MANAGING OUR GROUNDWATER FOR THE FUTURE

TEHAMA COUNTY
FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Antelope Subbasin Public Open House

Antelope Elementary School and Online
November 14, 2024 (6:00 – 7:30 PM)

TehamaCountyWater.org

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Meeting Objectives

COMMON TERMS

SGMA ("Sigma"): Sustainable Groundwater Management Act

GSA: Groundwater Sustainability Agency

GSP: Groundwater Sustainability Plan

- Update on Groundwater Sustainability Plan (GSP) implementation activities in the Antelope Subbasin
- Addressing key data gaps, particularly related to domestic well monitoring
- Resources and support
  - Volunteer sign-up: domestic well monitoring network; recharge project opportunities
  - One-on-one Q&A

Open House Design:
Start in full group session, followed by self-directed small group stations.
Online participation is listening-in only during plenary.



CBI

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Meet the Project Team

Convener: Tehama County Flood Control & Water Conservation District

- Justin Jenson

Technical Consultant: Luhdorff & Scalmanini Consulting Engineers (LSCE)

- Eddy Teasdale
- Evan Davis

Facilitation Support: Consensus Building Institute (CBI)

- Stephanie Horii
- Deeqa Mohamed

Note: The plenary portion of the meeting will be recorded and posted to the website: TehamaCountyWater.org

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Agenda

6:00 pm	Welcome and Introductions
6:05 pm	GSP Implementation Update
6:15 pm	Data Gaps and Monitoring
6:30 pm	Open Q&A
7:00 pm	Break - End of online workshop
	Stations will be in-person only
7:05 pm	Assistance Stations:
	General Background/Getting Involved | Groundwater Conditions and Data Gaps/Monitoring | Projects & Management Actions (PMAs) and Funding
7:30 pm	Adjourn

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Participation Protocols

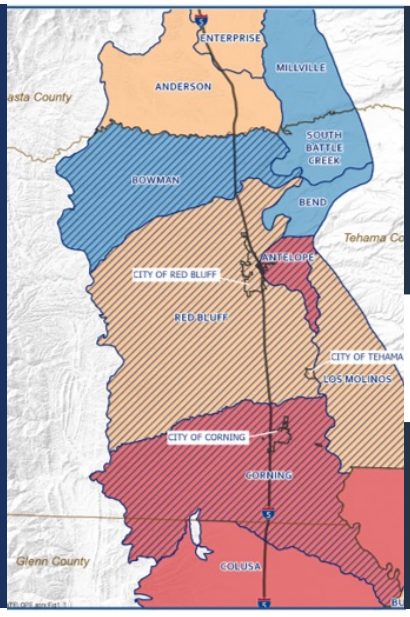
- Aiming to hear from everyone – please be concise
- Working toward shared understanding – ask questions and learn from each other
- Capturing your thoughts –
  - Use the mic/get close to the Polycom
  - Written comments: Comment form and Zoom Chat

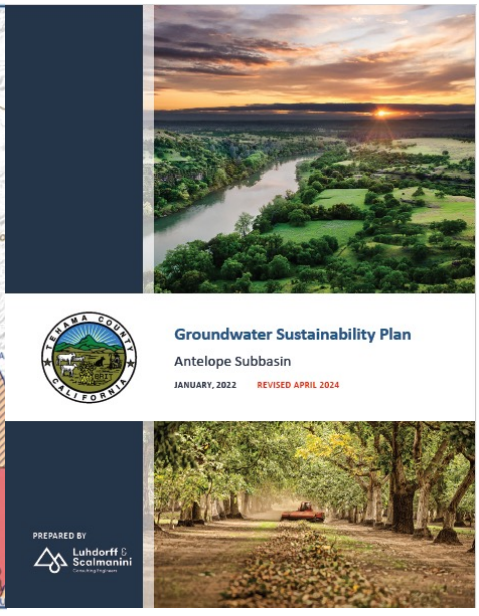
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Achieving Groundwater Sustainability

Context and Background





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SGMA Basics

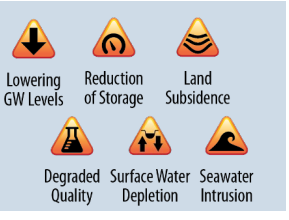
- The Sustainable Groundwater Management Act (SGMA) -- law was passed in 2014
- Values Local Control Groundwater Sustainability Agencies (GSAs)
- Management plans = Groundwater Sustainability Plans (GSPs)
- GSPs submitted to the State by January 31, 2022
- Sustainability must be achieved within 20 years (by 2042)

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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





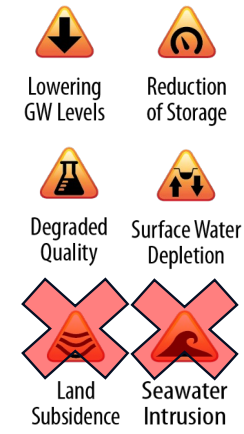
Undesirable Results

tehamacountywater.org/gsa/library/

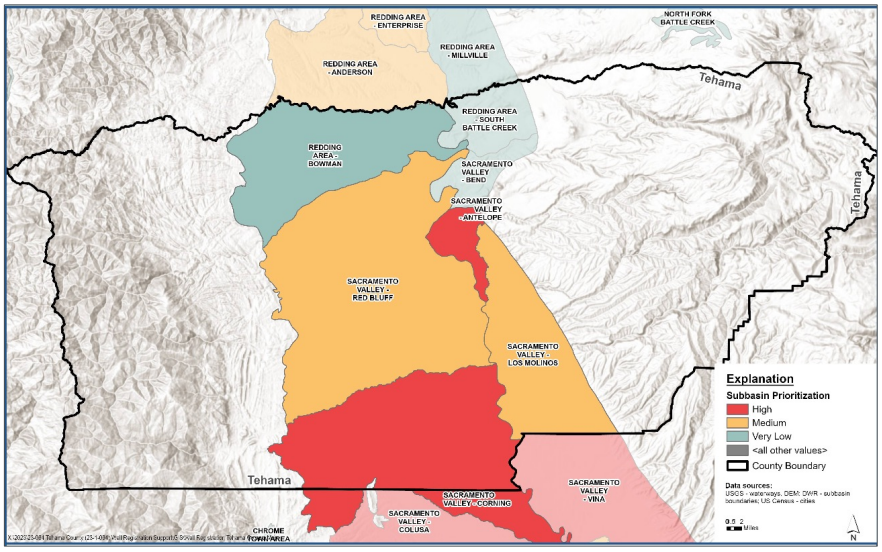
SGMA Resources, including:
- Understanding groundwater video
- SGMA Overview
- GSP Development Factsheets

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Groundwater Conditions



Luhdorff & Scalmanini Consulting Engineers



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REVISED GROUNDWATER SUSTAINABILITY PLANS (GSP)

October 2023: Calif. DWR determined that the GSPs for subbasins in Tehama County were incomplete; GSPs were revised to address to the following issues:

- **Overdraft Concerns**: Addressing excessive groundwater withdrawals.
- **Sustainable Management Criteria Revisions**: Required adjustments to meet sustainability goals.
- **Projects and Management Actions**: Need for additional projects and actions to support sustainable water use.

April 2024: Revised GSPs submitted following DWR's feedback.

December 2024: Anticipated feedback from DWR on the revised GSPs.

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FOCUSED GROUNDWATER MANAGEMENT AREAS

Targeted Areas Based on Dry Well Reports

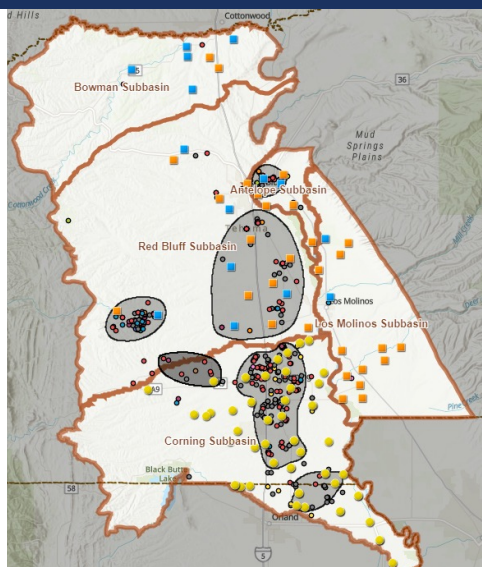
- Priority zones identified through reports of "dry wells" and declining groundwater levels.
- Focused efforts to address regions experiencing critical water shortages.

Aggressive Sustainable Management Criteria (SMC)

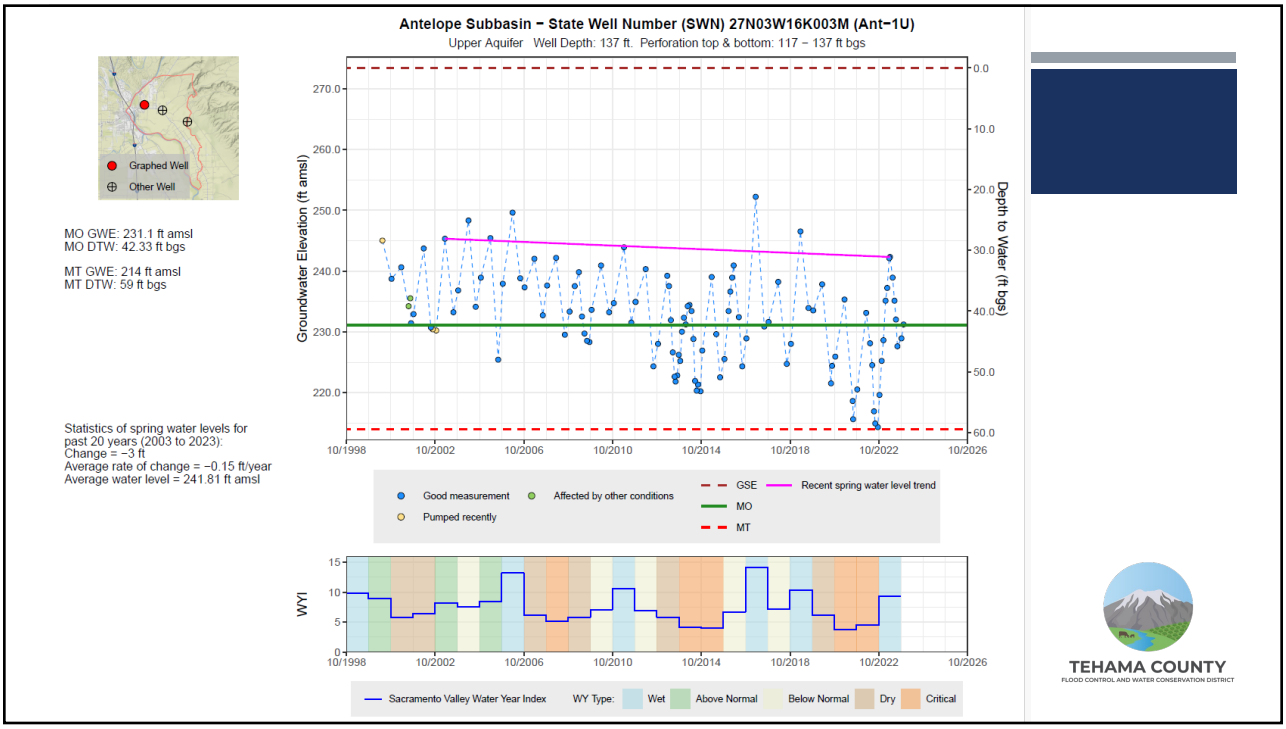
- Implementing stricter SMC guidelines within these high-priority areas.
- Aims to mitigate overdraft risks and promote sustainable groundwater levels more effectively.

Enhanced Future Monitoring Capabilities

- Future improvements include deploying refined groundwater level and water quality monitoring systems.
- Enhanced data collection will enable more precise management and proactive response to potential issues.



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RECENT, CURRENT, AND FORTHCOMING ACTIVITIES

Work underway with State grant
(>$15 million for Red Bluff, Antelope, Los Molinos, and Corning Subbasins)

- Tasks include developing annual reports, enhancing monitoring network, and supporting recharge projects and in-lieu surface water efforts

Tehama County Well Registration Program

- $0.29 per acre fee (2022-2025)

Demand Management Program
development (by Jan '26)

- Groundwater Commission working group currently meeting ~monthly

Well Mitigation Program
development (by Jan '26)

- Groundwater Commission working group to be formed

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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
- Levee Setback/Stream Channel Restoration
- Interbasin surface water transfers
- Water supply reservoir construction/renovation/ conversion

Demand Management / Water Use Efficiency

- Riparian habitat restoration
- Incentivized water use efficiency; recycled water
- System Modernization

Demand Management / Water Use Efficiency (continued)

- Well permitting ordinances
- Well mitigation program
- Demand management program
- Land usage restrictions
- Surface Water Conveyance Improvements
- Stormwater Management Improvements
- Less water-intensive crops
- Pumping fees
- Well metering

Monitoring and Other Studies

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

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Data Gaps and Monitoring Slides

- **Installation of Multi-Completion Monitoring Wells**
- Installation of Surface Water/Groundwater Wells
- Stream Gauging
- **Biological Investigations**
- **Develop Community Domestic Monitoring Programs**
- Groundwater Level and Quality Monitoring

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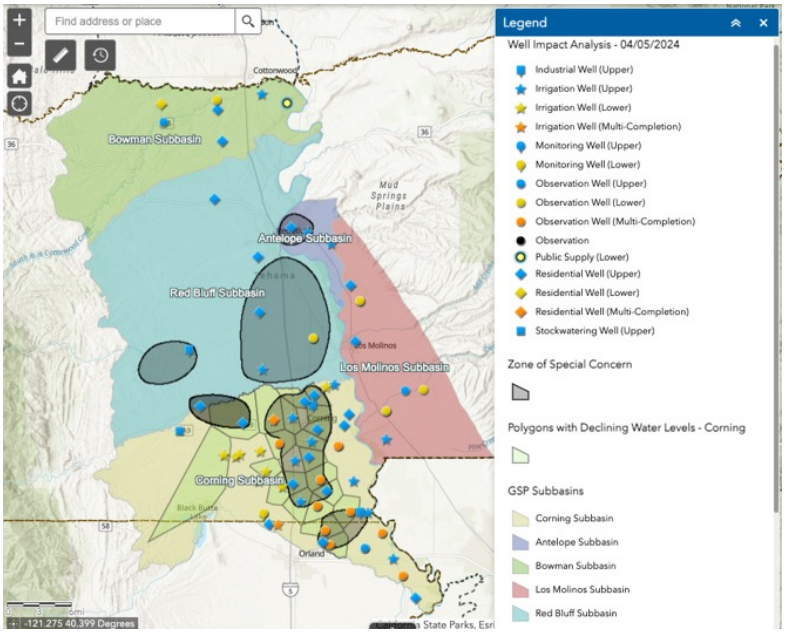
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Data Viewer Map

https://bit.ly/TehamaGlennSGMADataMapViewer

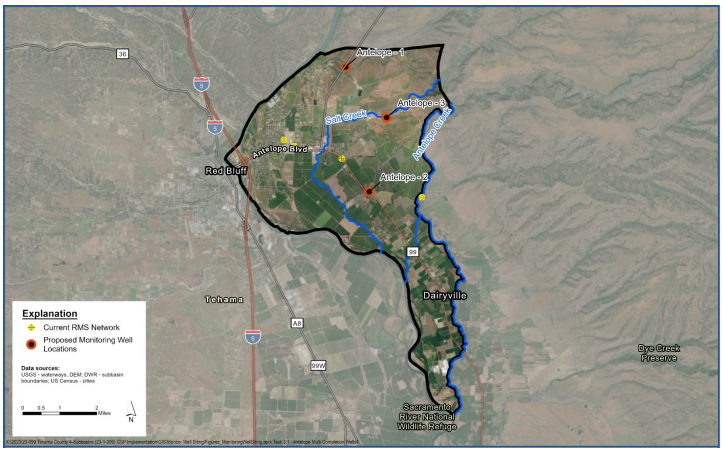


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Multi-Completion Monitoring Wells

- Received funding for **3 new multi-completion wells** to expand groundwater level monitoring
- Each location will have **3 wells at various depths** ranging from 60 ft to almost 800 ft.
- These wells are planned to be **installed in November or December**.

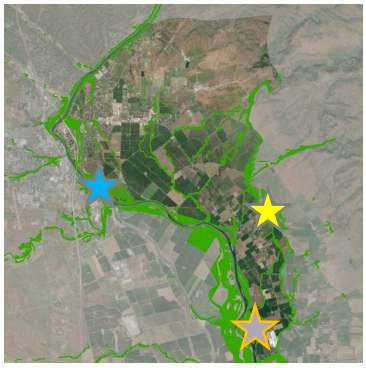


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Biological Surveys- Progress: GDE Survey



Butler Slough (CDFW) - sampled

USFWS – not yet sampled

Red Bluff Recreation Area (USFS) – in process of gaining permission

Would benefit from additional sampling along Antelope Creek and some tributaries into Sacramento River

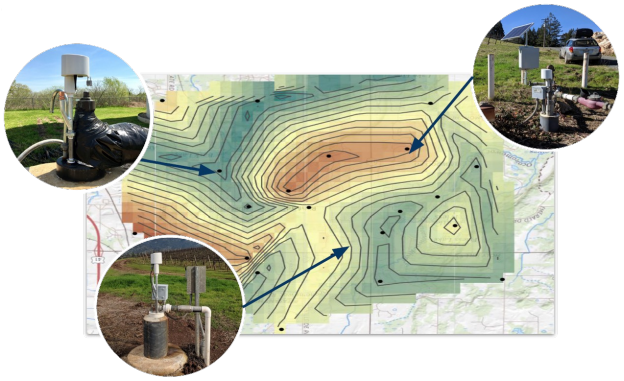
Groundwater Dependent Ecosystems (GDEs)

- **Major data gap** throughout the state.
- GSAs are required to manage groundwater to ensure **enough water for these GDEs**
- **Existing data too broad** (refer to satellite-based map with green on the image).
- **Biological surveys** to verify where GDEs exist at finer scale for informed management decisions.
- **Access Challenges** in certain areas (99 acres sampled to date of currently mapped 1,450 acres)

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Domestic Monitoring Program: Overview



- **Track water levels** to ensure levels are not dropping due to GW management activities.
- Purchasing/installing **non-invasive monit. equipment on 25 volunteer** wells.
- **Well owners gain insights** (ex: water levels and how often their pump is being used).
- The recorded **water levels publicly available**, but **location and property data kept private**.
- **Contact us** if interested in participating (installing as early as mid-March 2025).

Domestic Well Monitoring
bit.ly/DomesticWellMonitoring-InterestForm

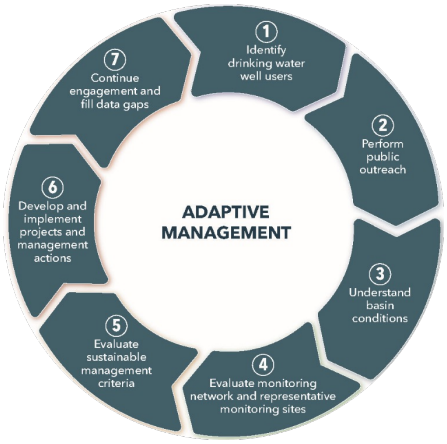
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Community Domestic Monitoring: Objectives

- Support and protect the **domestic beneficial users** of groundwater
- Obtain **additional data** points for GSAs to draw on for groundwater management
- **Minimize risks** to shallow wells and domestic users
- **Track effects of PMAs** on domestic groundwater levels
- Increase **public participation and outreach**



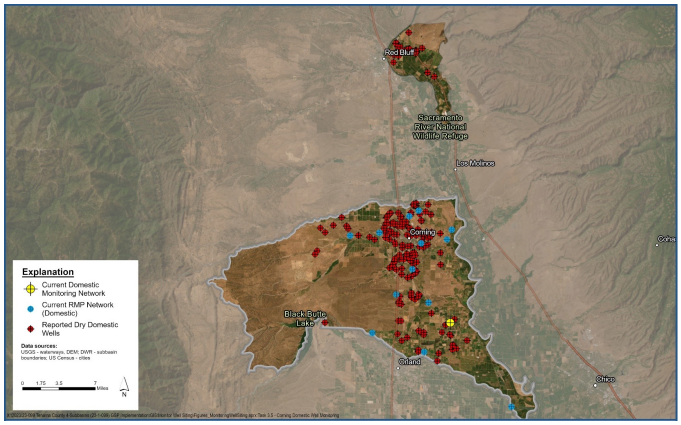
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Community Domestic Monitoring: Background

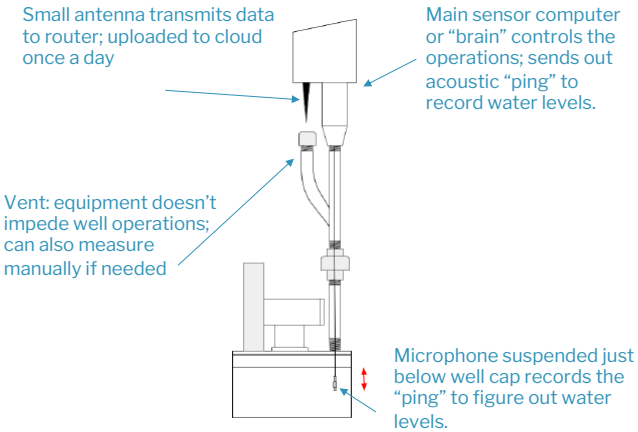
- **Dry well reporting** needs confirmation
- **GSP revisions:**
  - Focus areas
  - Considerations for domestic well users
- Need to increase **community engagement**
- Need for useful **public data**
- Other subbasins implementing **similar programs**



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Community Domestic Monitoring: Key Components

- Program is **funded for 5 years** via grant
- **WellIntel** provides equipment, installation service, and data management
- **Up to 25 wells** per subbasin
- Groundwater levels visible with **online data viewer**
- Data and progress **evaluated and reported annually** during grant timeline
- **Community outreach** and feedback through meetings and workshops



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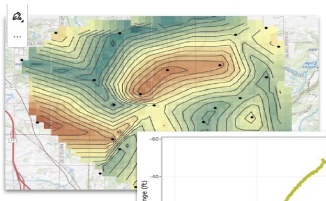
Community Domestic Monitoring: Program Benefits

Benefits for GSAs:

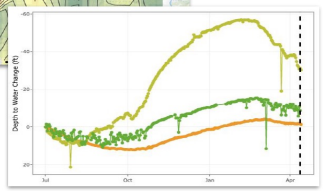
- Groundwater level monitoring points
- GSP activities effects on domestic users
- Increasing public engagement and outreach

Benefits for Well Owners:

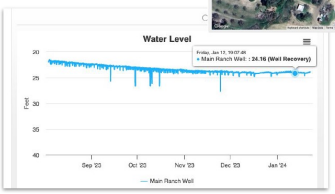
- Track groundwater levels, well efficiency over time
- Customize notifications



Track changes in water levels across the network to **understand where and when domestic wells are being impacted.**







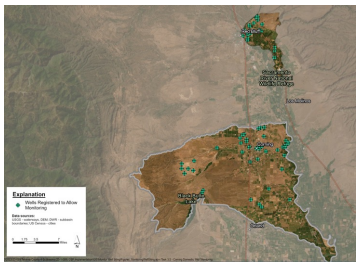
Participants can set up and **change alert settings in the dashboard** for their own well

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Community Domestic Monitoring: Program Implementation/Timeline

Upcoming Milestones



2024

November

- Public workshops
- Draft monitoring plan

December

- Contact interested parties; identify best candidates (Due mid-Dec)
- Finalize the participant list by end of 2024

2025

January

- Coordinate with selected volunteer participants (registration information, overview presentation, etc.)

March

- Install systems, calibrate, beginning monitoring
- Public workshop and overview of dashboard
- Integrate data into current online map viewer

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Domestic Well Monitoring Program

Domestic Well Monitoring
bit.ly/DomesticWellMonitoring-InterestForm

- Based on well information and location information, 25 participants will be selected in December
- Minimum requirements for participants:
  - Have WiFi within 2,000 ft of the well
  - Have an available opening on the well cap for the equipment

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Recharge Projects Interest Form

Recharge Opportunities
bit.ly/Recharge-InterestForm



Multi-benefit recharge site depicting shorebird habitat in Corning.

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What's Next and Staying Involved

Upcoming Meetings

Tehama County Meetings

- Groundwater Commission, 2nd Wednesdays at 8:30a, 727 Oak St., Red Bluff | **Dec 11**
- Flood Control Board of Directors, 3rd Mondays at 10a, 727 Oak St., Red Bluff | **Nov 18 • Dec 16**
- Groundwater Commission Demand Management Working Group (listen-in) (530) 212 – 8376, conference code 142001 | **Nov TBD • Dec 18**

Corning Subbasin

- Public Open House | **Nov 20** – Corning Senior Center, 1015 4th Ave, Corning, CA 96021 | 6:00p
- Corning Subbasin Advisory Board (CSAB) | **Dec 4**
- Corning Sub-basin GSA (Glenn County) | **Dec 12**

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 Bluf
  (530) 690-0700

TehamaCountyWater.org | CorningSubbasinGSP.org

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Background/Getting Involved	General SGMA background Outreach and Engagement Opportunities
Groundwater Conditions and Data Gaps/Monitoring	Domestic well monitoring network Interconnected surface water studies
Projects, Management Actions, and Funding	Water quality and dry well reporting Well registration, demand management, dry well mitigation, long-term funding considerations

OPEN HOUSE STATIONS OVERVIEW

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