

MANAGING OUR GROUNDWATER
FOR THE FUTURE



TEHAMA COUNTY
FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Tehama County Well Registration Community Workshop

Recorded Webinar

December 19, 2023 (6:00 – 8:00 PM)

TehamaCountyWater.org

Webinar 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 Tehama County Well Registration Program

- Purpose and connection to achieving long-term groundwater sustainability
- Available resources and support
 - Opportunity for Q&A
 - Direction to assistance completing Well Registration Forms

This meeting will be recorded and posted to <https://tehamacountywater.org/>.



Technical Difficulties?

- Use the Zoom Chat
- Or email Nichole Bethurem:
nbethurem@tcpw.ca.gov



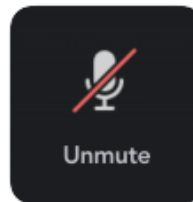
Phone Users:
Press ***9**
to “Raise Hand”

When we call on you,
Press ***6**
to unmute/mute

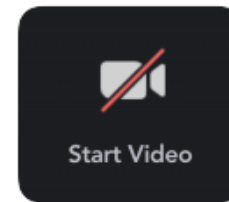
Zoom Instructions:

- ❑ Use only one audio source – either computer or phone.
- ❑ Please **MUTE yourself** at all times, except when speaking.
- ❑ **Orient yourself** to Zoom meeting controls:

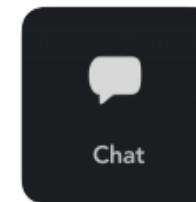
Unmute/Mute



Start Video





Zoom Chat



Raise Hand



How you can participate today:

- **Verbal:** Get into the queue w/ Raise Hand function 
- **Written:** Submit questions in Chat Box 



Presentations Followed by Q&A



Raise Hand for the Queue or Submit Comment in the Chat



Focus on Topic



Share the Air (take turns and ~2 minutes)



Respectful Space Where All Points Have Value



Need Assistance? Reach out to Nichole via Chat

Participating In The Workshop

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, including Well Registration Support
- 7:00 pm Adjourn



Meet The Project Team

Convener: Tehama County Flood Control & Water Conservation District



- Justin Jenson
- Nichole Bethurem

Technical Consultant: Luhdorff & Scalmanini Consulting Engineers (LSCE)



- John McHugh

Facilitation Support: Consensus Building Institute (CBI)



- Sophie Carrillo-Mandel
- Stephanie Horii



John McHugh, Senior Hydrogeologist

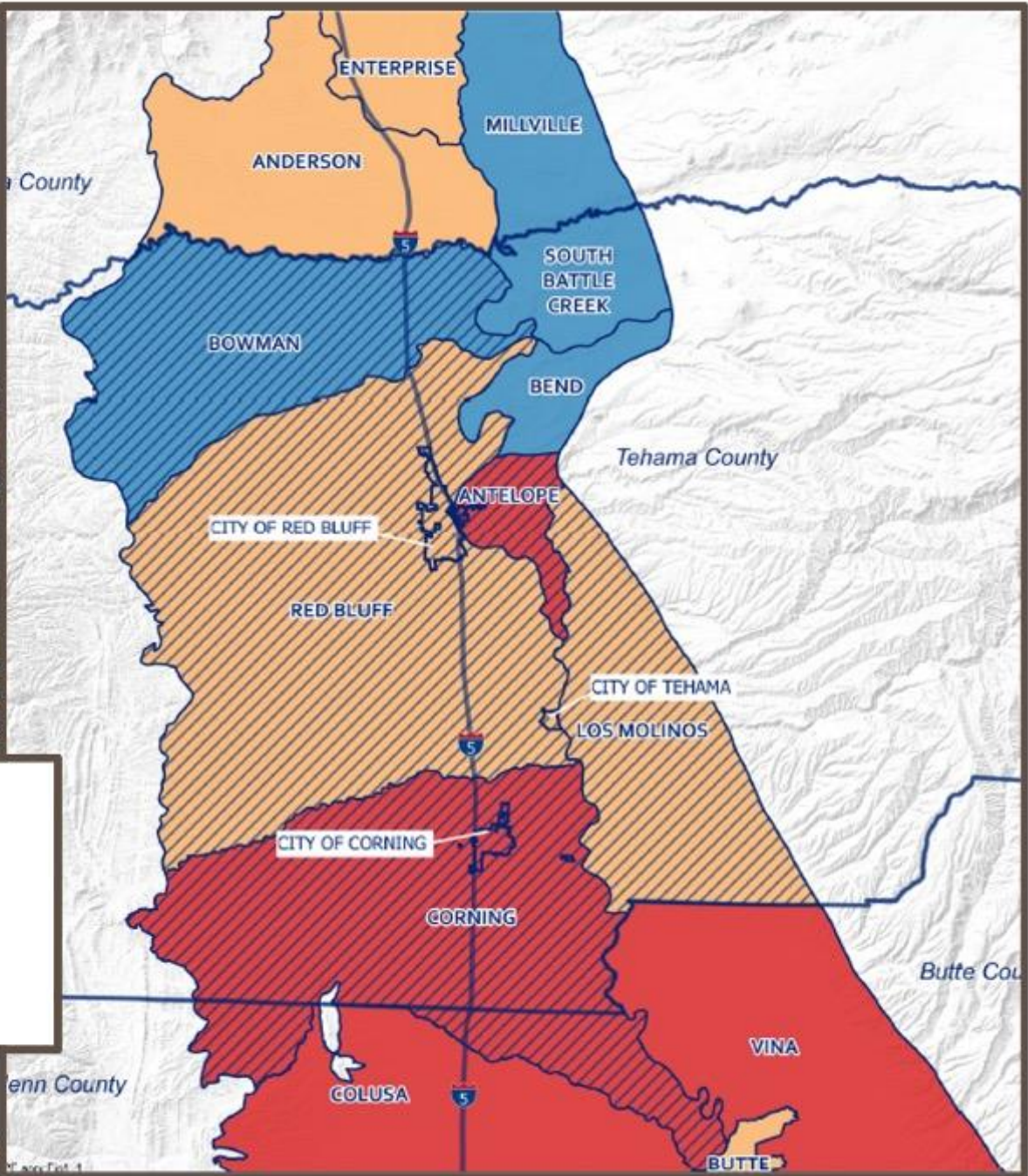
Supporting Well Registration and Managing
Task 2 of the GSP Implementation

Experience

- ✓ GSPs
- ✓ Annual Reports
- ✓ Prop 68 Grants

GSP Implementation Responsibilities

- GSP Annual Reports
- Update GSP from DWR Determination Letter
- Stakeholder Engagement and Community Outreach
- Long-Term Funding Strategy
- Policy Framework for Water & Land Use Restrictions & Well Permitting (Corning Sub-basin Only)
- Regional SW/GW Interaction Model
- 5-year GSP Update with Model Update



Subbasin Priority

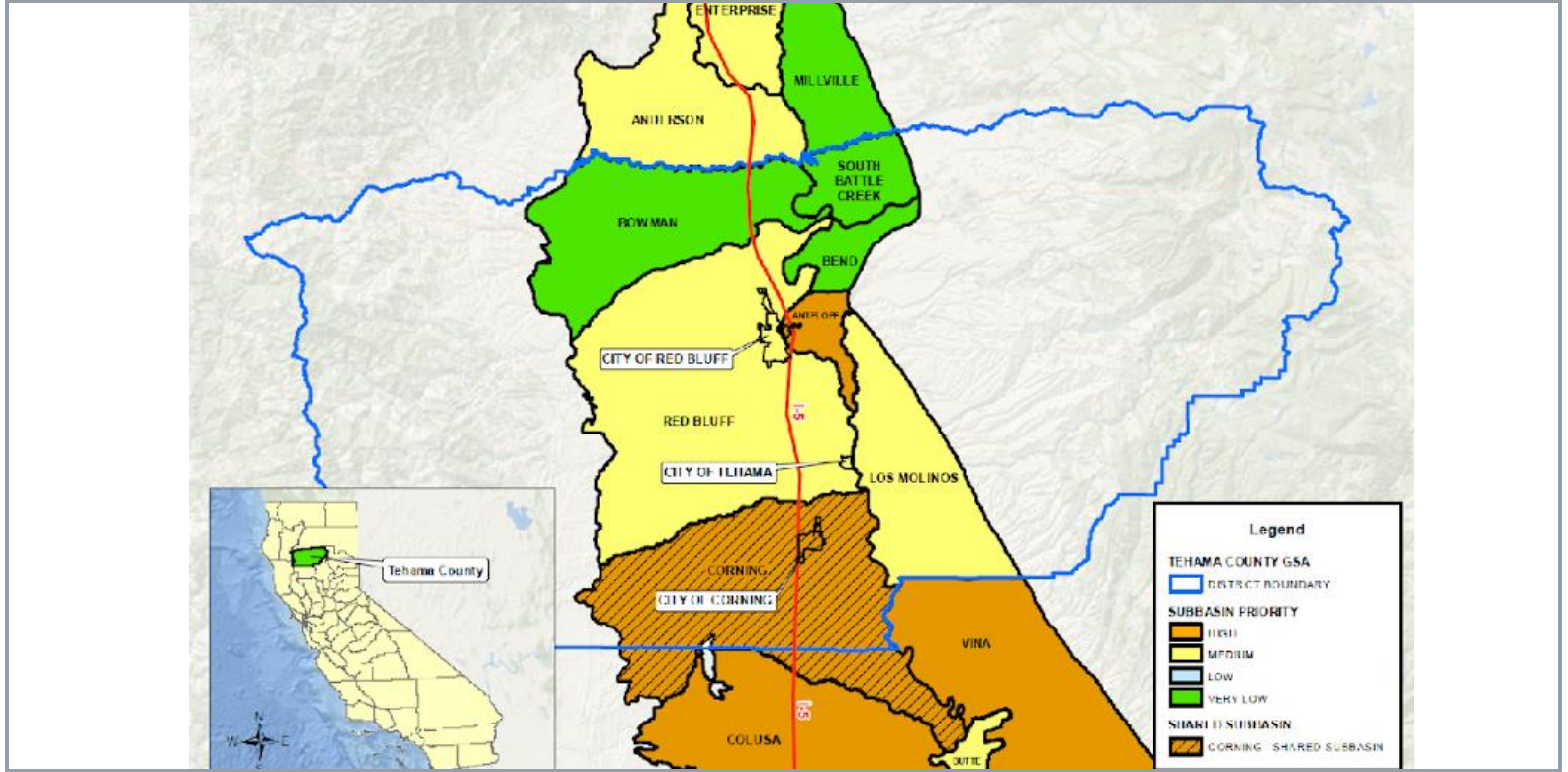
- Very Low
- Low
- Medium
- High

Tehama County
Other Counties

Where are you?



A Zoom poll will pop up momentarily



Achieving Groundwater Sustainability

Context for the Well Registration Program

SGMA Basics



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



Values Local Control
Groundwater Sustainability Agencies (GSAs)



Management plans = Groundwater Sustainability Plans (GSPs)

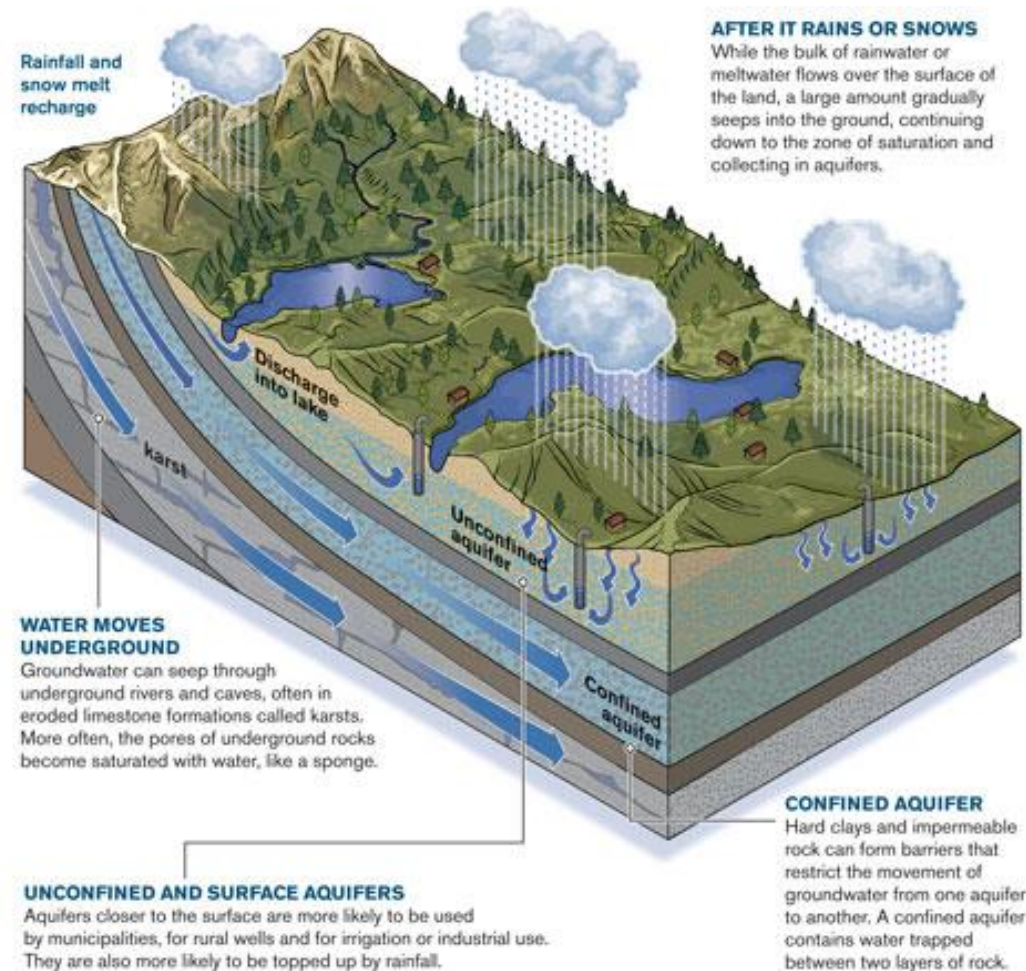
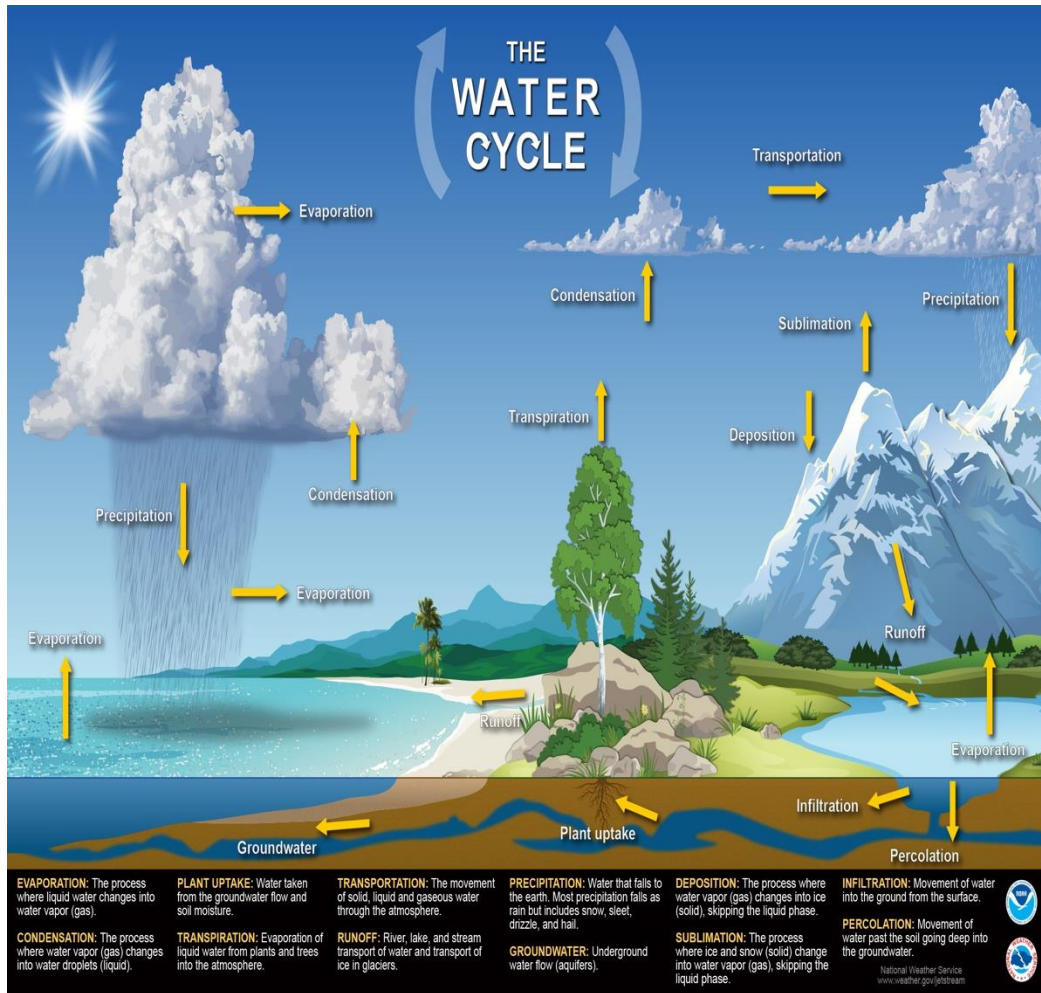


GSPs submitted to the State by January 31, 2022



Sustainability must be achieved within 20 years
(by 2042)

WHERE DOES YOUR WATER COME FROM?

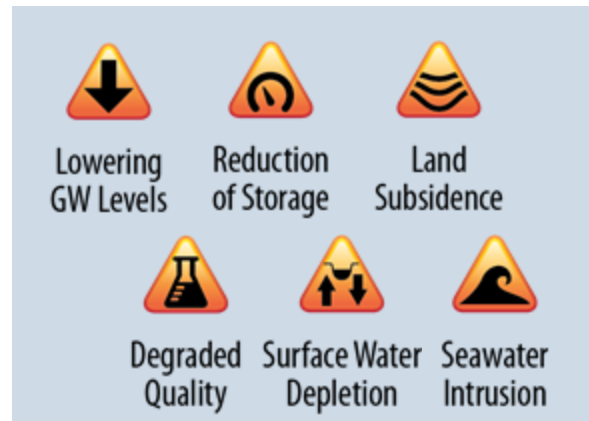


What Is the Purpose of SGMA?

- Promote sustainable management of groundwater basins
- Enhance local management to protect our 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



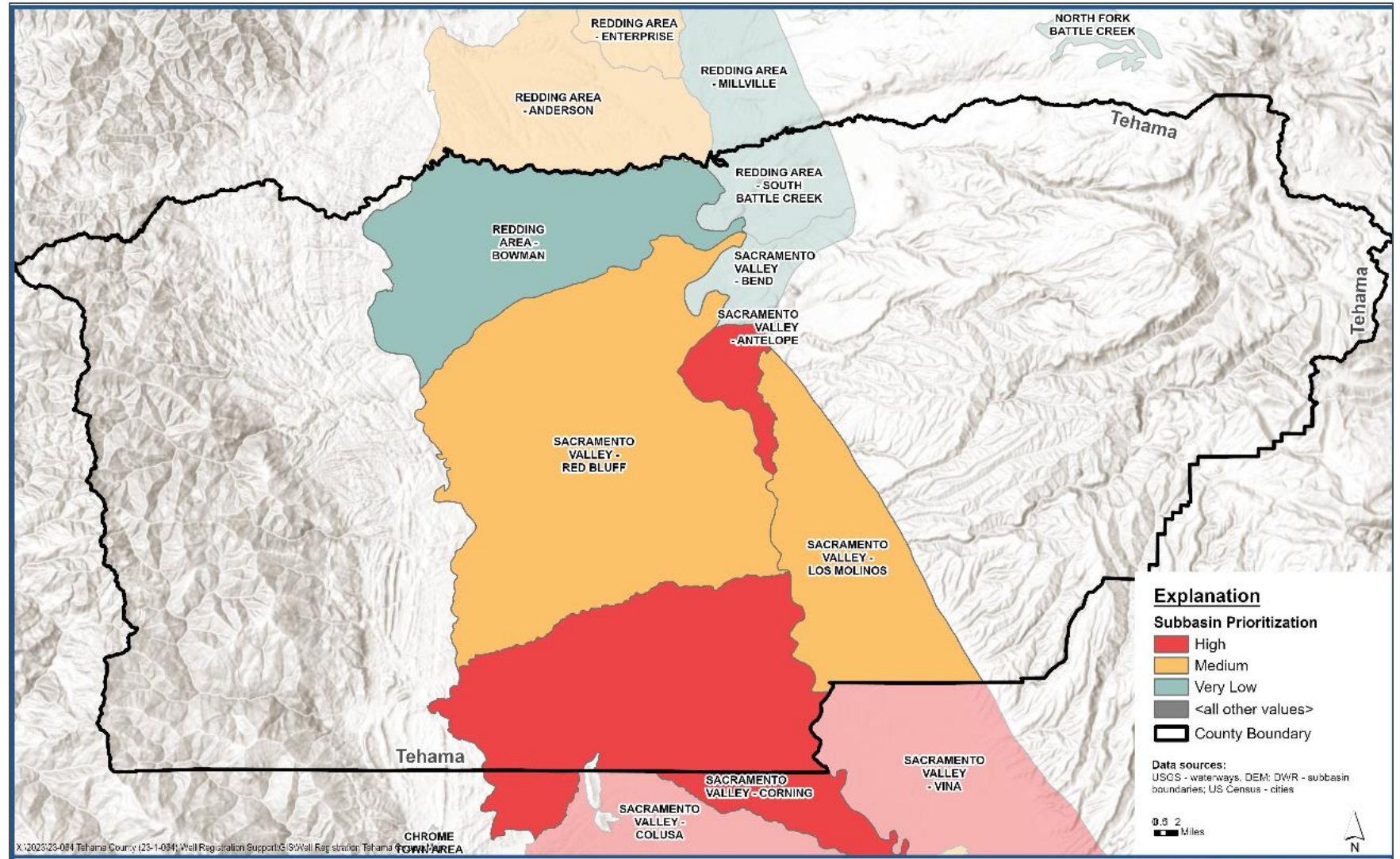
Reduction
of Storage



Degraded
Quality

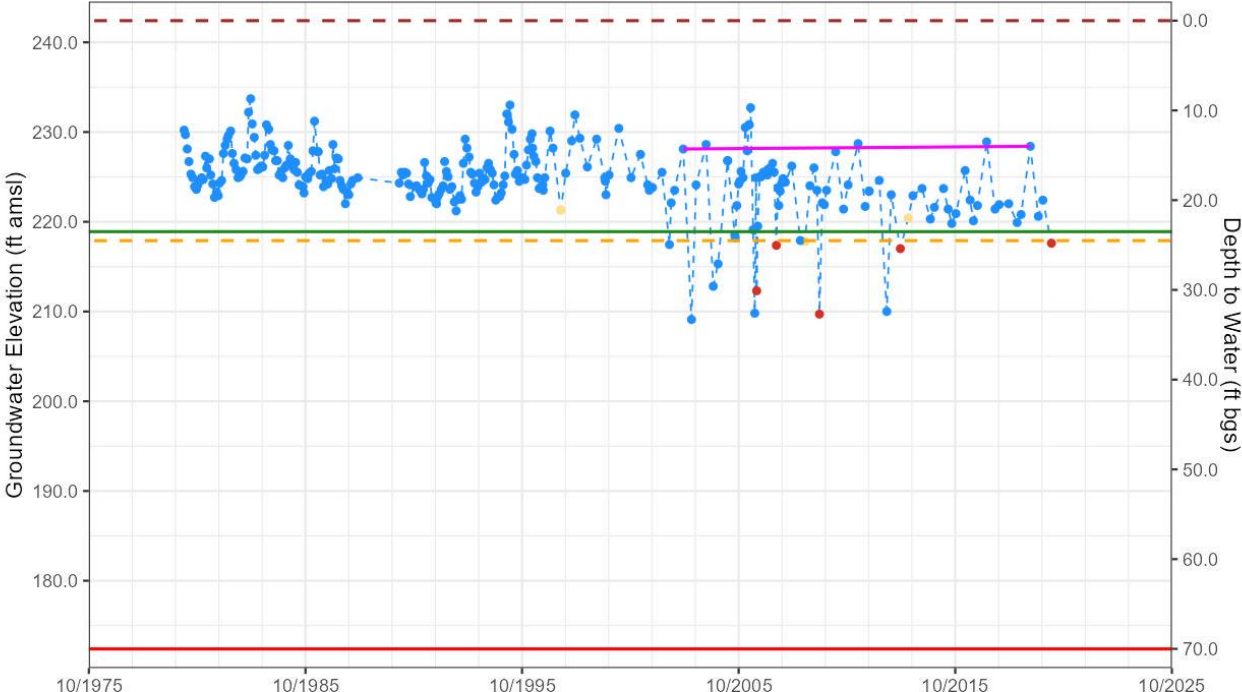
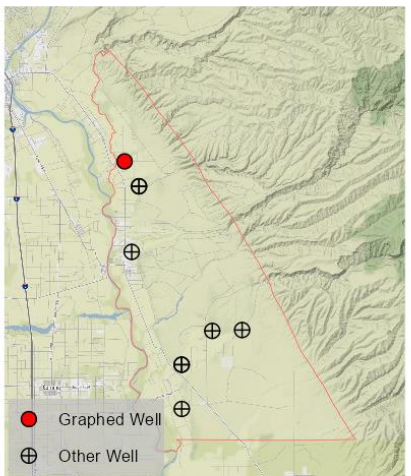


Surface Water
Depletion



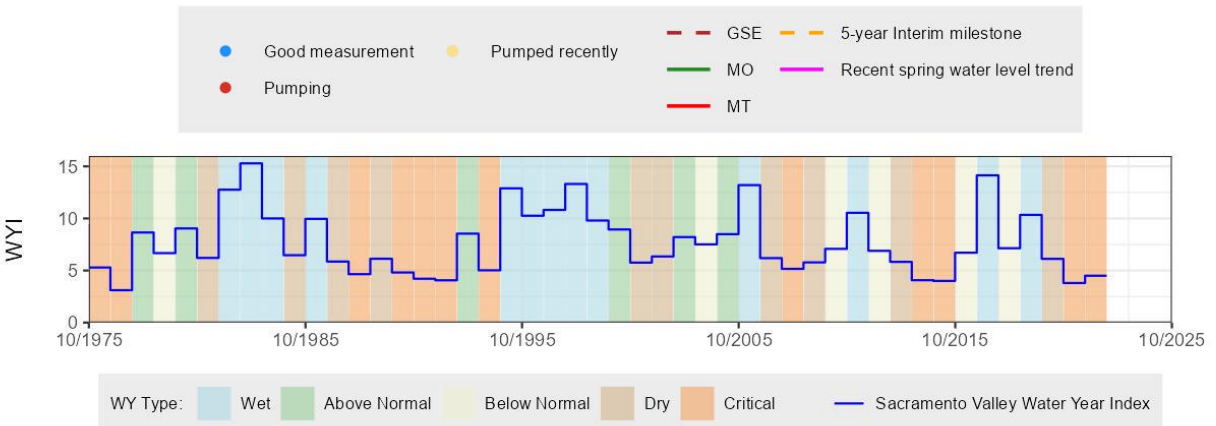
Los Molinos Subbasin - State Well Number (SWN) 26N02W16C001M (LM-1U)

Upper Aquifer Well Depth: 50 ft. Perforation top & bottom: Unknown



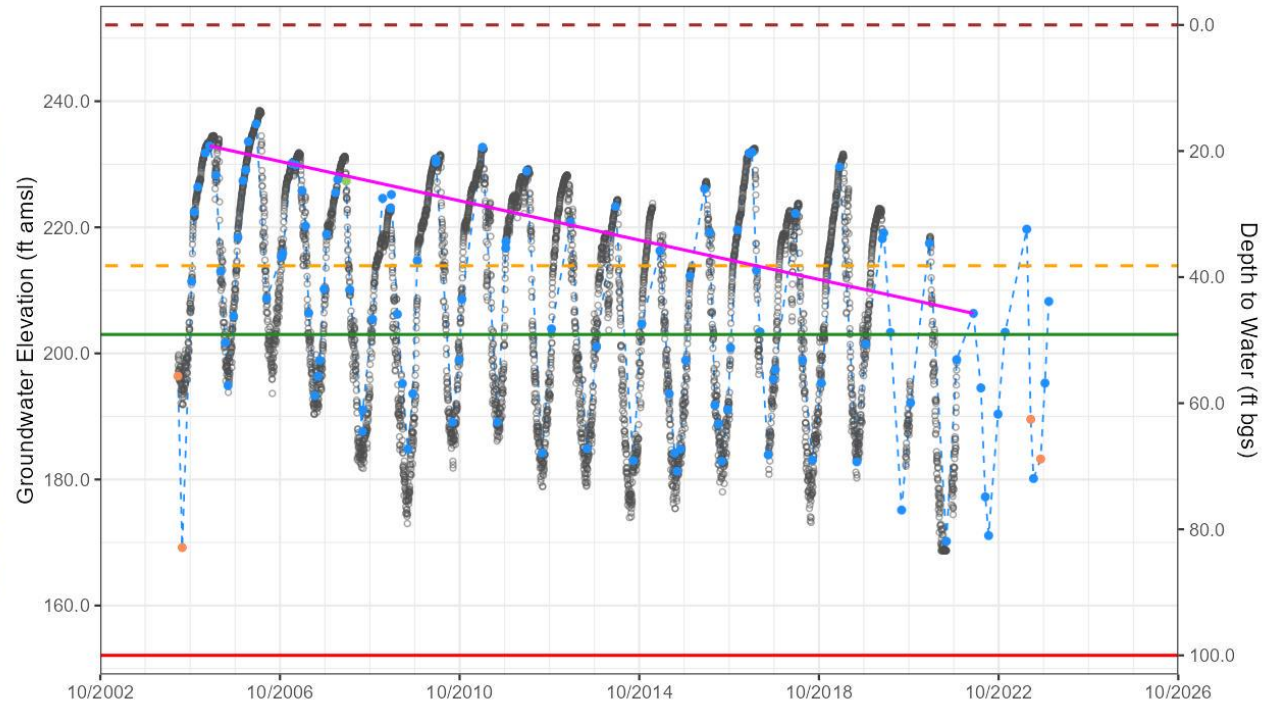
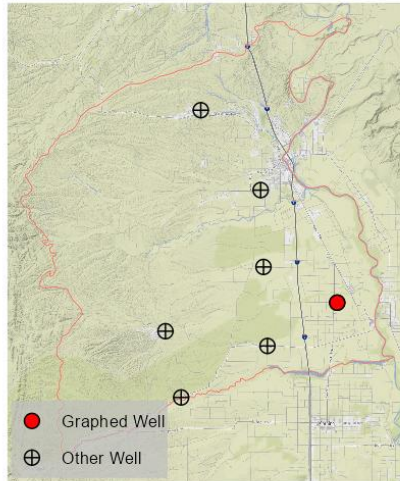
Sustainable Management Criteria
 IM (2027) = 217.9 ft amsl
 MO = 218.9 ft amsl
 MT = 172.4 ft amsl

Statistics of spring water levels for past 16 years (2003 to 2019):
 Change = 0.3 ft
 Average rate of change = 0.02 ft/year
 Average water level = 228 ft amsl



Red Bluff Subbasin - State Well Number (SWN) 25N03W11B001M (RB-4U)

Upper Aquifer Well Depth: 255 ft. Perforation top & bottom: 150 - 180 ft bgs



Sustainable Management Criteria

IM (2027) = 213.9 ft amsl

MO = 203.0 ft amsl

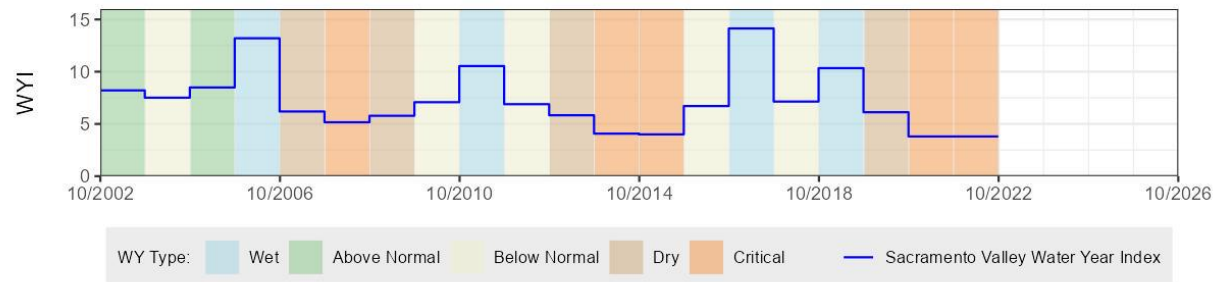
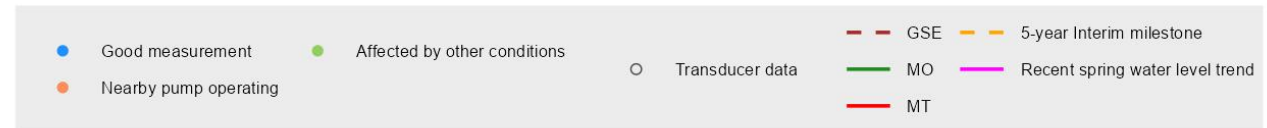
MT = 152.1 ft amsl

Statistics of spring water levels for past 17 years (2005 to 2022):

Change = -26.55 ft

Average rate of change = -1.56 ft/year

Average water level = 225.43 ft amsl



WY Type: Wet Above Normal Below Normal Dry Critical Sacramento Valley Water Year Index

SGMA Implementation Timeline



Groundwater Sustainability Plans

To view go to tehamacountywater.org



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 repurposing 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 support & technical assistance
- 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?”

Recharge Projects

- Multi-benefit Recharge Project: (LM, RB, C)
- Implement Thomes Creek (C, RB) and Elder Creek (RB) Diversions for Direct or in-Lieu Groundwater Recharge
- Groundwater and Stormwater Recharge Feasibility Study (RB, LM)
- Recharge through Unlined Canals and Drainages (C)
- Groundwater Recharge Pond South of Corning (C)
- California Olive Ranch Groundwater Recharge Project (C)
- Stony Creek Diversions for Recharge Feasibility and Pilot Program (C)
- Regional Water Transfers for In-Lieu Recharge (C)
- Use of Full Surface Water Allocations Planning (C)



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)
- DWR initial determinations in November must be responded to within 180 days



What If We're Not Succeeding? SGMA Backstop

What Triggers State Intervention and Basin Probation?



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.

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?**
 - Groundwater is overdrawn in places and we see our neighbors' wells going dry; **Tehama County can solve this together**
 - 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...”

Also, the District has been in place since 1957. Water Conservation Districts have the authority to require extraction facilities be registered. Water Code 75540-75544.

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
Well Count/Size	Relatively good proxy for usage	High cost to verify	\$258 per well/year
Land Use/Irrigated Acre	Close estimates of usage	Estimates, high cost to validate	\$7.67 per irrigated acre/year
Measured Flow	Directly related to usage	High cost to verify and maintain	\$2.99 per acre-foot/year
Flat Fee per Acre	Simplest to administer; brings down per person costs	Fairness concerns for those who use little groundwater	\$0.95 per acre/year
Hybrid/Phased: Flat Fee/Acre + Well Type	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

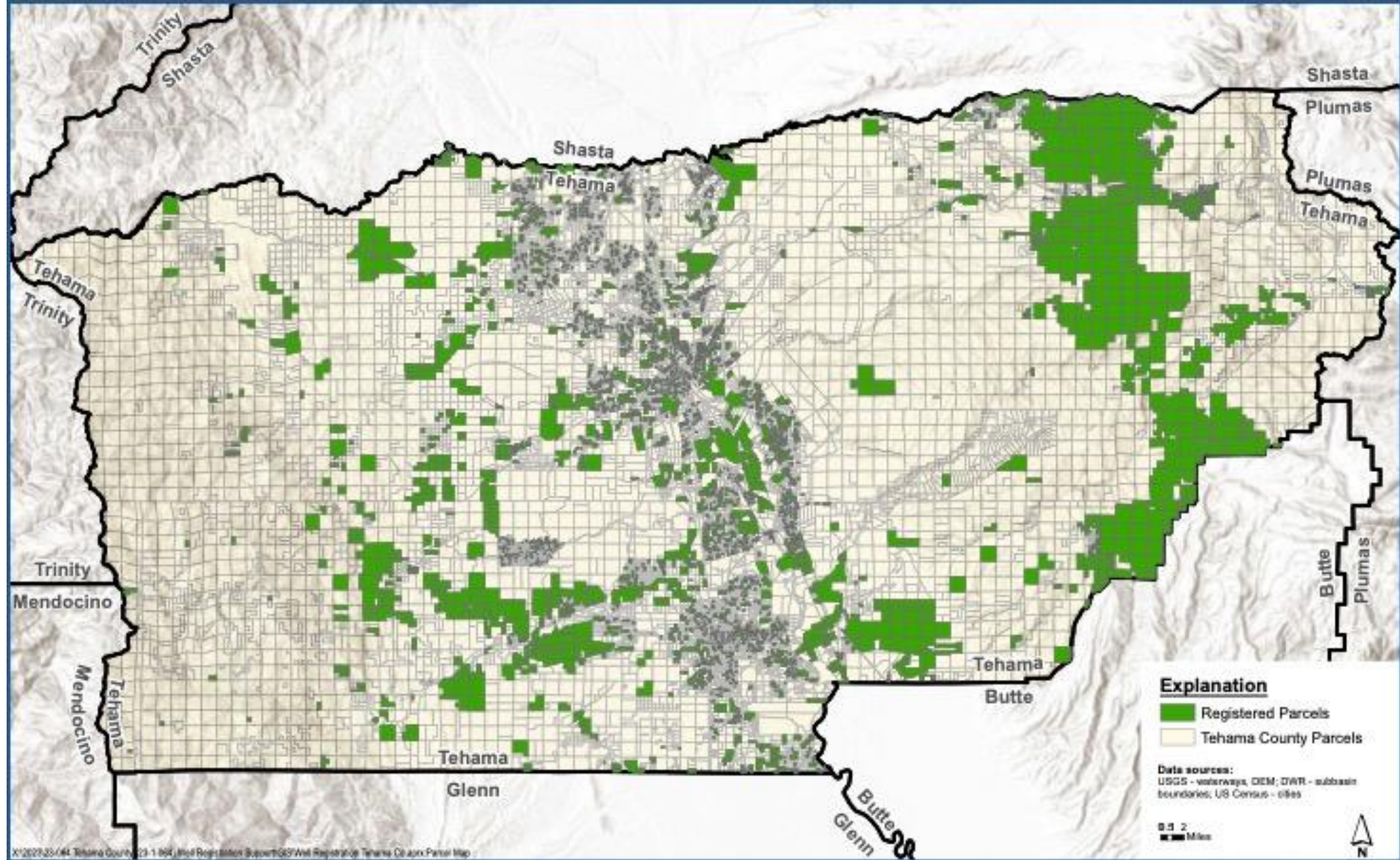
	Method of Funding	General GSA/GSP Implementation Cost for Three Years	Create Well Registration Program	Create Well Idle or Abandonment Program	Field Verification and Enforcement Annual Cost	Program Administration Annual Cost	Initial Three Year Cost to County	Annual Cost to County for First Three Years	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



Explanation
Registered Parcels
Tehama County Parcels

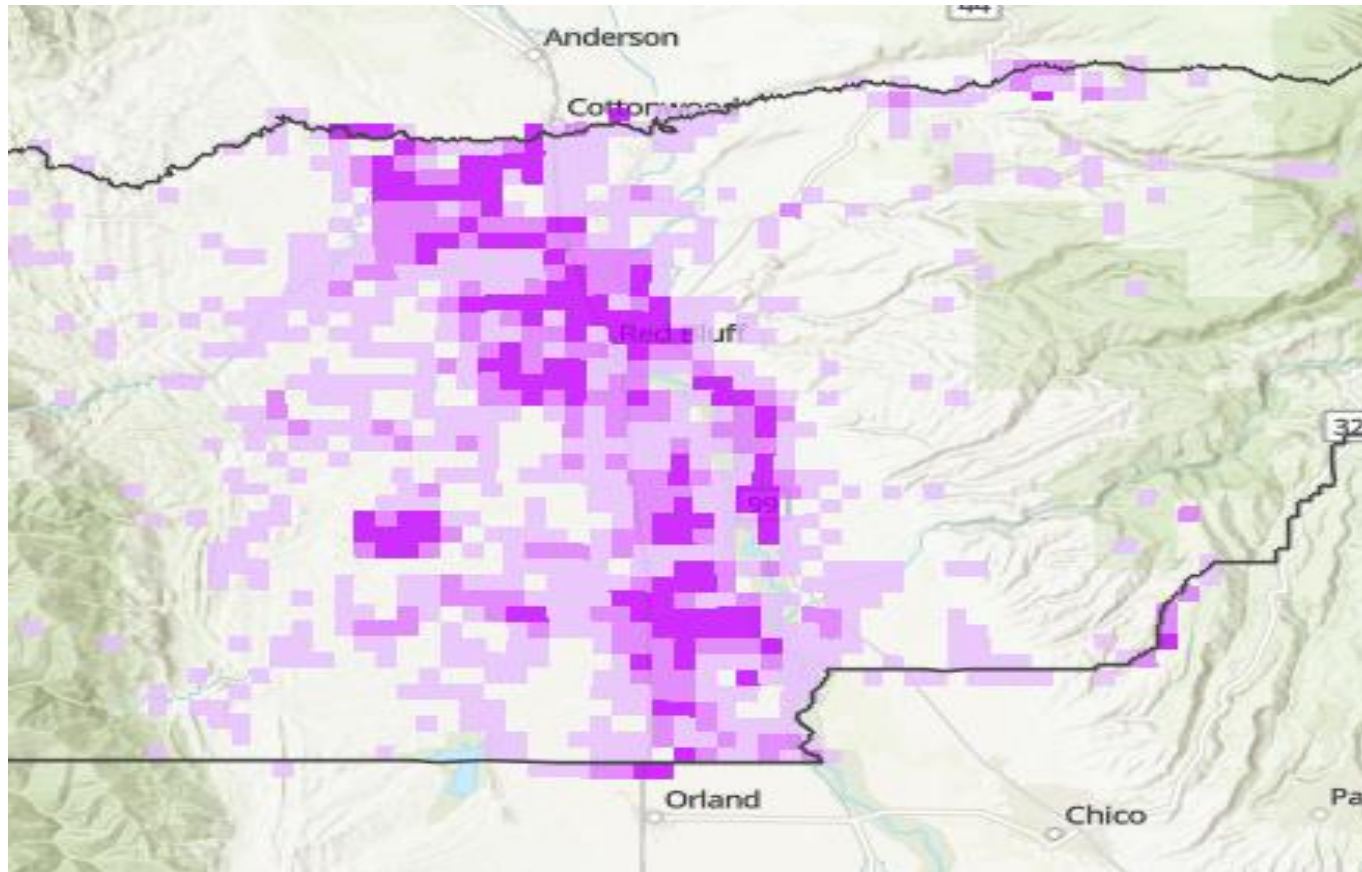
Data sources:
USGS - waterways, DEM; DWR - subbasin boundaries; US Census - cities

0.1 2 Miles



DOMESTIC WELL COMPLETION REPORTS - 2023

CALIFORNIA'S GROUNDWATER LIVE



Legend

California Counties



Groundwater Basins



Bulletin 118 Groundwater Basins

Domestic Well Completion Report Density



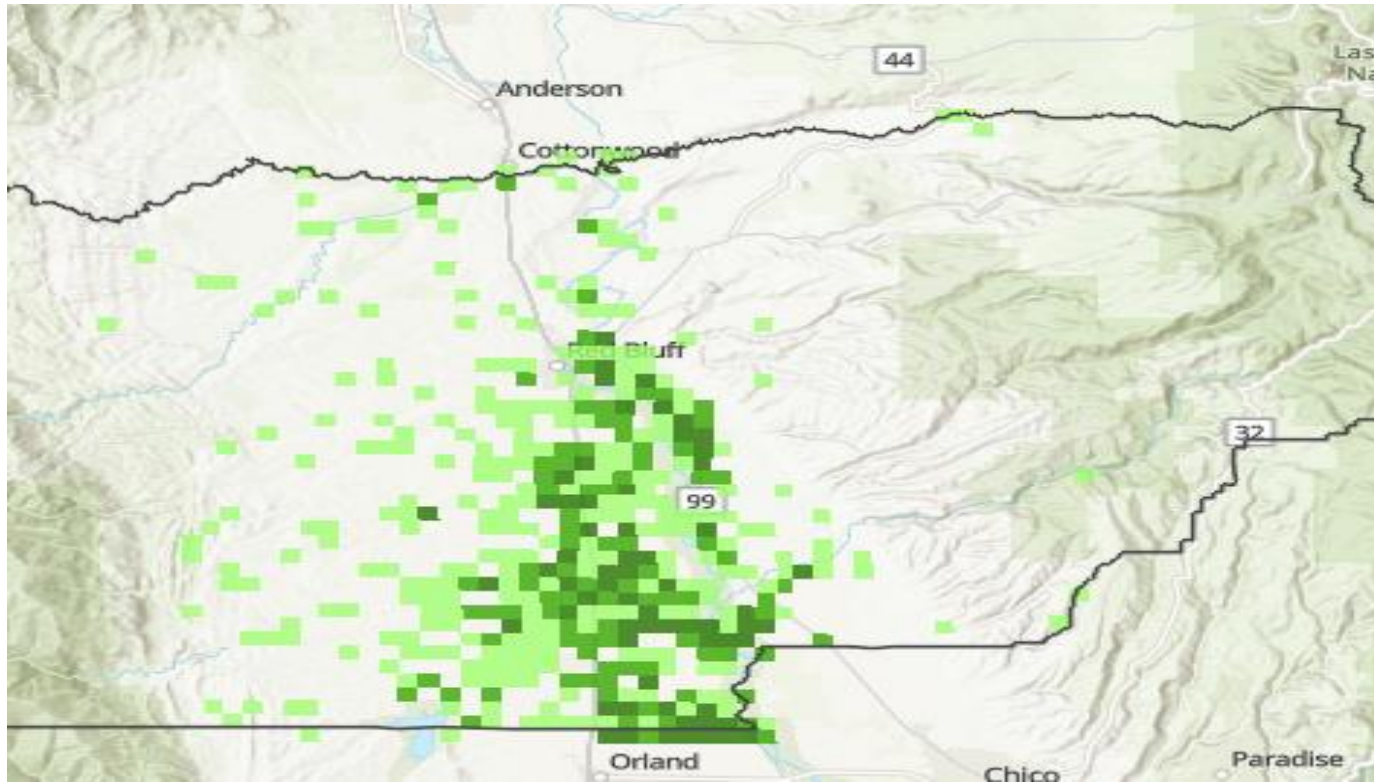
Lower Density



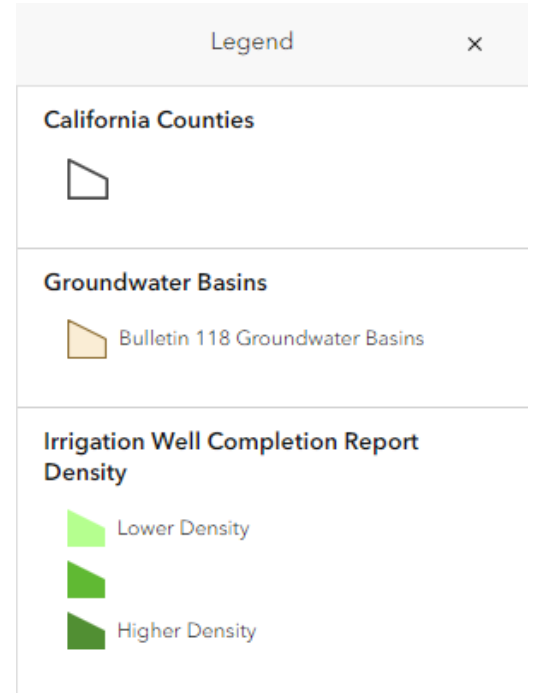
Higher Density

IRRIGATION WELL COMPLETION REPORTS - 2023

CALIFORNIA'S GROUNDWATER LIVE



<https://www.arcgis.com/apps/dashboards/68b62cd5cc224050bbfa4e4011b24ee3>



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:

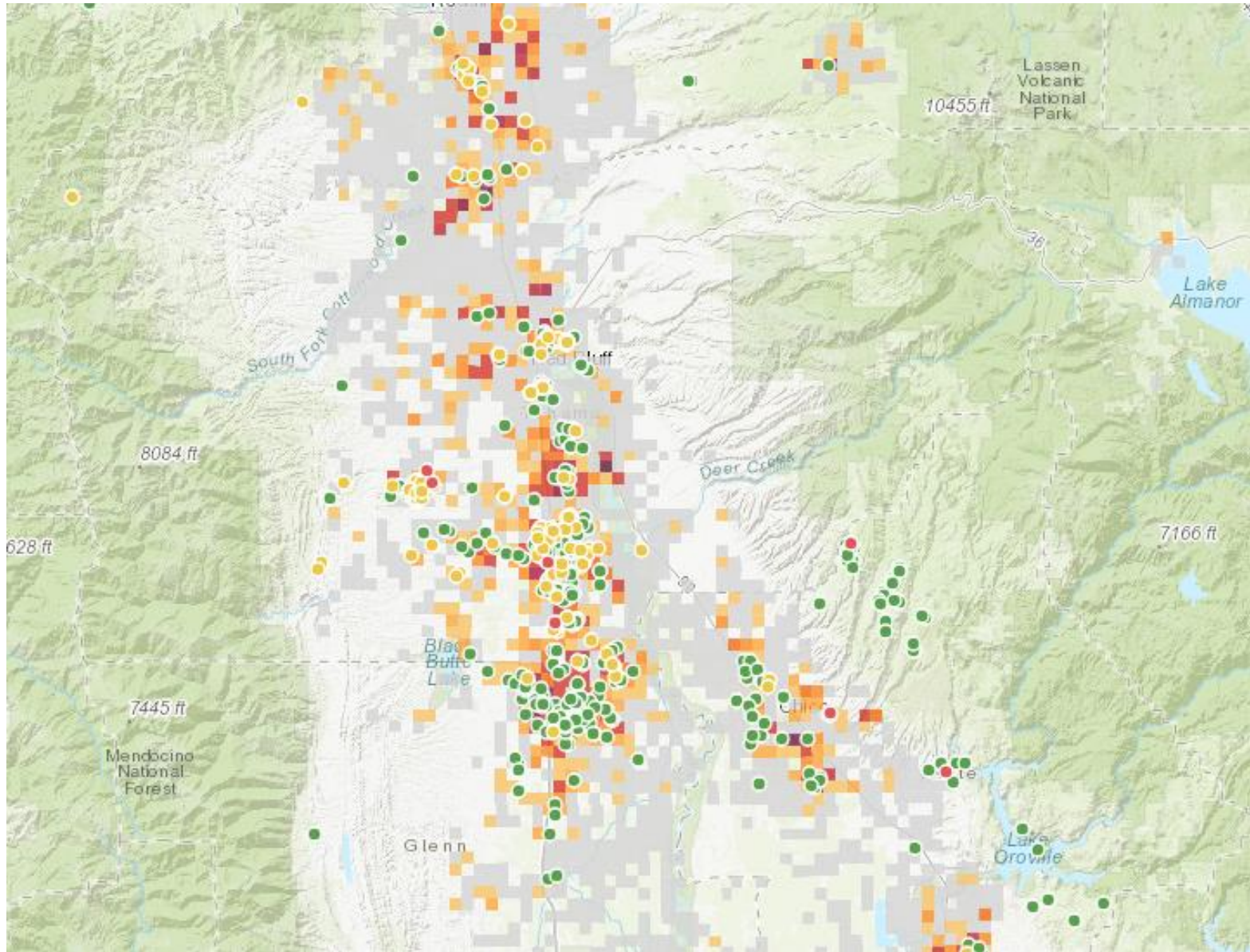
1. Well registration form must be submitted **by April 10 in the given year**; and
2. Well registration form must have the **APN or address of the property** that has the well or does not have a well; and
3. Well registration form must have identified the well use as either **residential, agricultural, 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

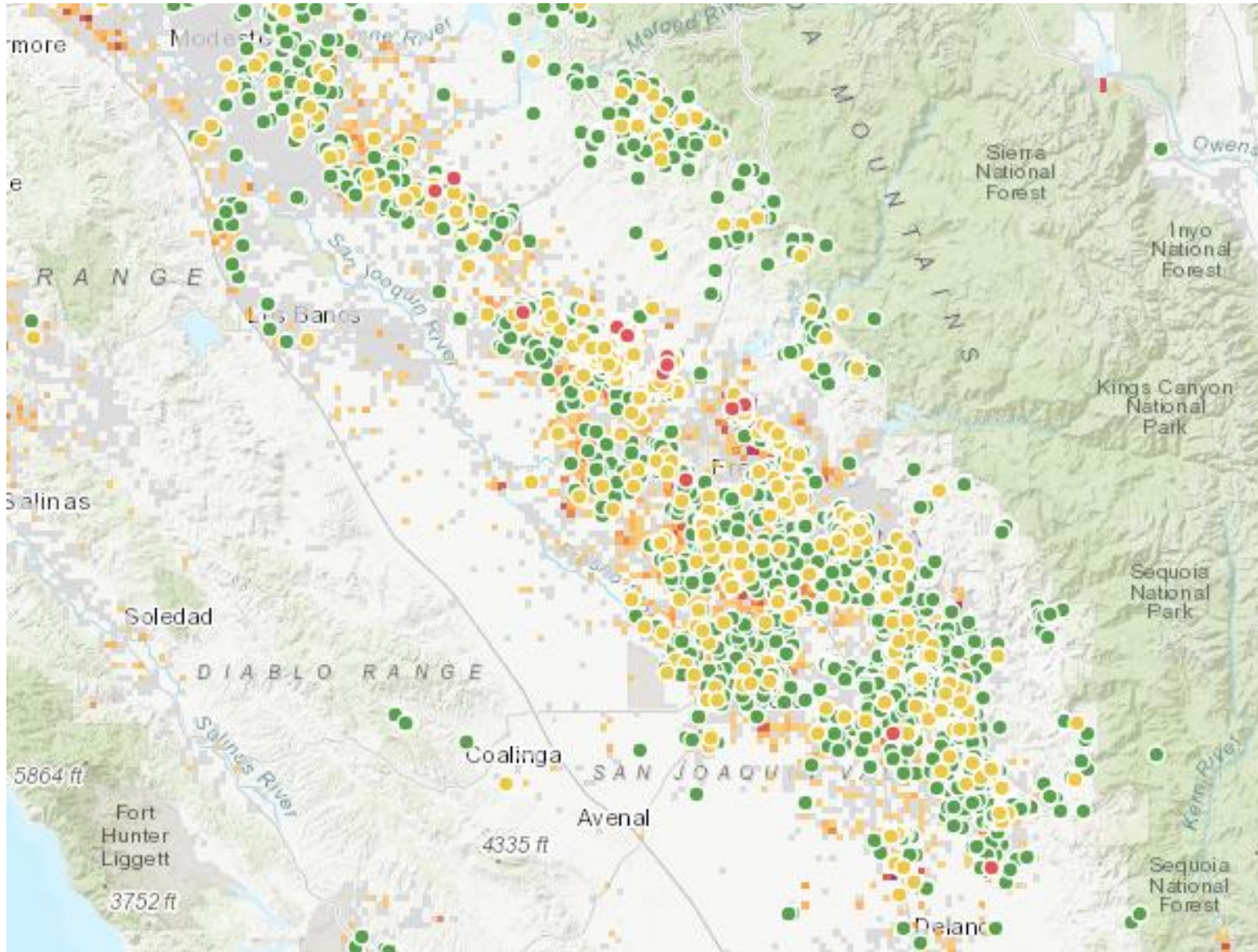
- Once a well registration program is sufficiently established APNs will begin receiving fees on tax roll
- These fees will be based on size and number of wells on the APN
- Those that do not register by the date required to process for the 2024 tax roll will receive an assumptive fee
- There will be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



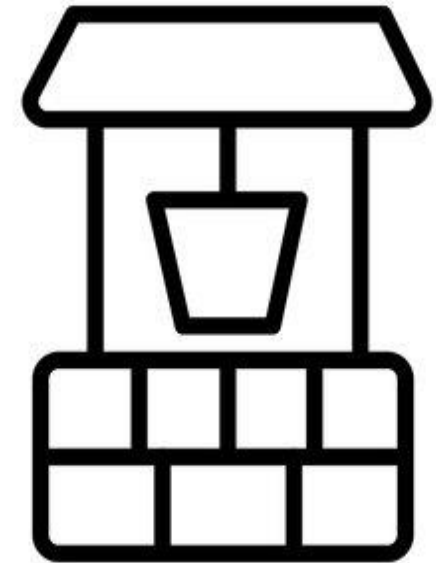
REPORTED DRY WELLS IN THE NORTH STATE



REPORTED DRY WELLS IN THE SOUTH STATE

Well Registration Forms – Round 2

- All unregistered APNs will receive a new form in the mail after January 1, 2024
- Mailing includes form, FAQ sheet, and instructions
- Submit registration form by April 10 to receive a fee waiver!
- You can register any time at <https://tehamacountywater.org/>



What's Next? Questions?

Upcoming Meeting Dates:

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

Jan 24 | Feb 28 | Mar 27

- Flood Control Board of Directors at 10a in Board Chambers Room, 727 Oak St., Red Bluff:

Jan 22 | Feb 26 | Mar 18

Connect with us

- Join the Interested Parties email list at <https://tehamacountywater.org/gsa/> or by emailing 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!

Q&A

For assistance completing the form:

- Ask general questions now! Raise your hand or ask in the chat.
- Contact us: (530) 690-0700 or TehamaGSA@tcpw.ca.gov

Reminders:

- Presentation slides & a recording of this webinar will be posted to tehamacountywater.org

