

Sustainable Groundwater Management Act

Virtual Workshop For Proposed
Designation of Kern County
Subbasin as a Probationary Basin
August 26, 2024

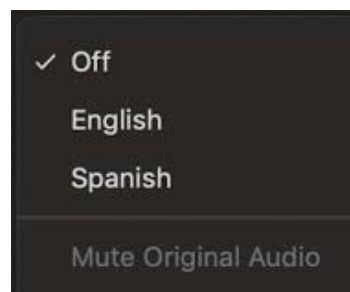


State Water Resources Control Board

Opción de Interpretación en Zoom

Seleccione el icono de interpretación desde los controles de la pantalla

- Haga clic en “Interpretation” en el menú
- Seleccione español (*Spanish*)
- Seleccione la opción para poner el audio original en silencio (*Mute Original Audio*)



Language Interpretation through Zoom

Click the Interpretation icon in your meeting controls

- Navigate to Language Channels
- Select Spanish OR English OR Punjabi
- Mute Original Audio

Preguntas sobre Zoom? Envíe un mensaje a Jackson vía el chat.

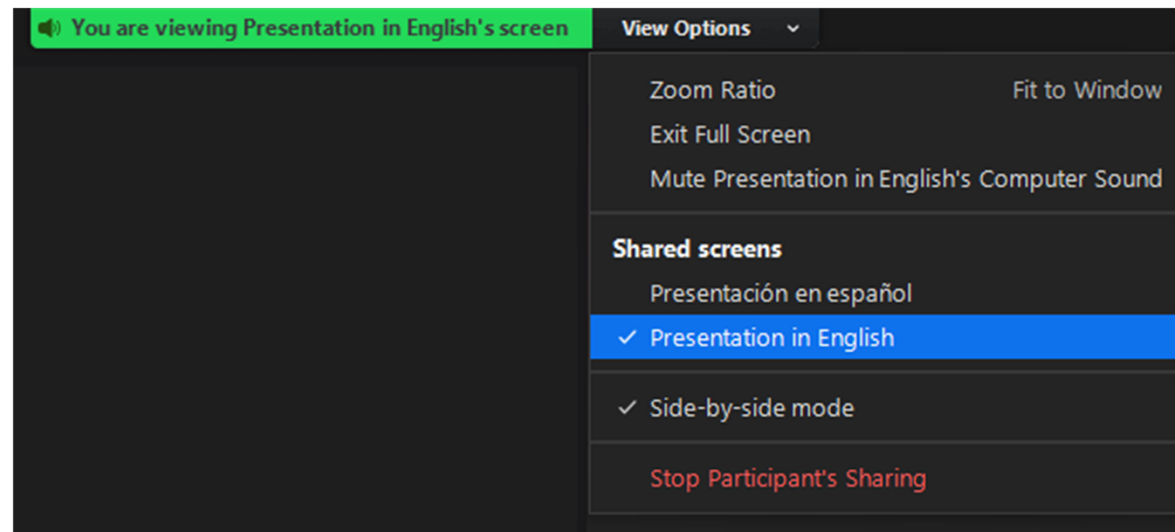
Zoom Questions? Send a message to Jackson in the Chat.

Opciones de Pantalla en Zoom

Haga clic en “View Options” en la parte superior de su pantalla y seleccione **“Presentación en español”** O **“Presentation in English”**

Preguntas sobre Zoom?

Envíe un mensaje a Jackson vía el chat.



View Options on Zoom

Click on View Options at the top of your screen and select **"Presentación en español," "Presentation in English,"** or **"Presentation in Punjabi."**

Zoom Questions? Send a message to Jackson in the Chat.


Participation Poll

Please take a moment to follow the prompts on the poll by following the link in the chat.





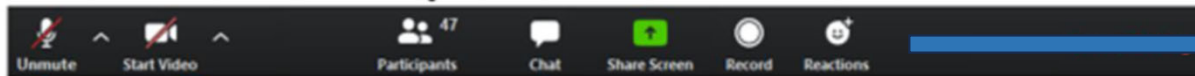
Community Guidelines

1. Please rename yourself and provide affiliation if it applies
 2. Engage respectfully and avoid personal attacks – verbally or in the chat
 3. Use chat to communicate comments and/or questions to speakers
 4. Please use "Raise Hand" function and wait until the facilitator calls on you to speak
 5. Please remain muted when not speaking
 6. During the comment portion, we will go in order of hands raised and may provide a time limit if there are many people who would like to comment
- 

Zoom Meeting Controls

How to Use 

Black menu bar at top or bottom of screen:



To Raise Hand
Press Reactions,
select "Raise Hand"

Mute/Unmute Yourself
Please remain muted when not speaking

Turn on/off your video

View all participants
and see where you are in comment line

Send a message
Select chat window to send comments/questions to speakers


Mute/Unmute Yourself on Phone
Select *6



Zoom Comments/Questions? Send message to Jackson using chat

How to Participate



Written Comments

Submit Questions and
Comments During the
Meeting by
Utilizing Chat



Verbal Comments

Raise Hand
Video On or Off
"Unmute" when
Called On by Facilitator



Objectives

1. **Provide an opportunity for the public to learn about the draft staff report which describes the actions staff recommend the State Water Resources Control Board should take for the proposed designation of Kern County Subbasin as a probationary basin.**
2. **Provide an opportunity for the public to interact with State Water Resources Control Board staff and raise their questions and concerns.**
3. **Provide an opportunity for the public to provide verbal and written comments on the draft recommendations.**




Public Workshop Agenda

1. Opening Remarks
2. Groundwater & Kern County Subbasin Background
3. Overview of State Intervention Under SGMA
4. Plan Issues Described in Staff Report
5. Proposed Requirements for Groundwater Extractors
6. Public Q&A on Probationary Hearing Process
7. Presentation from the Kern County Groundwater Sustainability Agencies
8. Next Steps
9. Public Comment (Starts at 12:15 pm)



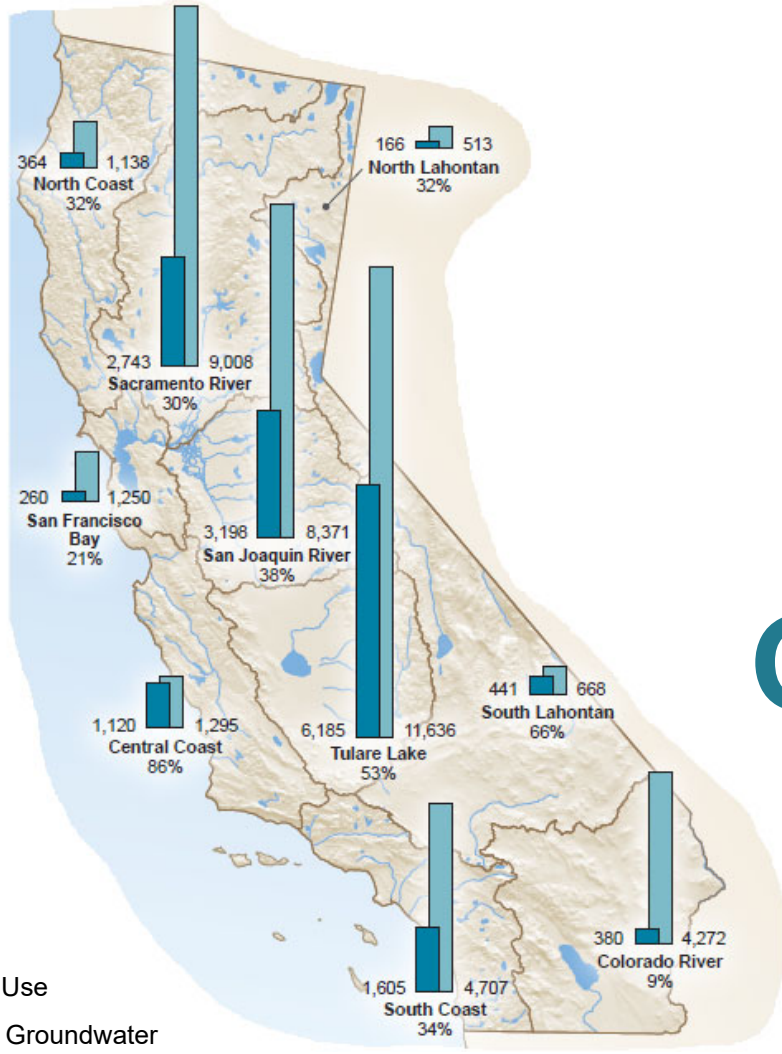
Opening Remarks



Background on Groundwater & the Kern County Subbasin

80%

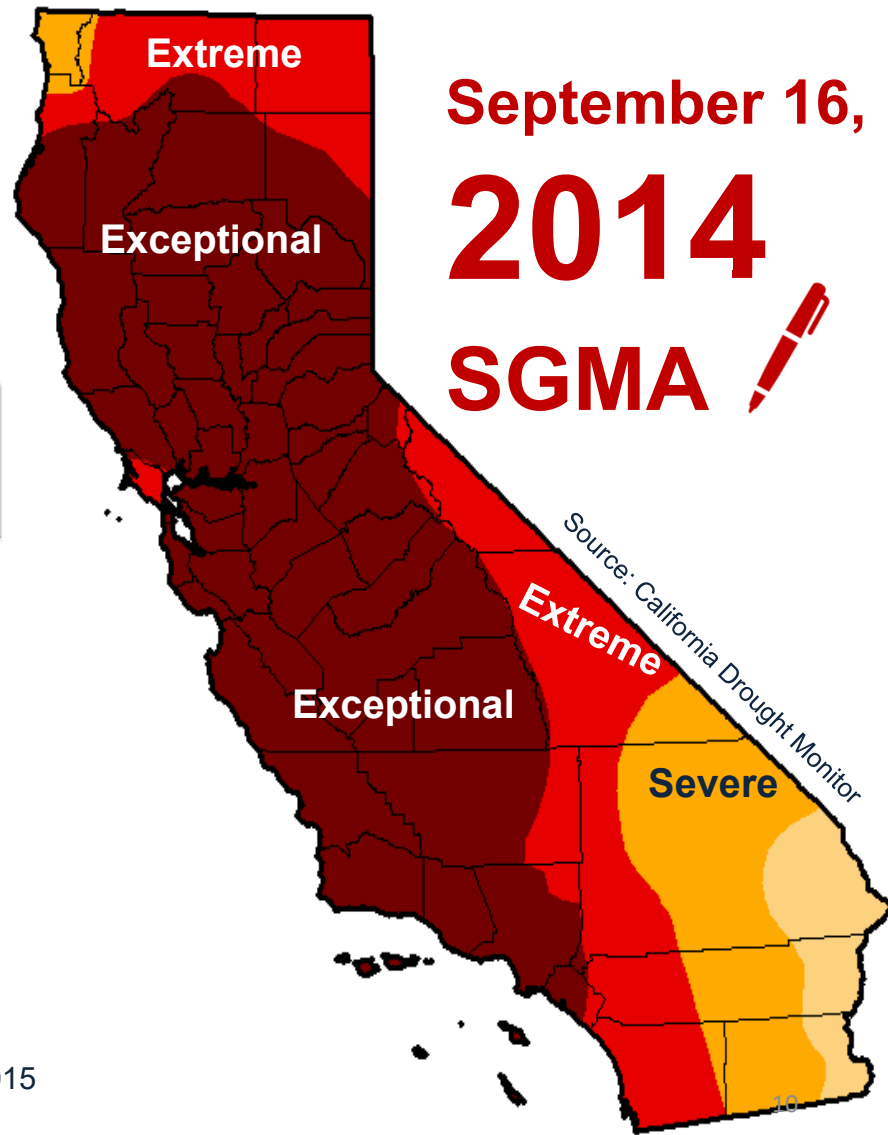
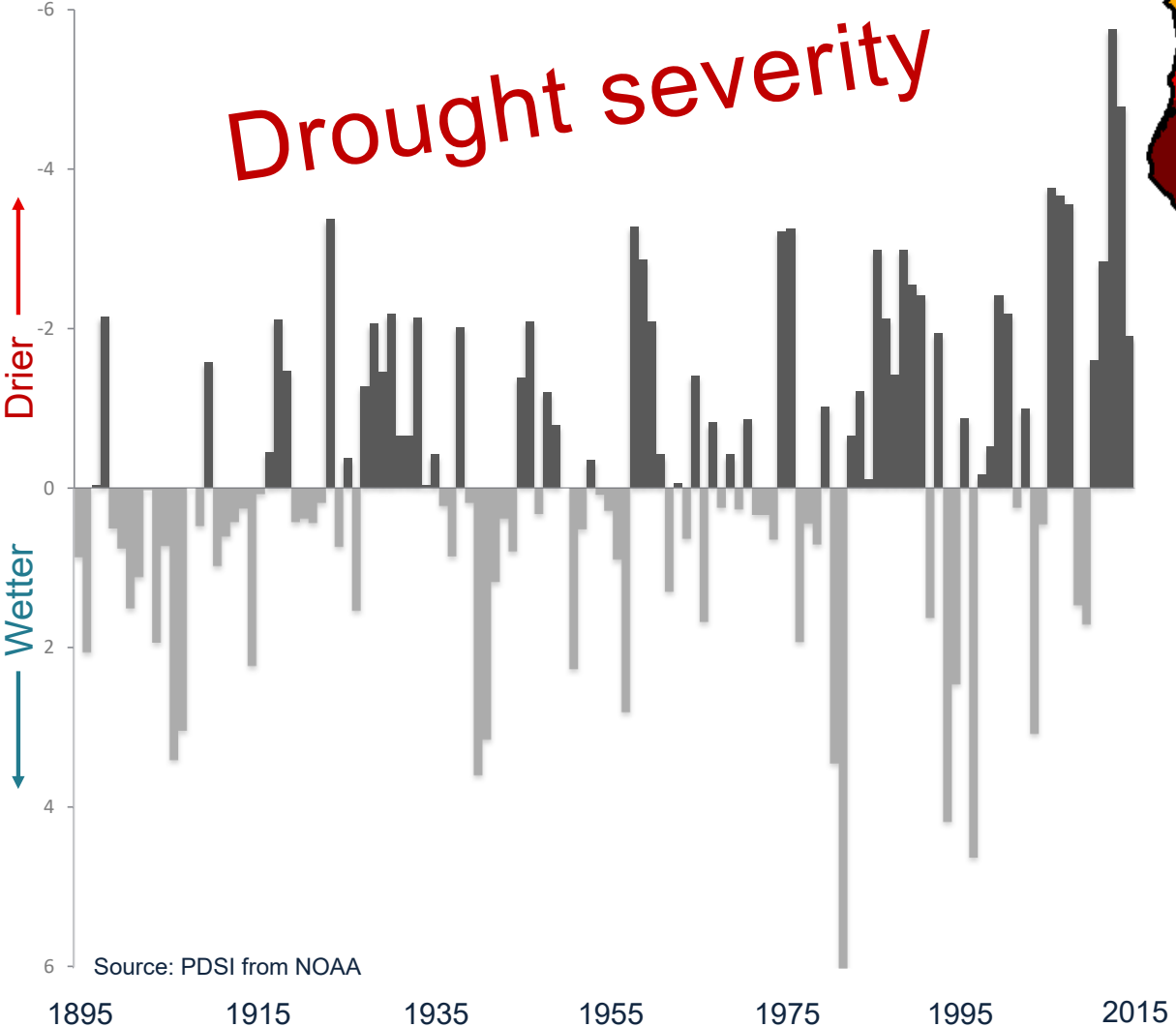
of Californians rely on
GROUNDWATER
for part of their water
supply



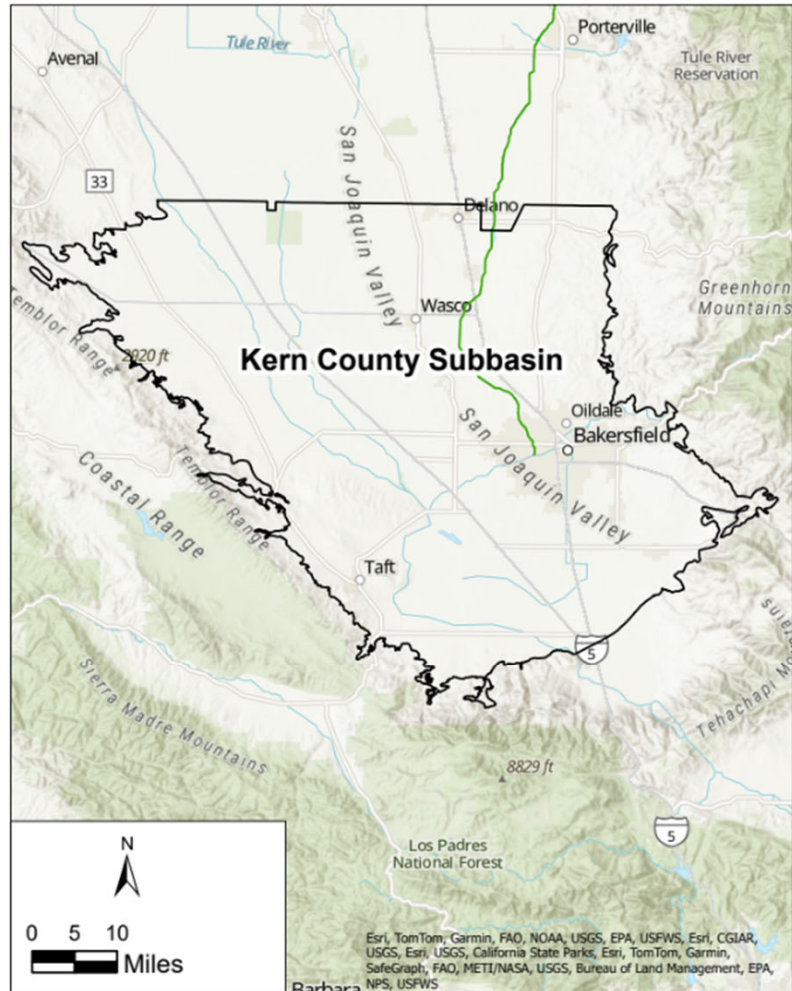
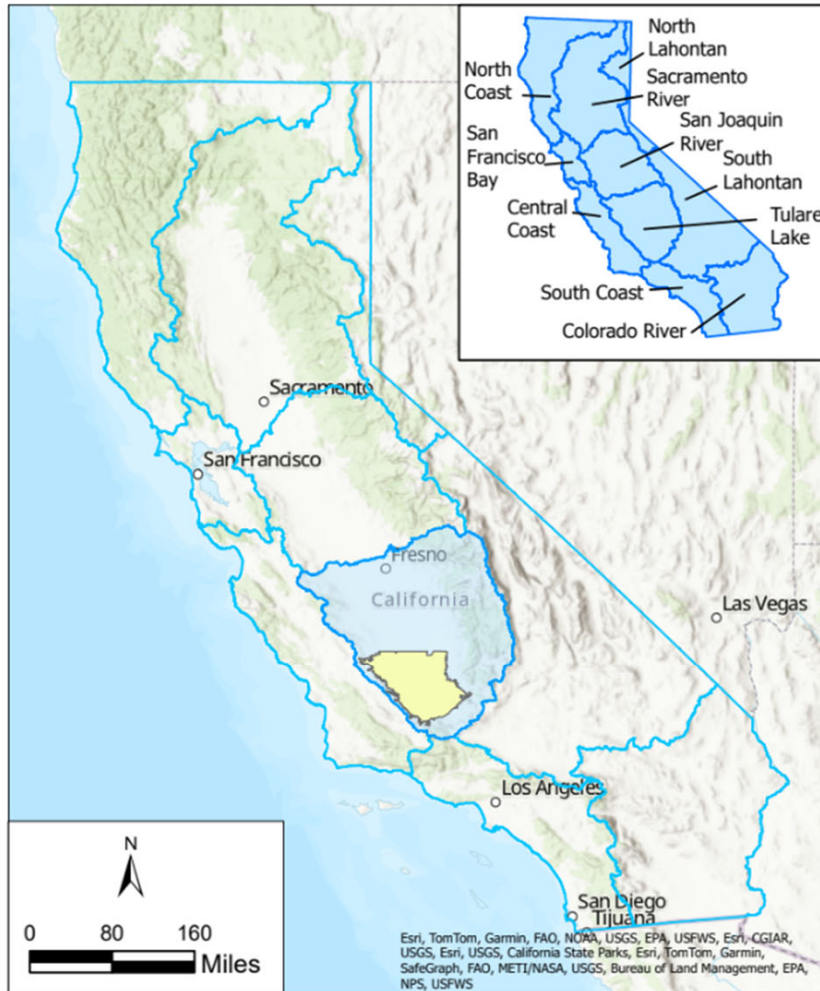
■ Total Water Use
■ Use Met By Groundwater

Source: California Water Plan Update 2013

Drought severity



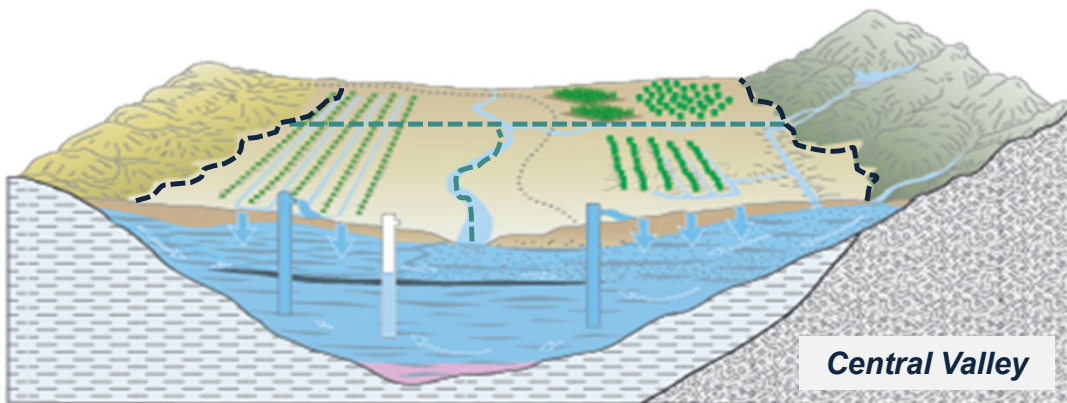
Kern County Subbasin



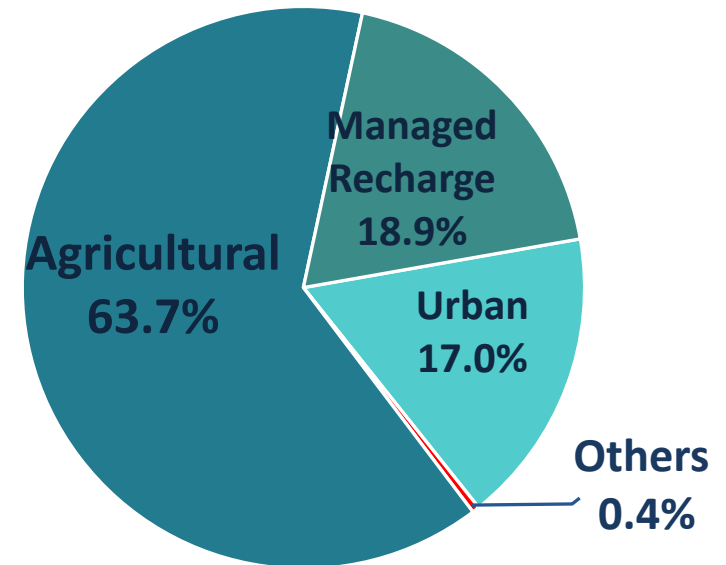
Kern County Subbasin

Groundwater Uses

- Municipal and domestic supply
- Drinking Water
- Agricultural supply
- Industrial and service supply
- Managed Recharge Recovery



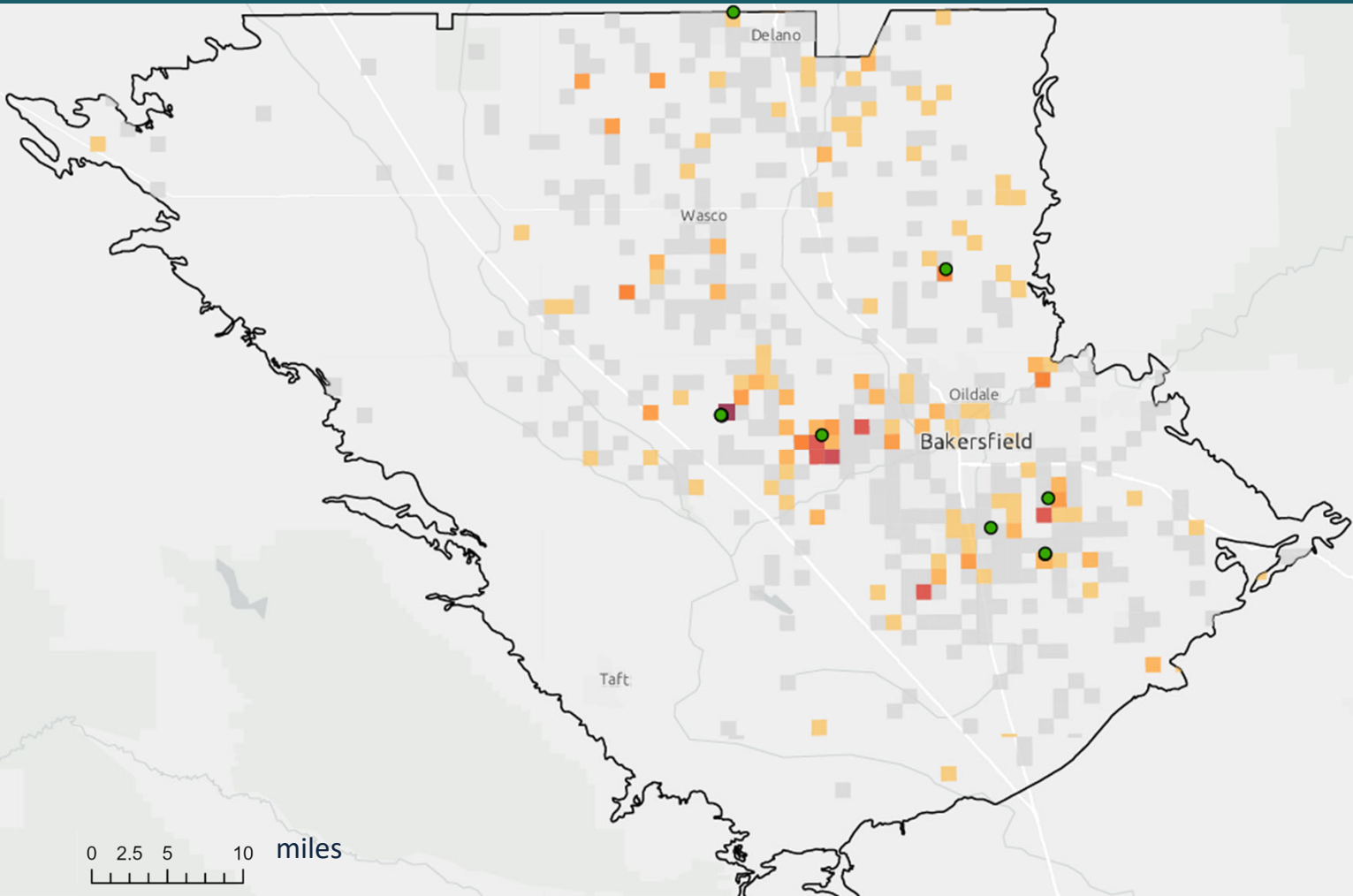
Groundwater Extractions October 2022 – September 2023



925,464 acre feet

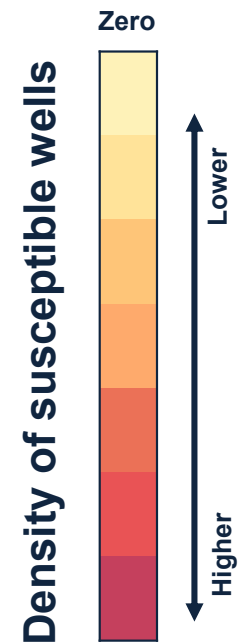
Data Source: WY 2023 Kern County Subbasin Annual Report

Kern County Subbasin: Domestic Wells

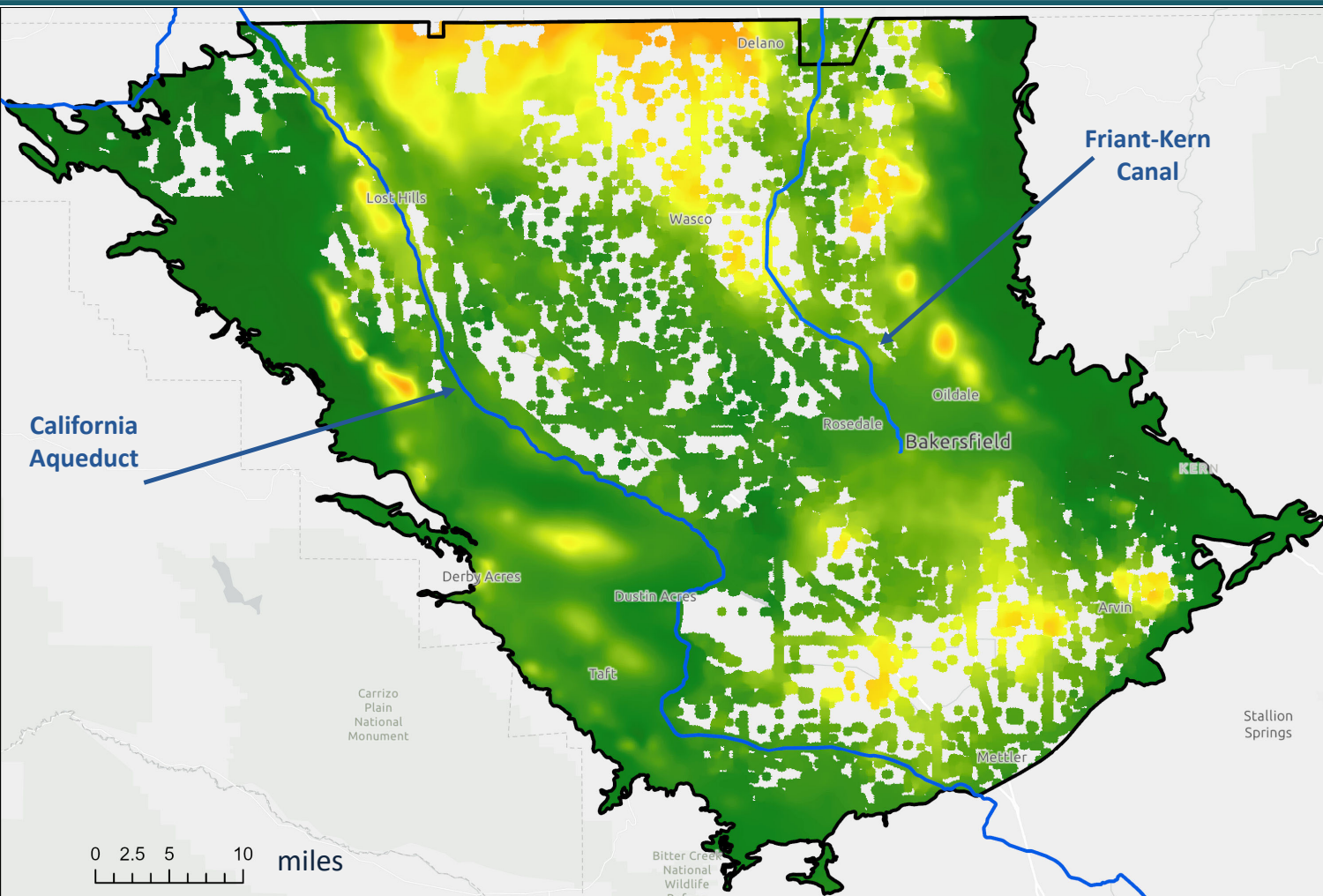


Susceptible: 227

**Reported dry in
2023: 10**



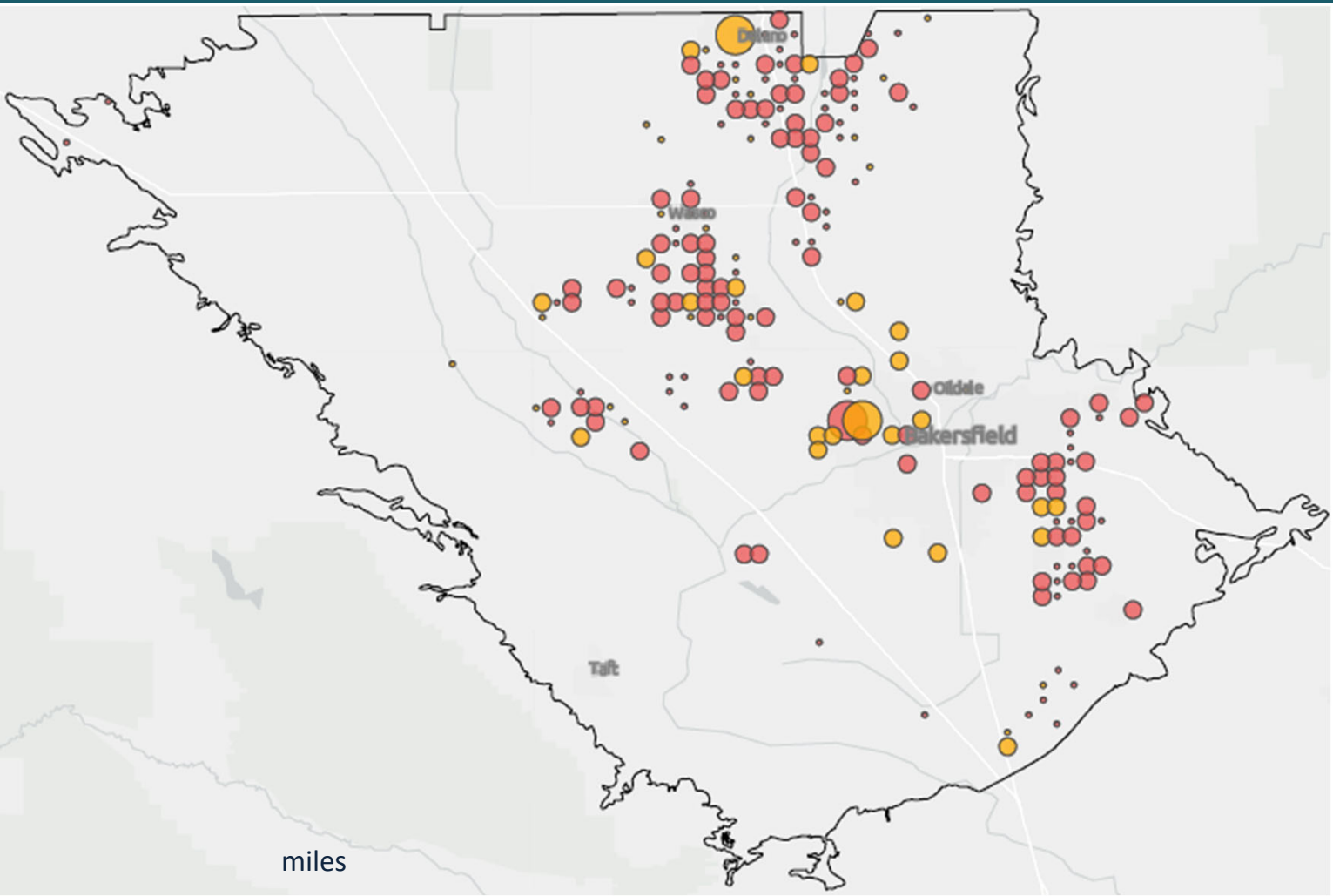
Kern County Subbasin: Subsidence



Subsidence from InSAR:
June 2015 to January
2024



Kern County Subbasin: Groundwater Quality



2024 At Risk Domestic and State Small Water System Wells

591 Wells

1. Nitrate

1,031 Wells (Other)

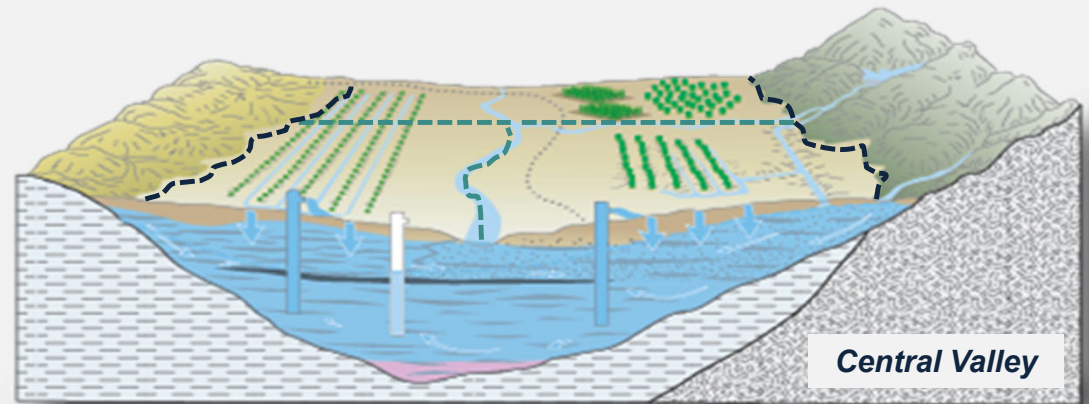
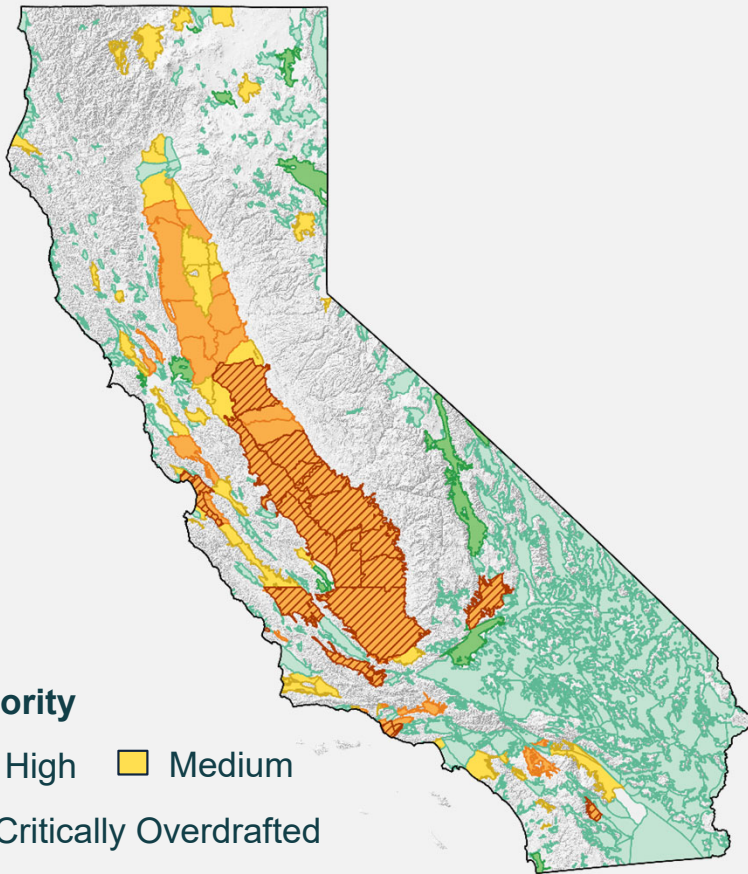
Risk
● Medium
● High

Number of Wells
● 1
● 25
● 50



State Intervention Under SGMA

SGMA AT THE BASIN SCALE



Basins & Subbasins

SGMA Authorities

Groundwater
Sustainability Agencies
(GSAs)

CA Department of Water
Resources (DWR)



State Water Resources
Control Board

What is Sustainability?

**Basin operated within its sustainable yield
and not experiencing undesirable results:**



Lowering
GW Levels



Storage
Reduction



Seawater
Intrusion



Degraded
Quality



Land
Subsidence



Surface
Depletion

Significant and unreasonable...

**...caused by groundwater conditions
occurring throughout the basin.**

“

Where a local groundwater sustainability agency is not managing its groundwater sustainably,

the state needs to protect the resource

until... a local groundwater sustainability agency can sustainably manage the groundwater basin.

”

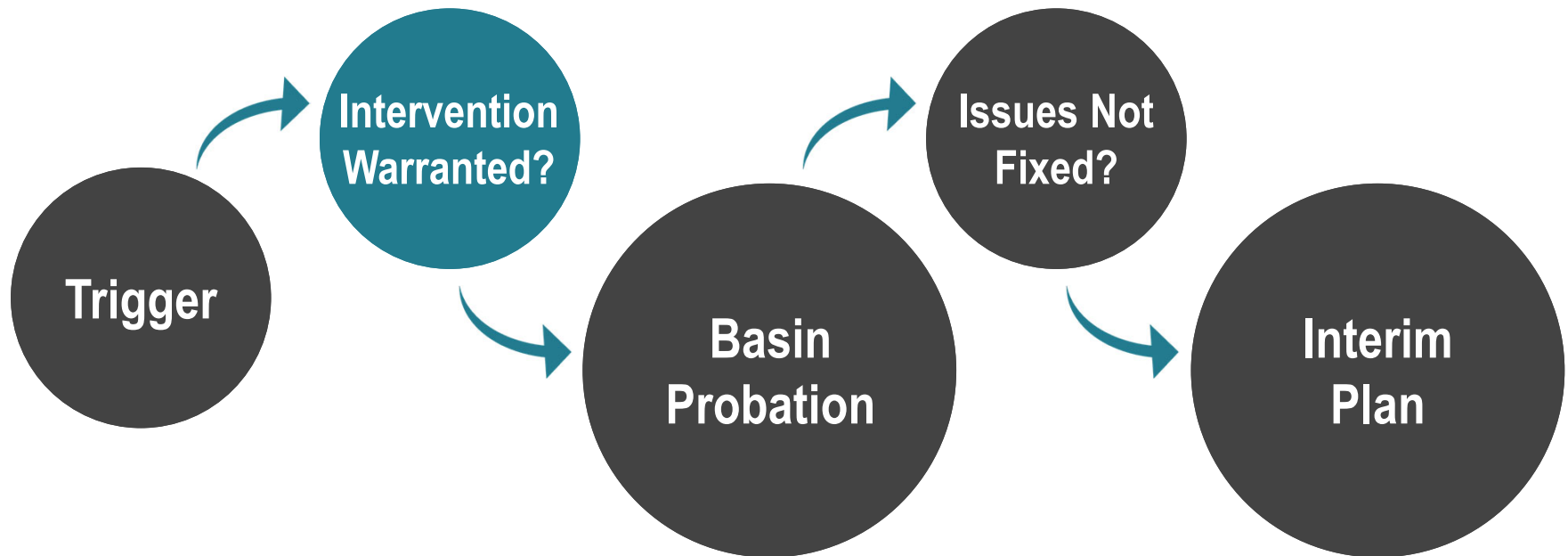
California Legislature

Board Backstop Basics

- ① Board only steps in when local efforts fail.
- ② Temporarily protects the basin until locals come up-to-speed.
- ③ Backstop is triggered by deadlines and deficiencies.



State Water Resources Control Board Intervention



Probationary groundwater BASIN



Board identifies deficiencies



GSAs have time to address issues & continue to implement their plans



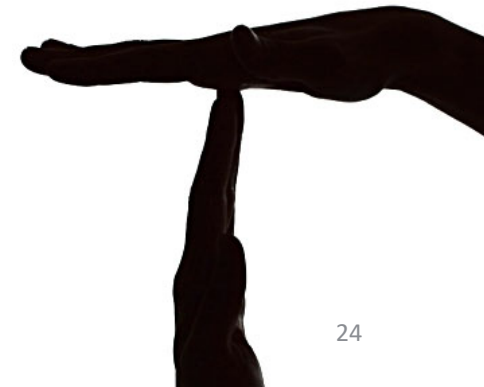
Extractors begin reporting



Board may require meters



Board recovers costs via fees



Extraction **REPORTS**

Reports are submitted annually.

Reports require...

- well location & capacity
- monthly extraction volumes
- place & purpose of use

Reports must be filed electronically.

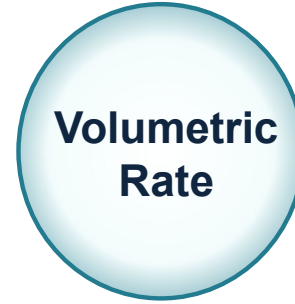
Information on extraction reports is available at https://www.waterboards.ca.gov/sgma/reporting_and_fees.html.

Probationary Extraction Reporting Fees

If the Board places the basin on probation



+



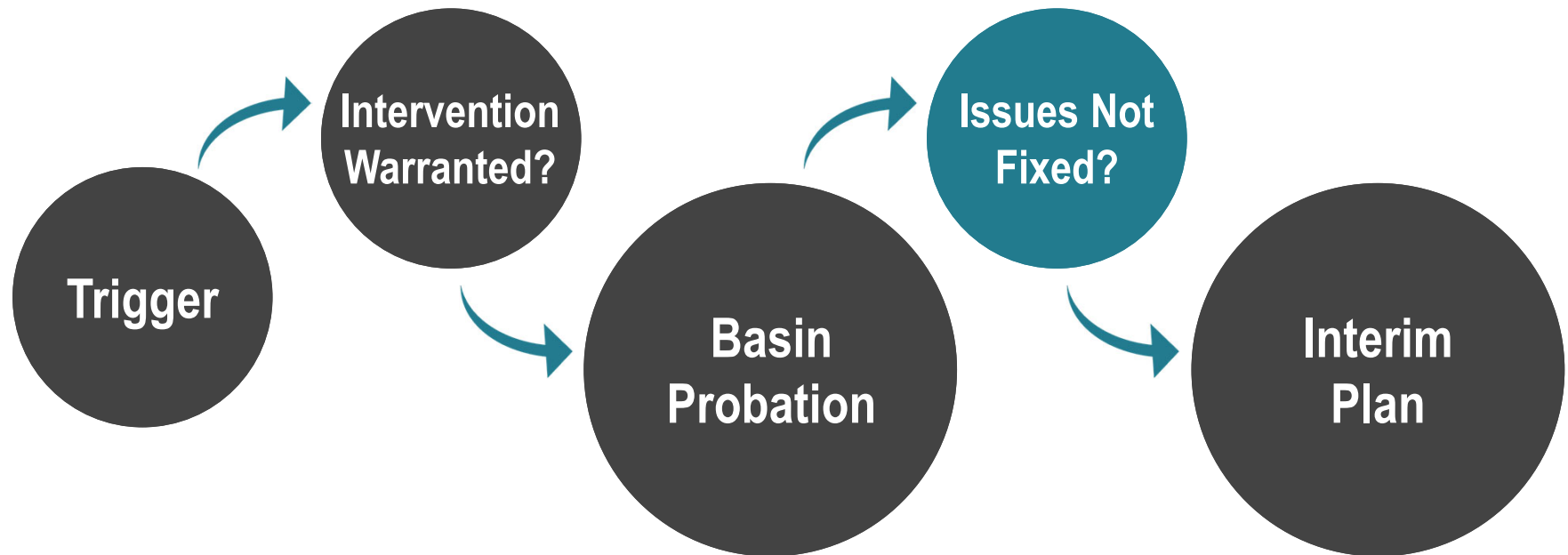
**\$300 per well
per year**

**\$20 per acre-
foot extracted**

Late reporting fee: 25% per month late

*Fee waivers available for DACs, public schools, and those with low income

State Water Resources Control Board Intervention







Groundwater Sustainability Plan Issues Described in Draft Staff Report

Kern County GSP Review

- **March 2023 DWR found July 2022 GSPs inadequate and referred the Kern County Basin to the State Water Board**
 - **Board staff began review of the 2022 GSPs and development of the Staff Report identifying deficiencies and potential corrective actions**
- **May 28, 2024 GSAs released new draft GSPs for public comment**
 - **Board staff conducted a preliminary review and determined that major deficiencies identified in the draft Staff Report remain, posing a continued risk to beneficial users**
- **Draft Staff Report analysis of July 2022 GSPs helps inform the continued review and improvement of the draft 2024 GSPs**

Staff Recommendations

- **Improved plans are necessary to achieve sustainability in the basin by 2040**
- **In 2022 and 2024 Draft Plans, Staff identified potential impacts to:**
 - **Groundwater users (primarily drinking water users)**
 - **Critical infrastructure**
 - **Groundwater quality**
 - **Interconnected surface water**
- **Continue to review new Draft 2024 GSPs**
 - **Work with GSAs and meet regularly to walk through areas of major deficiencies and potential corrective actions**

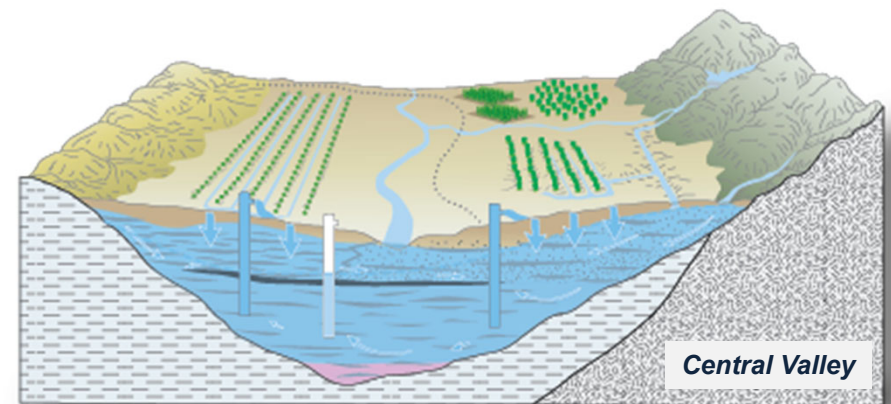
GSP Elements

Groundwater Conditions

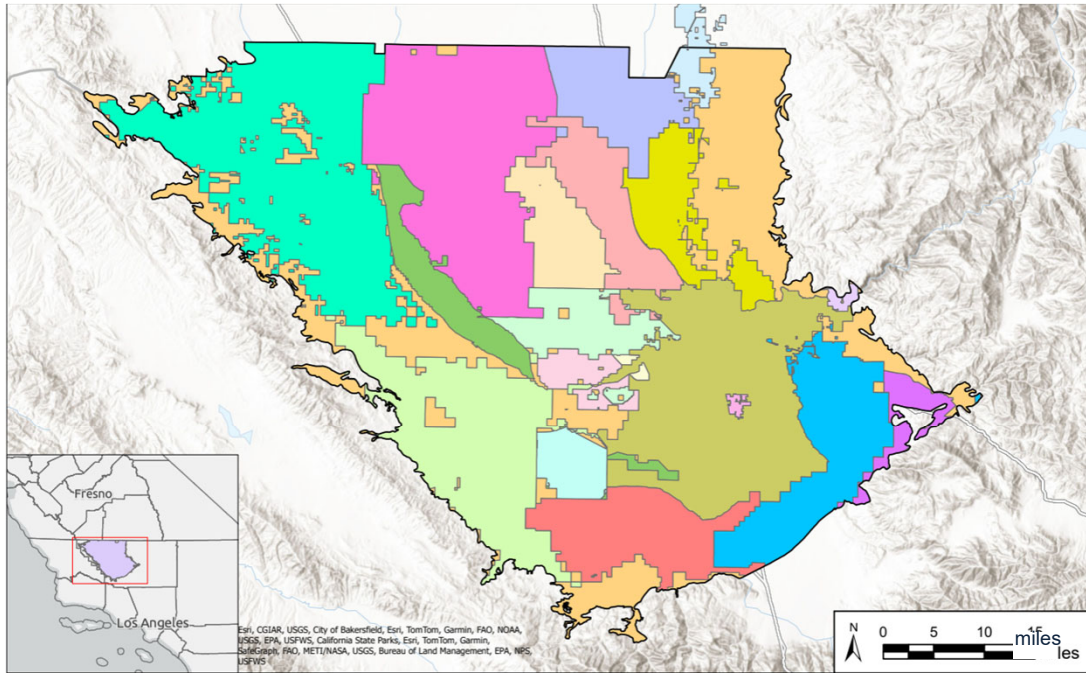
Sustainability Criteria

Monitoring

Projects & Actions



Plan Deficiencies



Issues with:



Coordination



Declining Groundwater Levels



Land Subsidence



Water Quality Degradation



Interconnected Surface Water

Plan Deficiencies: Coordination

Problems with:

- **Inconsistent Data and Methodologies that are incomparable**
- **Description of what the GSPs are trying to avoid (“undesirable result”)**
 - **Two-tiered approach to define undesirable results would require multiple management area exceedances to occur before an undesirable would be triggered**
- **Potential impacts to groundwater users**
 - **One or more management areas, and users within those areas, can experience impacts for sustained periods of time and not be considered an undesirable result**
- **Lack of clarity on basin GSA coverage and authority**
- **Potential impacts due to subsidence, groundwater quality degradation**

Potential Consequences: Coordination

- **Lack of communication**
- **Disproportional impacts to users across basin**
- **Impacts to other sustainability indicators**
- **No clear responsible party for impacts**
- **Continued localized impacts with no actionable triggers**

Plan Deficiencies: Declining Groundwater Levels

Problems with:

- **Inconsistent and incomparable data and methodologies across plans**
- **Description of what the GSPs are trying to avoid (“undesirable result”)**
 - **What is considered “significant and unreasonable” in each Plan is defined separately**
- **Potential impacts to groundwater users**
 - **Under 2022 GSPs, over 437 of 2,141 domestic wells (20%) and 25 of 256 (10%) public supply wells would go dry at groundwater level minimum thresholds**
- **Potential impacts to other sustainability indicators**
- **Role and scope of monitoring and well mitigation**

Potential Consequences: Declining Groundwater Levels

- **Threatens drinking water sources by causing dry wells or reducing well productivity**
- **Increases costs to deepen or drill new wells**
- **Increases energy costs of pumping**
- **Increases cost of water for everyone**
- **Causes subsidence, degrades groundwater quality, reduces storage, and depletes interconnected surface water**

Plan Deficiencies: Land Subsidence

Problems with:

- **Inconsistent definitions of infrastructure, data, and methodologies**
- **Description of what the GSAs are trying to avoid (“undesirable result”)**
 - **Example: amount of damage to canals, levees, wells, loss of storage in aquifers**
- **Subsidence impacts from declining groundwater levels**
- **Significant impacts to conveyance infrastructure without mitigation**

Potential Consequences: Land Subsidence

- **Reduces carrying capacity of gravity-driven water conveyance (e.g., canals)**
 - **Reduces surface water deliveries and increases flooding risks**
- **Damages deeper wells**
- **Damages infrastructure like roads, utilities, and pipelines**
- **Causes irreversible damage to groundwater aquifers and lasting damage to aquatic ecosystems**
- **Degrades groundwater quality**

Plan Deficiencies: Degraded Groundwater Quality

Problems with:

- **Inconsistent Data and Methodologies**
- **Lack of adequate identification of constituents of concern present within the subbasin**
- **Inadequate monitoring of domestic drinking water wells and users**
- **Lack of mitigation**

Potential Consequences: Degraded Groundwater Quality

- **Can cause foul taste and odor, chronic disease, or death.**
- **Can result in irrigation water that is not suitable for crops**
- **Mitigation and treatment of water may be difficult and expensive**
- **May require alternative water source**

Plan Deficiencies:

Depletion of Interconnected Surface Water

Problems with:

- **Potential impacts to groundwater and surface water beneficial uses**
- **Inconsistent definition of interconnected surface water throughout the subbasin**
- **Need to assess depletion of interconnected surface water**
- **Lack of monitoring**

Potential Consequences: Depletion of Interconnected Surface Water

- **May substantially transform/harm habitat and wildlife**
- **Reduces available water for surface water users**



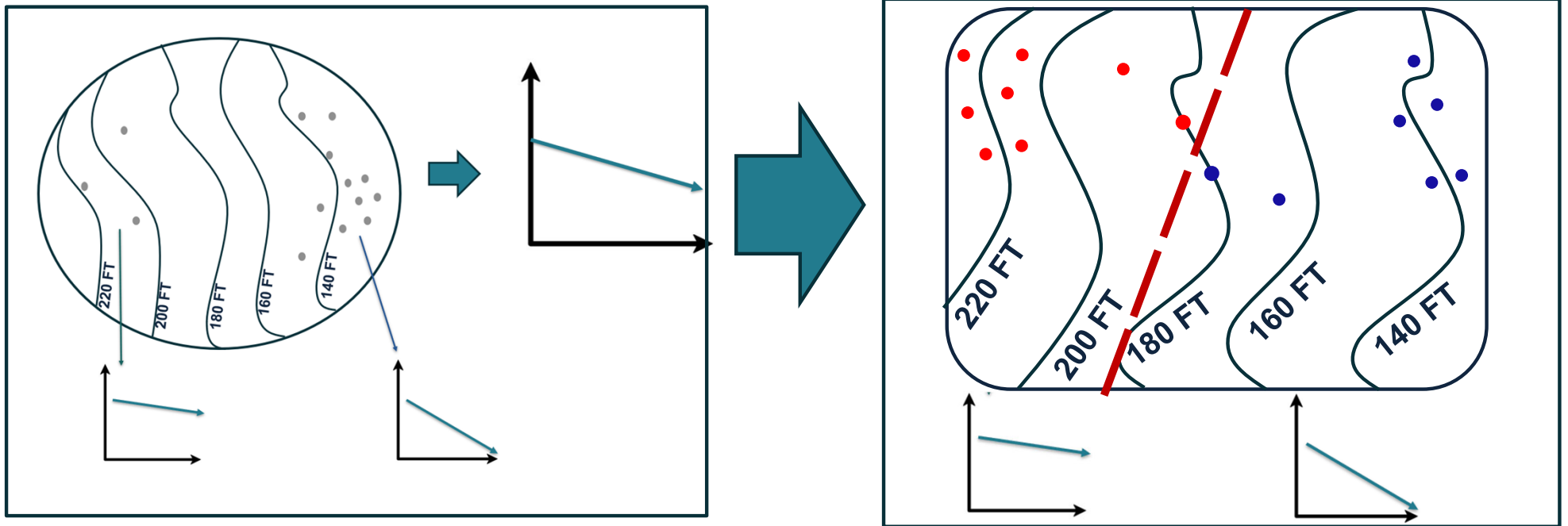
2024 Groundwater Sustainability Plans' Issues Described in Draft Staff Report

Kern County Draft 2024 GSPs Deficiencies:

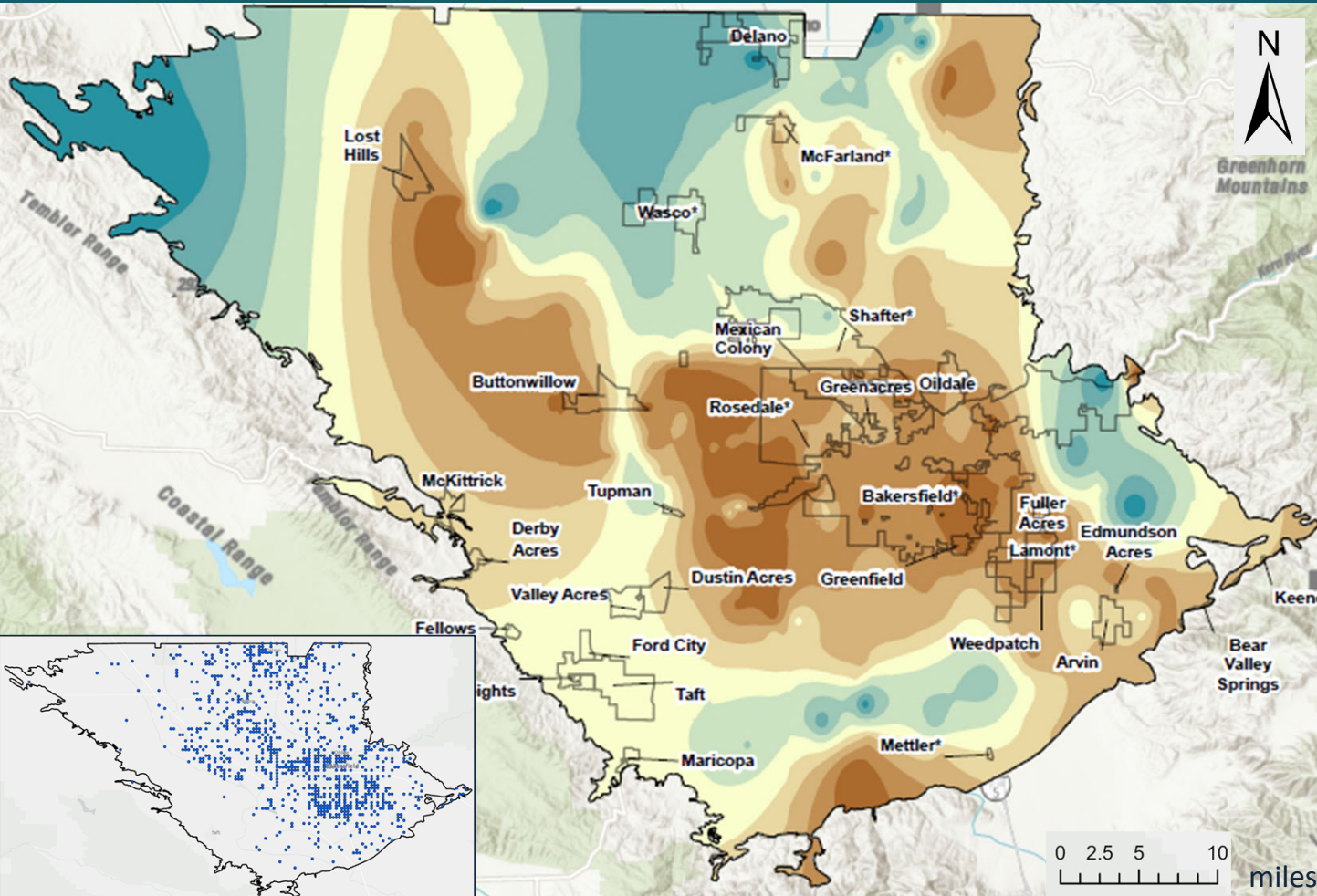
- **Methodology results in values that are not coordinated across boundaries**
- **Methodology is based on the lowest “trend” or “range” value rather than impacts to beneficial uses or users, resulting in lowered thresholds near communities**
- **Lowered thresholds result in up to 9.3 MAF less groundwater**
- **Insufficient consideration of confined, unconfined, and semi-confined aquifers can cause a lack of protections for beneficial uses and users meant to be protected by monitoring networks and mitigation plans**

Kern County Draft 2024 GSPs' Deficiencies:

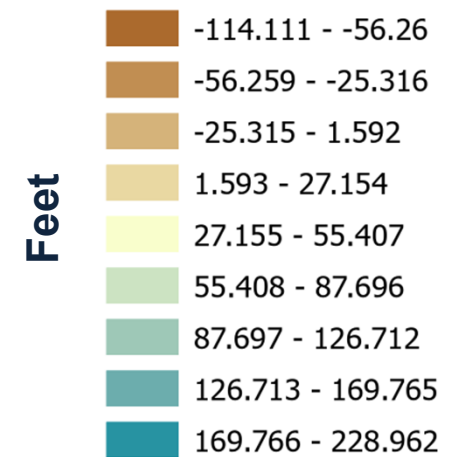
- **Methodology results in values that are not coordinated across boundaries**



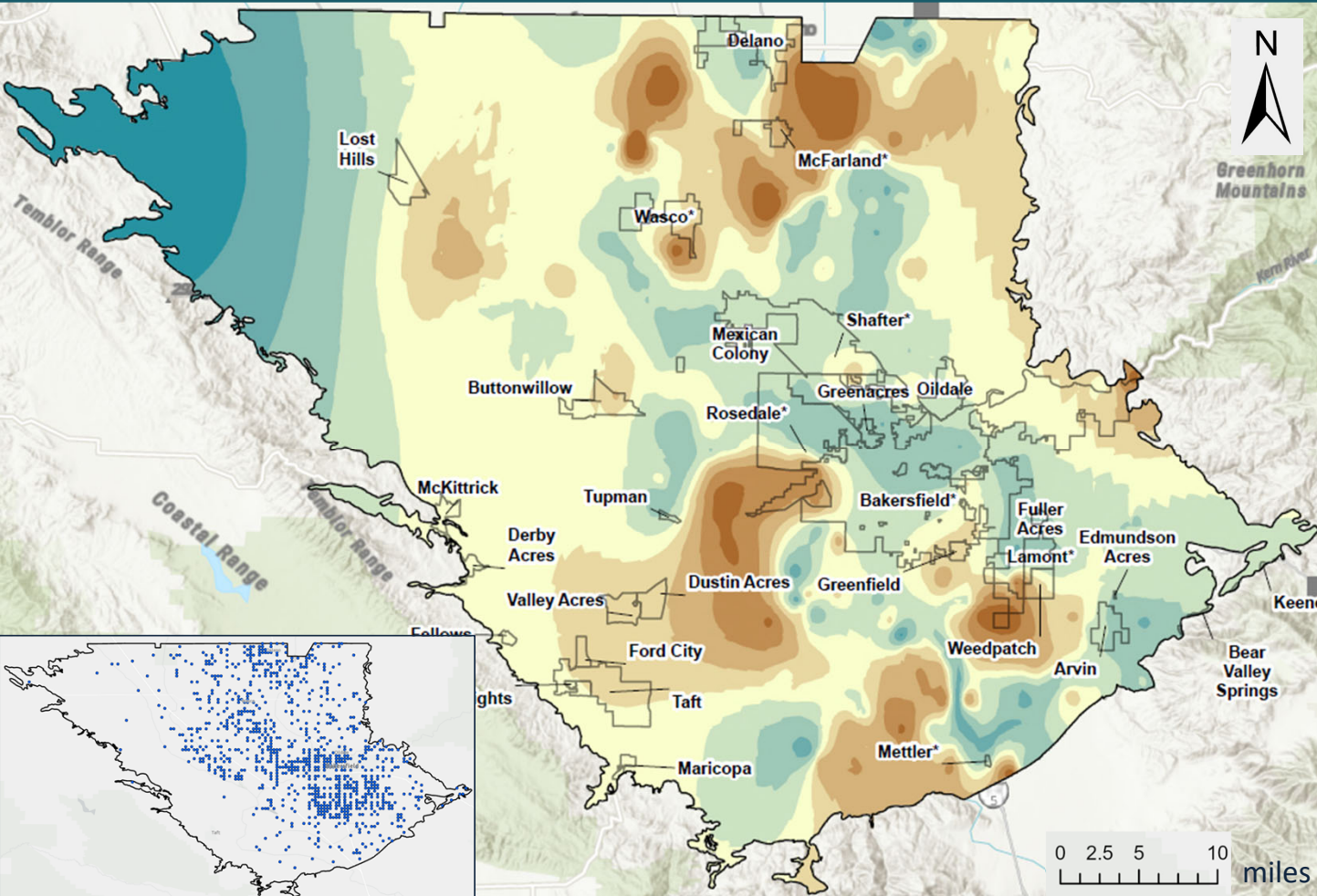
Deficiencies: Change in Minimum Thresholds



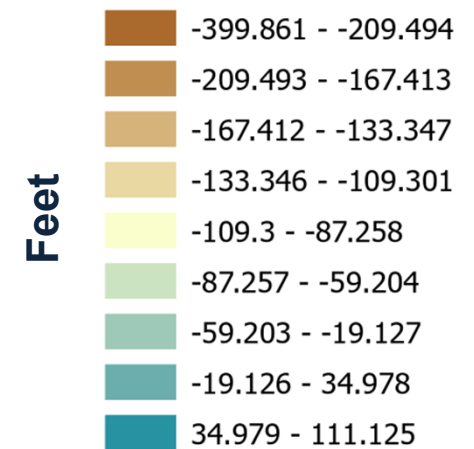
Change in 2022 to 2024
Minimum Thresholds



Deficiencies: Declining Groundwater Levels

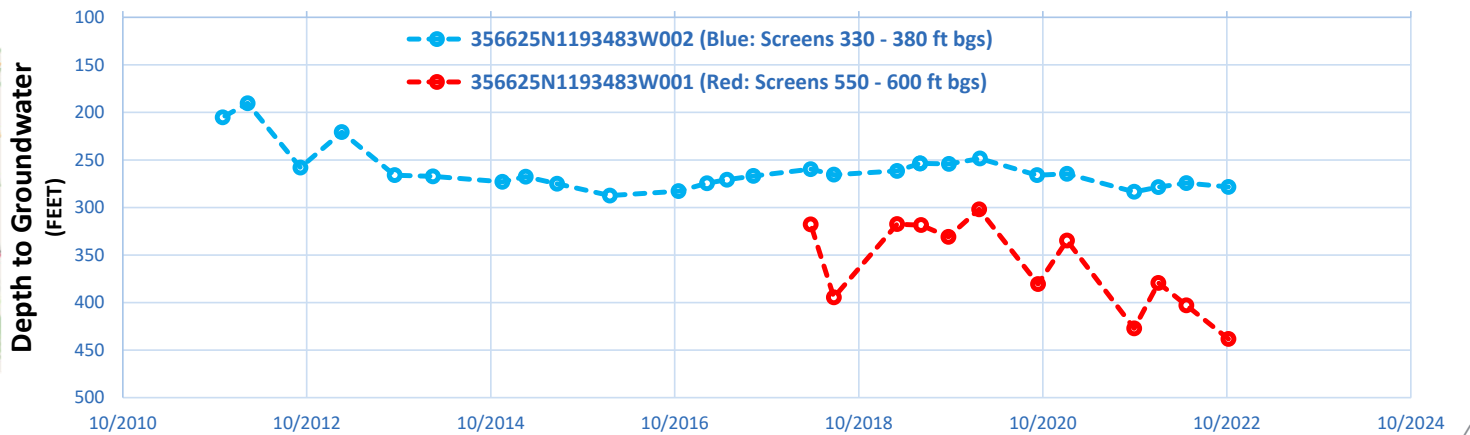
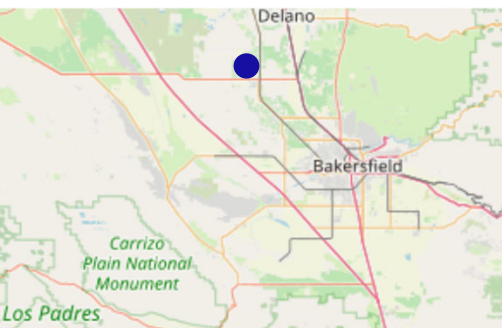
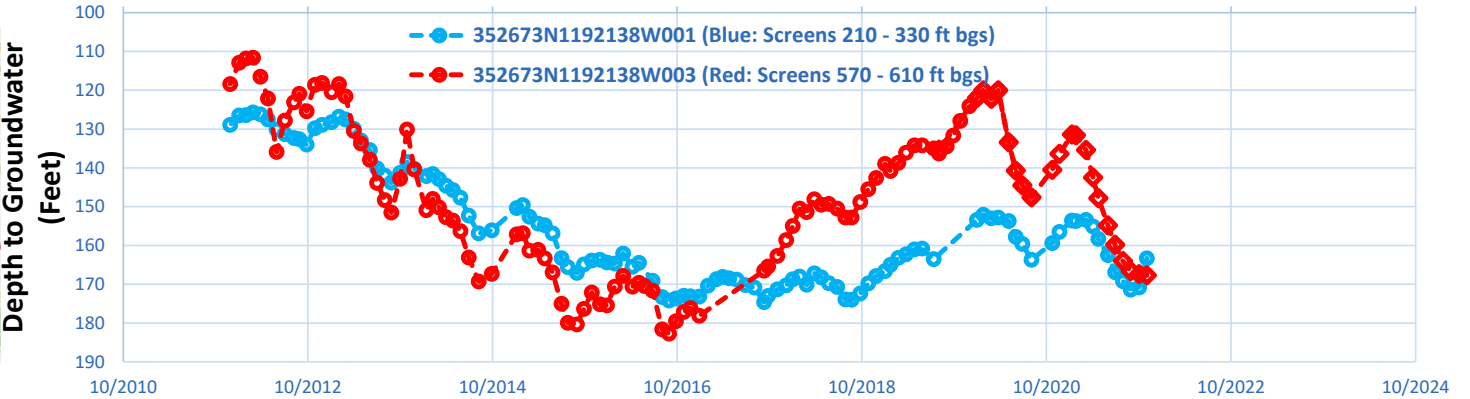
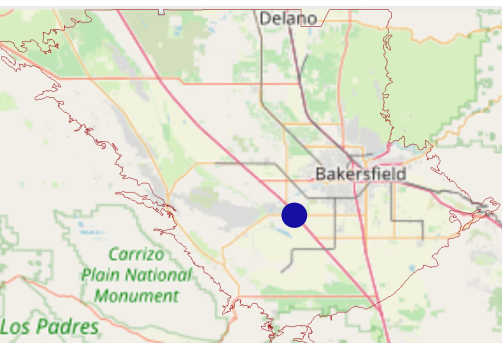


**Change in Current
Groundwater Levels to
2024 Minimum Thresholds**



Deficiencies: Aquifer Differences

Nested/Cluster Groundwater Wells



Kern County Draft 2024 GSPs' Deficiencies:

- **Uncertainty how banking and recharge operations impact management**
- **Incomplete subsidence mitigation plans and inadequate explanations of subsidence effects of oil and gas operations**
- **Lack of clarity on how GSAs will address minimum threshold exceedances for groundwater quality caused by GSAs**
- **GSAs do not define ISW consistent with the requirements of SGMA**

Potential Consequences:

- **Insufficient well impact analysis, which leads to insufficient well mitigation plans**
- **Various impacts to beneficial uses and users in the subbasin**
- **Significant impacts can occur without being considered an “undesirable result”**
- **Inability for projects and management actions, including banking and recharge operations, to properly account for water availability**



Recommended Requirements For Groundwater Extractors

Staff Recommendations

- **Exclude household domestic well users from reporting and fees**
- **Require other pumpers to report by December of each year**
- **Require meters for those pumping more than 500 acre-feet a year**
- **Require meters for those pumping near critical infrastructure (except for household domestic well users)**
- **Do not exclude any portion of the basin from probationary status**

Kern County Schedule

2024-2025

July 25, 2024



Release draft deficiencies
Notice to cities and counties

July 26, 2024



Notice to all known pumpers

August 26 & 29, 2024



Stakeholder meetings

July 25 – Sept. 23, 2024



Public comment period

Jan. 2025



Release final deficiencies
Issue draft resolution

Feb 20, 2025



Hearing
Potential probationary designation

*subject to change or cancellation

Public Q & A

A scenic view of a lake at sunset. The sun is low on the horizon, casting a golden glow across the sky and water. The sky is filled with soft, white clouds. In the foreground, there are several clumps of tall, green reeds. In the middle ground, a manhole cover is partially submerged in the water, with water splashing around it. The background shows a distant shoreline with some buildings and mountains under a hazy sky.

A scenic landscape featuring a large body of water in the foreground. In the center, a wooden barrel is partially submerged, with water splashing out from its sides. The sun is low on the horizon, creating a bright sunburst effect over the barrel. The sky is filled with soft, white clouds. In the background, there are distant mountains and a city skyline. The overall atmosphere is serene and natural.

Public Comment

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**Release final
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Feb 20, 2025



Hearing
**Potential
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Written Comments

Electronic:

Email in PDF format to
[SGMA-Kern
County@waterboards.ca.gov](mailto:SGMA-KernCounty@waterboards.ca.gov)

Fax to (916) 341-5620

Mail or Hand Delivery:

Address to:

Courtney Tyler, Clerk to the Board
State Water Resources Control
Board

Mail: P.O. Box 100, Sacramento,
CA 95812

Hand Delivery: 1001 I Street, 24th
Floor, Sacramento, CA 95814

Comments must be received by September 23, 2024, at 12:00 noon.

Thank you and Adjourn

bit.ly/sgma-Kern County

