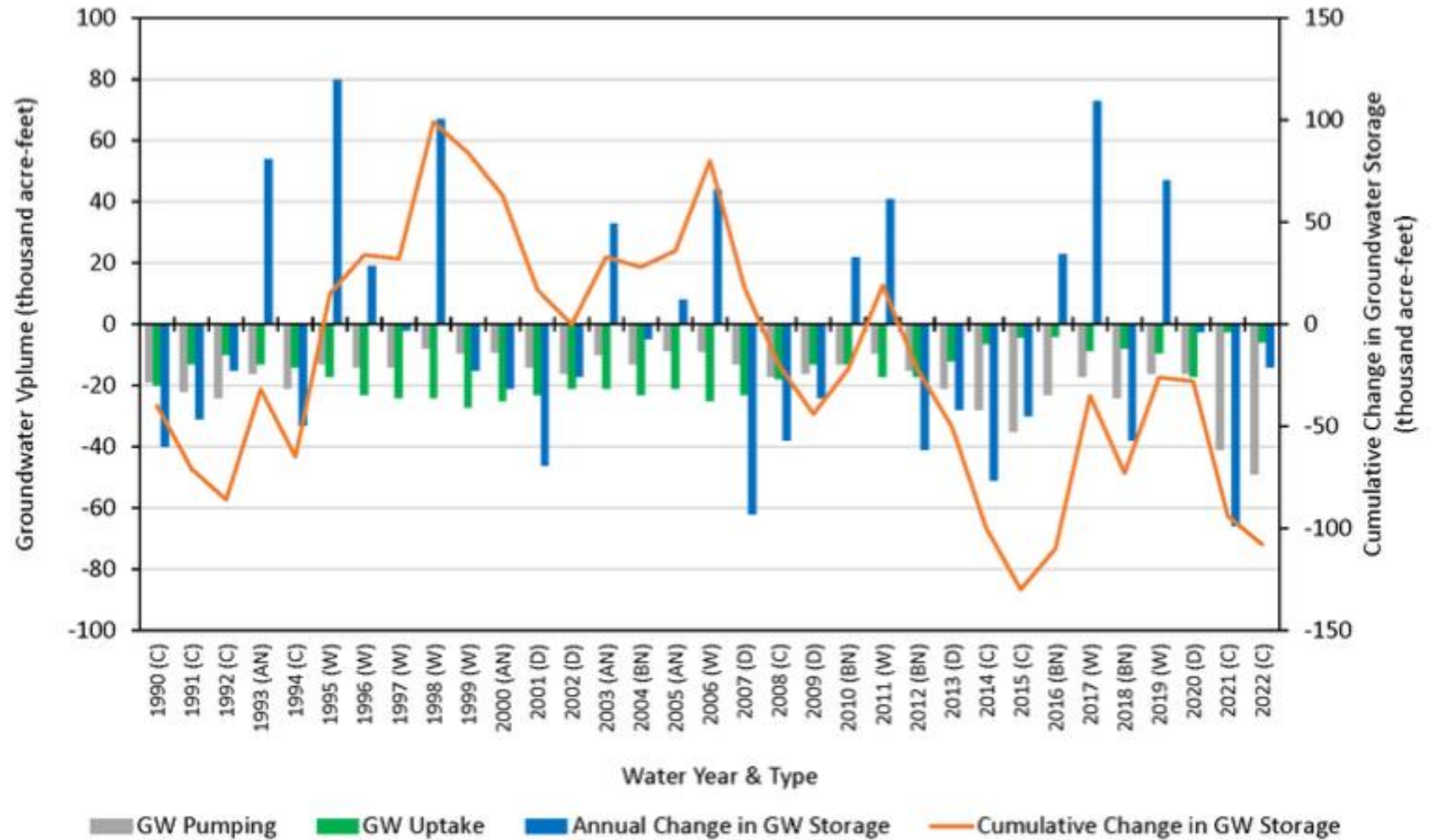
**Statistics of spring water levels for past 20 years (2003 to 2023):**  
 Change = -5.8 ft  
 Average rate of change = -0.29 ft/year  
 Average water level = 198.23 ft amsl

## Los Molinos Subbasin – State Well Number (SWN) 24N02W12P001M (LM-4U)

Upper Aquifer Well Depth: 370 ft. Perforation top & bottom: 165 – 360 ft bgs



# Groundwater Conditions – Groundwater Storage Los Molinos Subbasin



# SGMA Implementation Timeline



# Groundwater Sustainability Plans

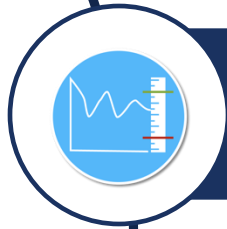
To view go to [tehamacountywater.org](http://tehamacountywater.org)



## Describe the Basin Conditions

Plan Area, Subbasin Setting & Water Supplies

**What water sources are used in the basin and what are the basin conditions related to those uses?**



## Define Basin Sustainability

Sustainable Management Criteria & Monitoring

**What is sustainable groundwater management?**



## Develop Projects/Management Actions & Implementation Plans

**How can we ensure groundwater sustainability?**



## Develop & Adopt GSPs

Submitted GSPs to DWR: January 31, 2022

**Will this plan meet our sustainability goals?**

# Options for Projects and Management Actions

Range of potential PMAs (“Keep all options on the table, pick appropriate ones for our area.”)

## Supply Augmentation

- Direct and In-Lieu GW Recharge
- Interbasin surface water transfers
- Water supply reservoir construction/renovation/conversion
- Levee Setback/Stream Channel Restoration

## Demand Management / Water Use Efficiency

- Riparian habitat restoration  
(Invasive plant removal)
- Incentivized water use efficiency; recycled water
- Stormwater Management Improvements

## Demand Management / Water Use Efficiency (continued)

- System Modernization
- Surface Water Conveyance Improvements
- Less water-intensive crops
- Extraction allocation program
- Pumping fees
- Land fallowing program
- Land usage restrictions
- Well deepening/replacement prog.
- Well metering
- Well permitting ordinances

## Monitoring and other Studies

- Expanded monitoring network
- Public data portals and info sharing
- Water quality snapshots
- Identifying locations of concern
- GDE Health
- Well registration program
- Enhanced boundary flow measurement

## Education and Outreach

- Grower Education
- Domestic well owner outreach

Highlighted/Underlined PMAs are current or expected in the near-term

## How Will the State Funding Be Used?

Covers implementation of the GSPs for the next **three to five years**

Reduce costs and help to provide **water security to disadvantaged communities.**

Begin the process of **recharging aquifers** protecting access to drinking water, riparian areas and live waterways.

Better understanding of the **effects of overdraft** on the community.

Enhanced community **outreach and education** to allow stakeholders to work together to find solutions before groundwater issues become irreversible.

DWR SGMP Grant Awards  
(Announced Sept 12, 2023)

- Antelope: \$1,572,450
- Red Bluff: \$3, 568,00
- Corning: \$8,080,600
- Los Molinos: \$1,823,00

Total grant funding: >\$15 million

*“If you have this grant funding, why do you need a fee?”*



# Reminder: Interested Parties Must Be Included In SGMA Planning/Implementation

- All Groundwater Users
- Holders of Overlying Rights (agriculture and domestic)
- Municipal Well Operators and Public Water Systems
- Tribes
- County
- Planning Department/Land Use
- Local Landowners
- Disadvantaged Communities
- Business
- Federal Government
- Environmental Users
- Surface Water Users (if connection between surface and groundwater)

The GSPs aim to find a balance that addresses diverse and sometimes competing interests related to groundwater use, environmental conservation, economic growth, and community well-being

# Progress to Date: Pre-SGMA and Developing GSPs

## Pre-SGMA

- **AB 3030** Groundwater Management Plan (1996 and 2012 update)
- **Groundwater Commission** established (2016)

## GSA Formation and Development of the GSPs

- **District is the GSA** in Tehama County boundaries (2017)
- Established new **website** and **interested parties list**
- Awarded **State funding** for technical and outreach support
- Held 5 county-wide **public meetings**; 3-4 rounds of basin-specific
- Developed voluntary **interbasin coordination** framework for Northern Sacramento Valley
- **Submitted GSPs** for Red Bluff, Antelope, Los Molinos, Corning, and Bowman subbasins (Jan 2022)



# Progress to Date: Implementing the GSPs

- Conducted initial **financial feasibility** planning (Spring 2022)
- Submitted first **annual reports** for five subbasins (Apr 2022)
- Explored and established a **Well Registration Program** and funding structure (more on this to come) (Jun 2022)
- Adopted regulations governing **new and replacement wells** (Sep 2022)
- Commission exploring **well drilling requirements**
- Hosted public meeting (Nov 2022) for **State grant application** (Dec 2022)
  - Final awards announced (Sep 2023) (>**\$15 million** for Red Bluff, Antelope, Los Molinos, and Corning Subbasins)



# What If We're Not Succeeding? SGMA Backstop

## What Triggers State Intervention and Basin Probation?



Jul 1, 2017 No GSA or Alternative

Feb 1, 2020 Critical Overdraft &  $\left\{ \begin{array}{l} \text{No Plan} \\ \text{DWR Fails Plan} \end{array} \right.$

Feb 1, 2022  $\left\{ \begin{array}{l} \text{No Plan} \\ \text{DWR Fails Plan \& Long-Term Overdraft} \end{array} \right.$

Feb 1, 2025 DWR Fails Plan & Surface Depletions

# Alternative is State Intervention Fee Schedule

(Pathway we want to avoid!)



Fee Category	Fee Amount	Applicable Parties
Base Filing Fee	\$300 per well	All extractors required to report (excludes de minimis extractors).
Unmanaged Area Rate	\$10 per AF (metered)	Extractors in unmanaged areas (excludes de minimis extractors).
	\$25 per AF (unmetered)	
Probationary Rate	\$40 per AF	Extractors in probationary basins (excludes de minimis extractors).
Interim Plan Rate	\$55 per AF	Extractors in probationary basins where the State Water Board determines an interim plan is required (excludes de minimis extractors).
De minimis Fee	\$100 per well	De minimis extractors in probationary basins.
Automatic Late Fee	25% per month	Extractors that do not file reports by the due date.

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# Well Registration Program and Fee Schedule

*Why did I get this confusing form, and what do I do with it?*



# Well Registration Program

- **What are we trying to solve?**
  - Cannot have a **balanced water budget** without better understanding how much water is going in and out of the system
  - **Reliable long-term funding** calls for diverse portfolio of options; grants and partnerships will not cover all costs
  - Need sufficiently robust GSPs to **comply with SGMA** and achieve **sustainability goals**

# Well Registration Program

- **Why have a well registration program?**

- Need to address major **data gaps** - We really don't know how many wells we have in the County
- Of the wells we do know about, **less than half have a known size**
- Without adequate information, a reasonably **proportional fee** is not possible

**Does SGMA give well registration authority to GSAs?**

**-- Yes**

*Water Code 10725.6 -- A [GSA] may require registration of a groundwater extraction facility within the management area of the groundwater...*



# What was our approach?

Starting in 2021, the Groundwater Commission and the Board of Directors reviewed multiple methodologies to fund SGMA, considering the various tradeoffs.

Aimed to find options that would be fair, feasible, and successful:

- Achieve the groundwater sustainability goals
- Balance diverse needs (e.g., socio-economic)
- Maximize other funding sources like grants
- Minimize administrative and operation costs
- Minimize cost burdens to individuals
- Be proportional to groundwater use / benefit

Regardless, nearly all options required well registration.

# Comparing Methods and Fee Estimates

Method	Pros	Drawbacks	Estimated Initial Cost to Land/Well Owner
<b>Well Count/Size</b>	Relatively good proxy for usage	High cost to verify	\$258 per well/year
<b>Land Use/Irrigated Acre</b>	Close estimates of usage	Estimates, high cost to validate	\$7.67 per irrigated acre/year
<b>Measured Flow</b>	Directly related to usage	High cost to verify and maintain	\$2.99 per acre-foot/year
<b>Flat Fee per Acre</b>	Simplest to administer; brings down per person costs	Fairness concerns for those who use little groundwater	\$0.95 per acre/year
<b>Hybrid/Phased: Flat Fee/Acre + Well Type</b>	Hybrid, phased approach of incorporating usage with keeping per person costs low	Still estimates, potential for fairness concerns	\$0.29 per acre/year startup, then \$193 per well/year

# Comparing Methods and Fee Estimates – Detailed Calculations

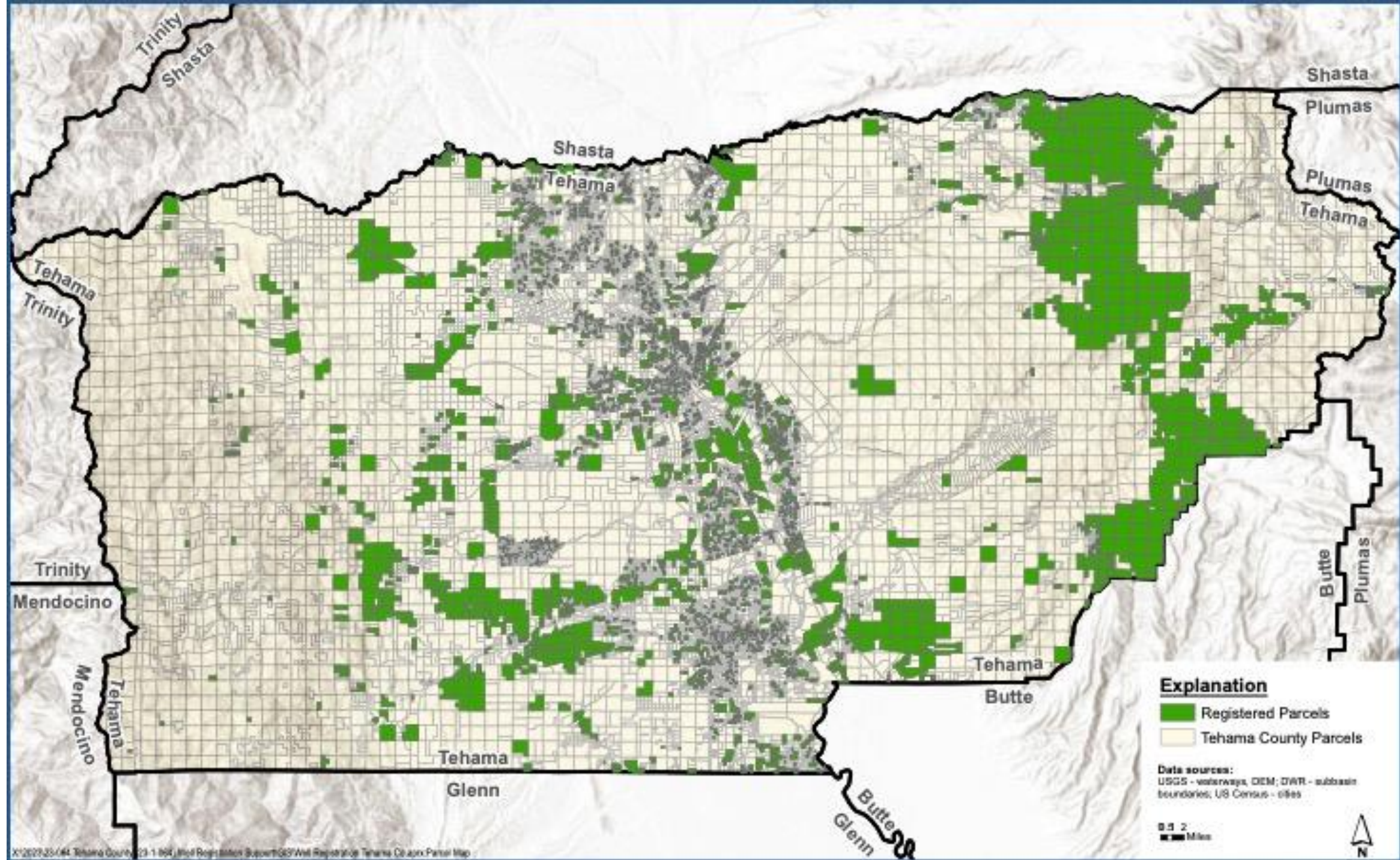
	Method of Funding	General GSA/GSP Implementation Cost for Three Years	Create Well Registration Program	Create Well Idle or Abandonment Program	Field Verification and Enforcement Annual Cost	Program Administration Annual Cost	Initial Three Year Cost to County	Annual Cost to County for First Three Years	Initial Cost to Land/Well Owner Estimates	Per	Scale Example
1	Well Count/Size	\$1,900,000	\$200,000	\$75,000	\$50,000	\$50,000	\$2,475,000	\$825,000	\$258	Well/year	\$50-\$1,000 per well
2	Land use/Irrigated Acre	\$1,900,000	\$200,000	\$75,000	\$75,000	\$100,000	\$2,900,000	\$966,667	\$7.67	Irrigated Acre/year	\$5-\$15 per Irrigated acre
3	Measured Flow	\$1,900,000	\$200,000	\$75,000	\$150,000	\$200,000	\$3,225,000	\$1,075,000	\$2.99	Acre -foot	
4	Flat Fee per Acre	\$1,900,000				\$30,000	\$2,005,000	\$668,333	\$0.95	Acre/year	
	Flat Fee/acre + well type	\$1,900,000	\$200,000	\$75,000	\$50,000	\$50,000	\$2,475,000	\$825,000	\$193.36 \$0.29	Well/year Acre/Year	\$50-\$1,000 per well

**Assumptions:**

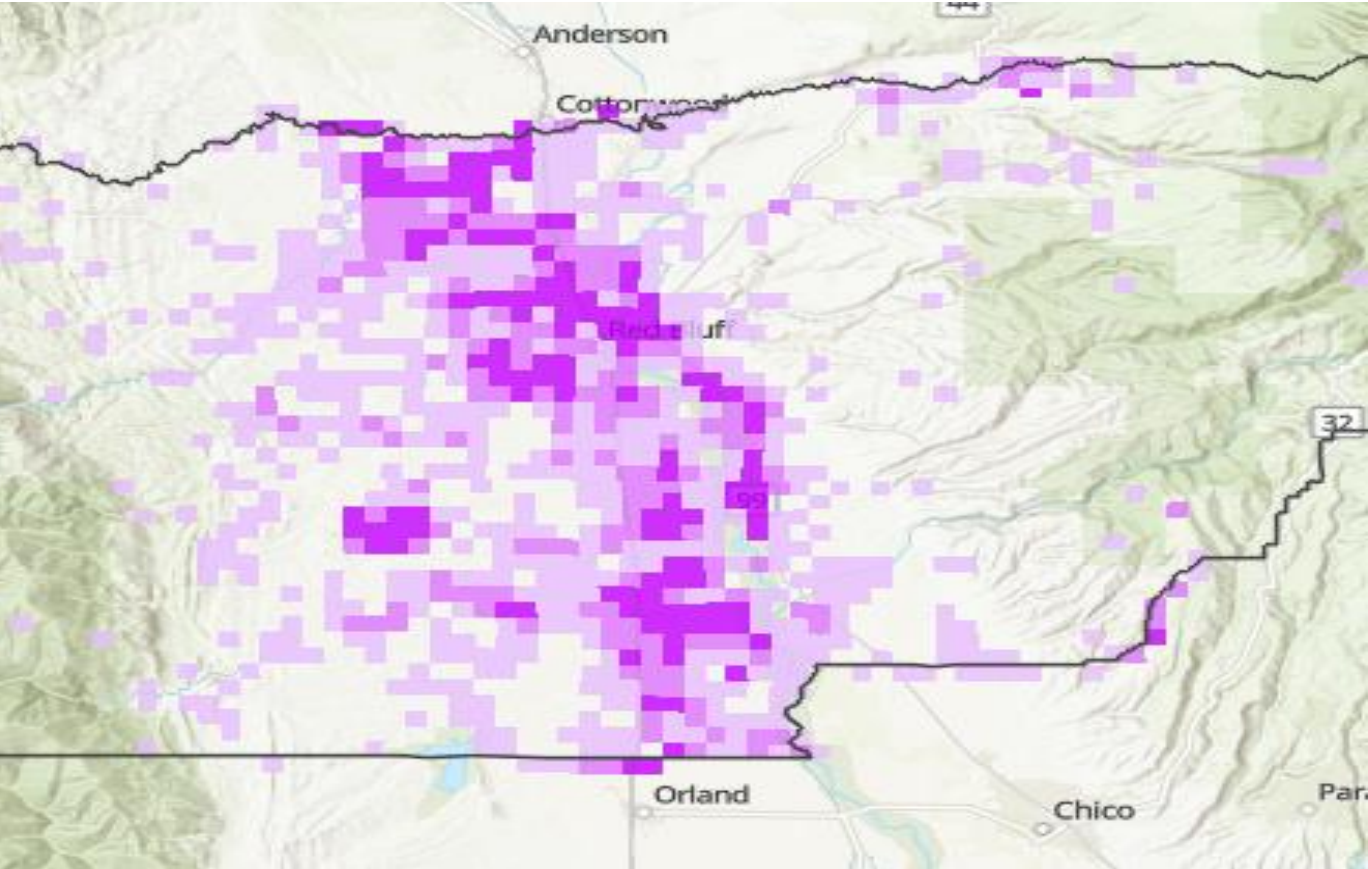
Well count is an estimate and assumes 10% of domestic wells well not be de minimis number used is 3200 wells actually per well fee will vary based on type

Land use is an estimate and will be on a scale based on use type used 126,000 acres for estimate

Measured flow is based on an estimate of total AC feet used as flow data does not exist estimated total AC feet used is 360,000



# DOMESTIC WELL COMPLETION REPORTS - 2023 CALIFORNIA'S GROUNDWATER LIVE



### Legend

#### California Counties



#### Groundwater Basins



Bulletin 118 Groundwater Basins

#### Domestic Well Completion Report Density

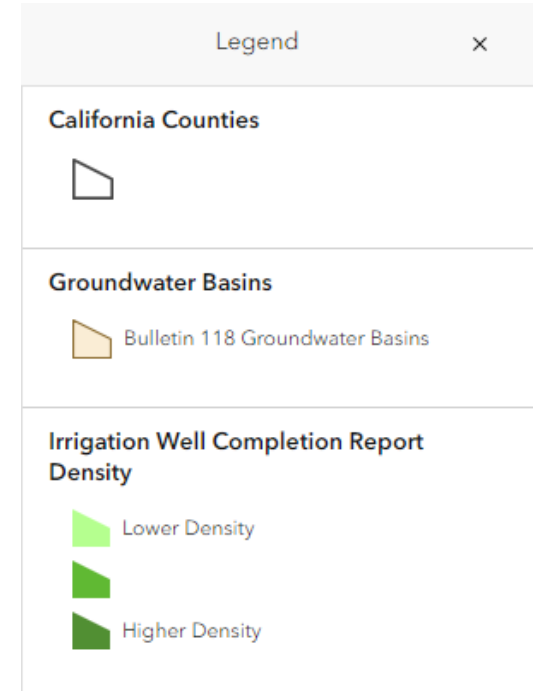
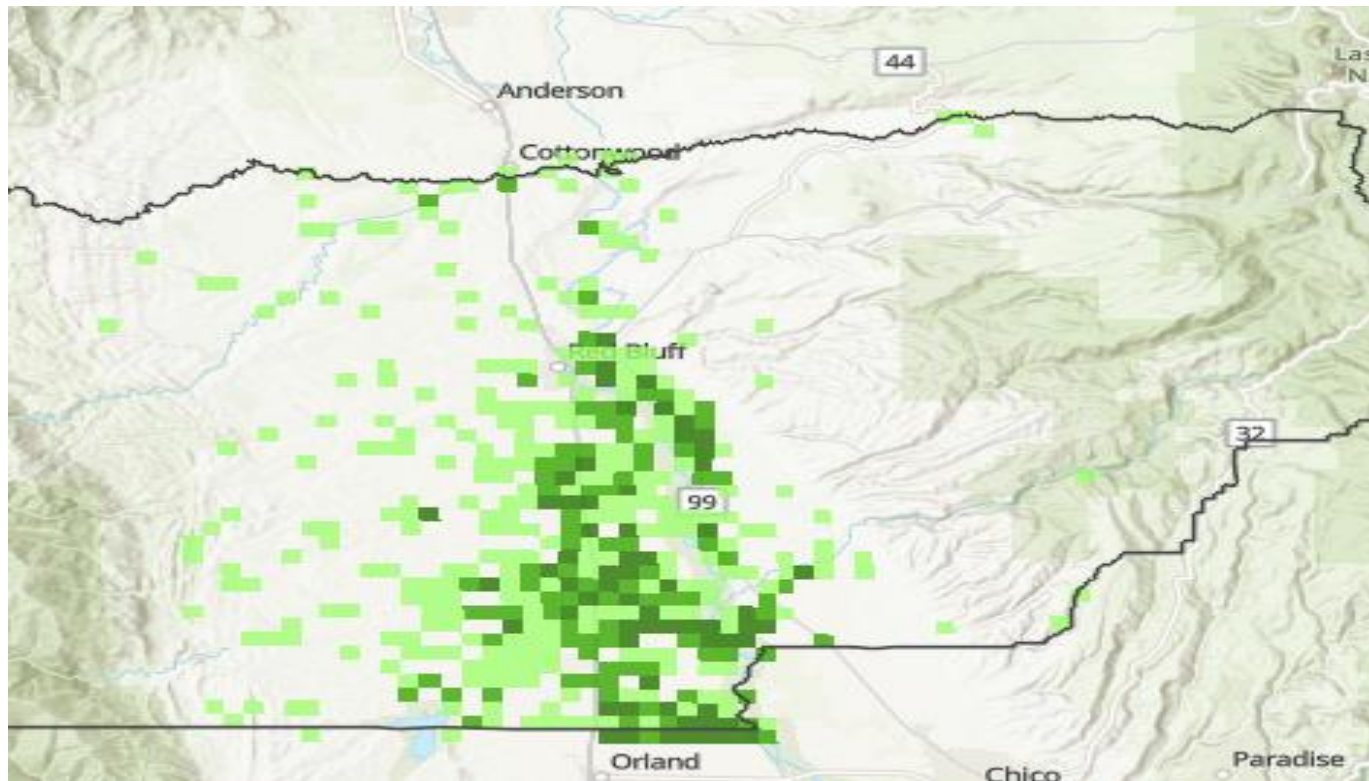


Lower Density



Higher Density

# IRRIGATION WELL COMPLETION REPORTS - 2023 CALIFORNIA'S GROUNDWATER LIVE



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# Administrative Fee on a Per Acre Basis (3 years, exemptions)

June 2022: Tehama County Flood Control and Water Conservation District adopted a Resolution requiring all wells in the County to be registered, and all qualified APNs to pay \$0.29/acre/year in order to cover the cost of the registration program.

- A small countywide fee that is placed on the tax roll
- The fee will be assessed to all APNs large enough to cover the cost of billing
- This fee is assessed regardless of property use
- This fee will initially be used to set-up a well registration program

Summer 2023: The Board of Directors adopted additional terms and exemptions: The fee is in place for three years but for those that register their wells prior to April 10 there will be an exemption from future registration fees for the remaining years.

# Administrative Fee (3 years; exemptions)

To qualify for exemption there are five minimum requirements:

1. Well registration form must be submitted **by April 10 in the given year**; and
2. Well registration form must have the **APN or address of the property** that has the well or does not have a well; and
3. Well registration form must have identified the well use as either **residential, agricultural, or other**; and
4. If identified as **agriculture**: identify either **well size and typical annual volume**, or **current crop type and acreage used for each crop** identified; and
5. If identified as **other/combination**, include a **detailed description** of what exactly the other/combination activity is.

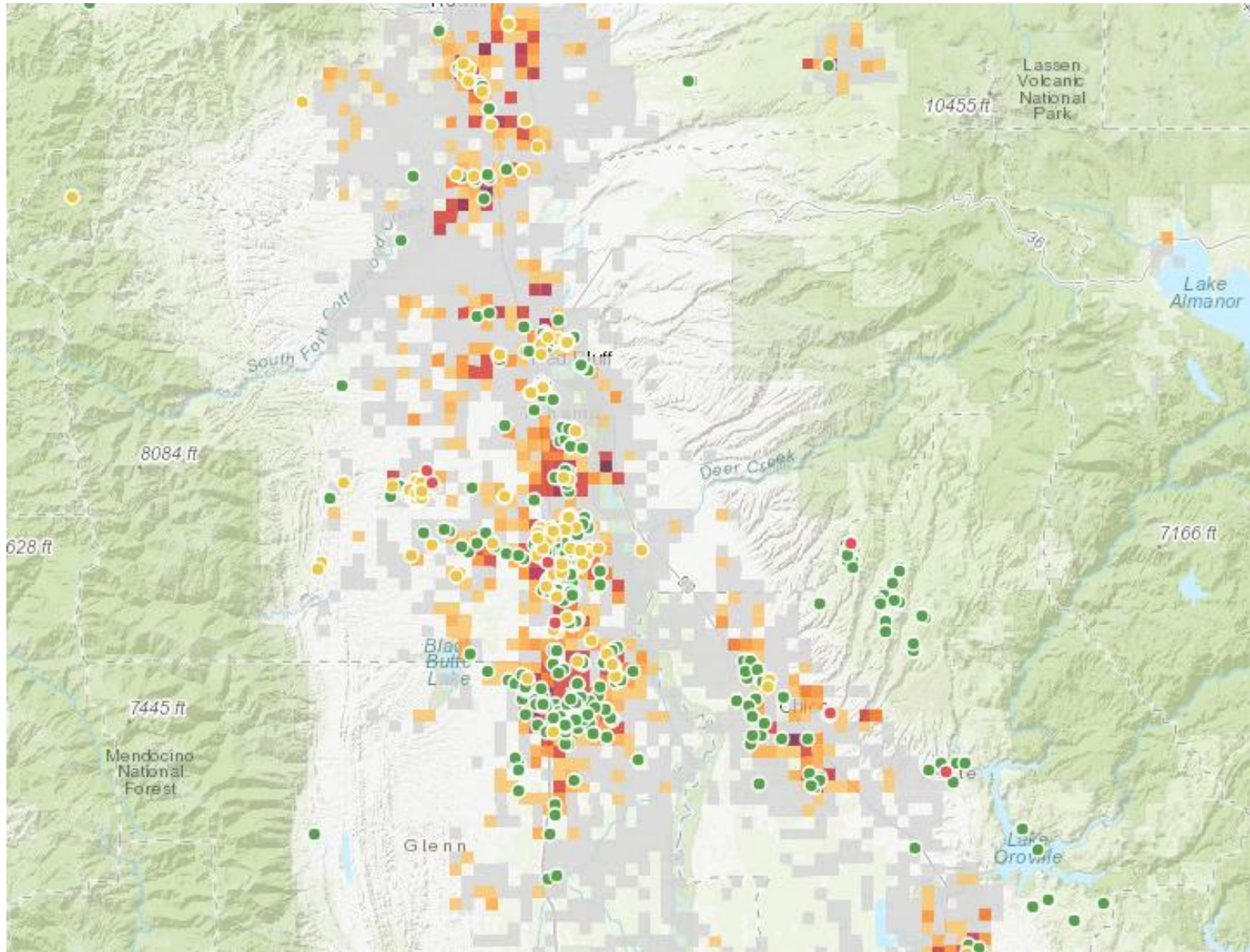


# Future Fees Will Be Based on Well Size/Use

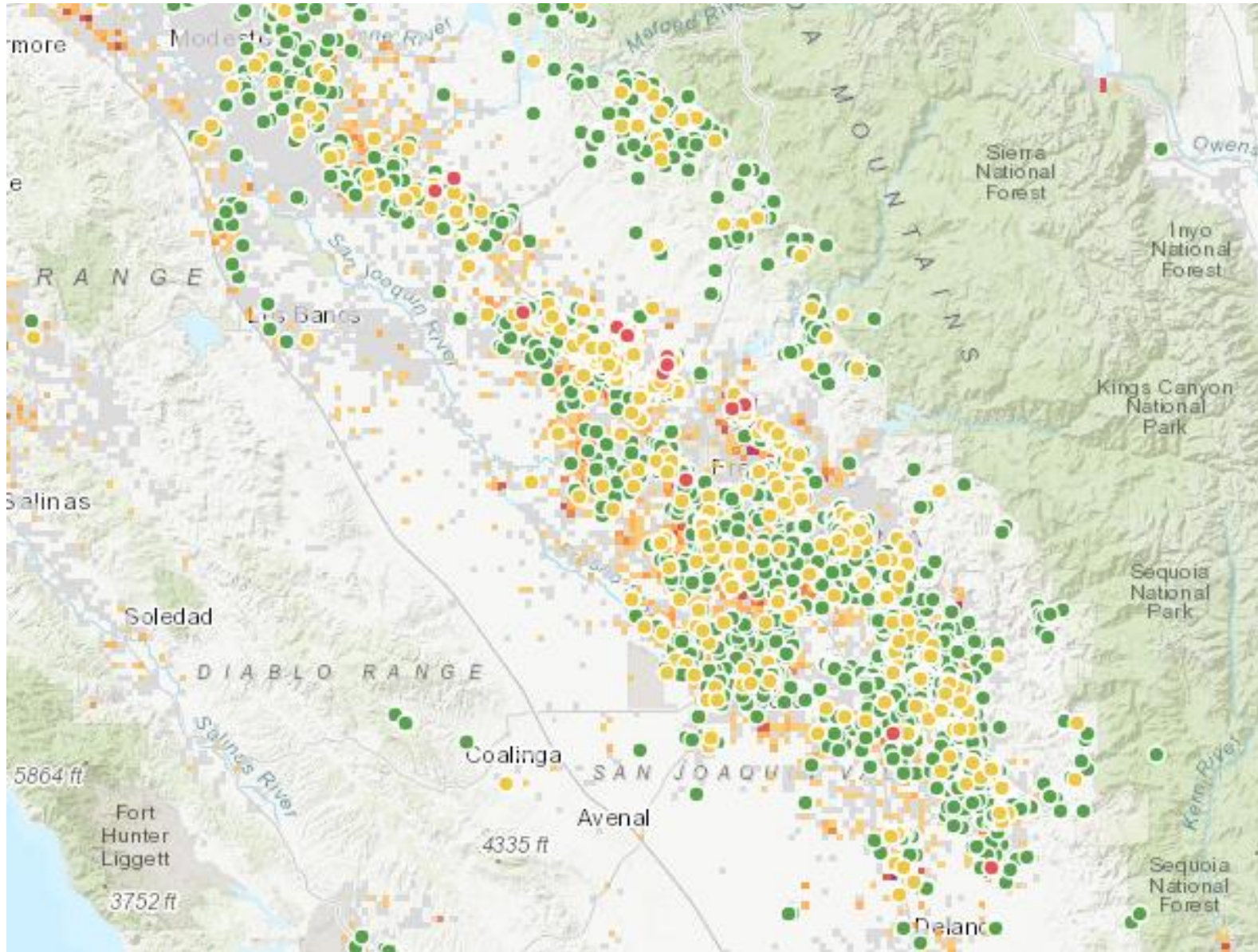
- Once a well registration program is sufficiently established APNs will begin receiving fees on tax roll
- These fees will be based on size and number of wells on the APN
- Those that do not register by the date required to process for the 2024 tax roll will receive an assumptive fee
- There will be programs to idle or abandon wells
- There will be a process to appeal to the District

# How Does This Benefit Me?

- There will be countywide well monitoring, allowing action if water tables get too low.
- There will be projects to recharge aquifers using surface and recycled water.
- The fees associated with groundwater will be much lower than the state intervention fees.
- We will continue to seek community input and local officials will be the administrators of the programs.
- We will work to incentivize surface water storage and use for irrigation.



# DRY WELLS IN THE NORTH STATE



DRY WELLS IN THE SOUTH STATE

# What's Next? Questions?

## Upcoming Meeting Dates:

- Groundwater Commission at 8:30a in Board Chambers Room, 727 Oak St., Red Bluff:

Oct 25 | Dec 13

- Flood Control Board of Directors at 11a in Board Chambers Room, 727 Oak St., Red Bluff:

Oct 16 | Nov 20 | Dec 18

- Public Webinar: December 2023

## Connect with us

- Join the Interested Parties email list at <https://tehamacountywater.org/gsa/> or by emailing [TehamaGSA@tcpw.ca.gov](mailto:TehamaGSA@tcpw.ca.gov)
- Follow Tehama County Flood Control & Water Conservation District on Facebook
- District Staff office hours:  
Mon-Thur, 7:30a-4:30p  
1509 Schwab Street, Red Bluff

# Thank You!

## Assistance Stations

- Well Registration Form Assistance
- Groundwater Management Information
- Outreach & Getting Involved

## Reminders:

- Presentation slides will be posted to the website
- Public meetings Sept 20 in Fournoy and Sep 21 in Manton covered the same information

### **Need Help? Look for the Name Tags:**

- Tehama County GSA Staff: Nichole Bethurem [Red Name Tag]
- Technical Consultant John McHugh, [Black Name Tag]
- Facilitation Support: Stephanie Horii. and Sophie Carrillo-Mandel [Purple Name Tags]