

Sustainable Groundwater Management Act

Implementation Update
April 4, 2023



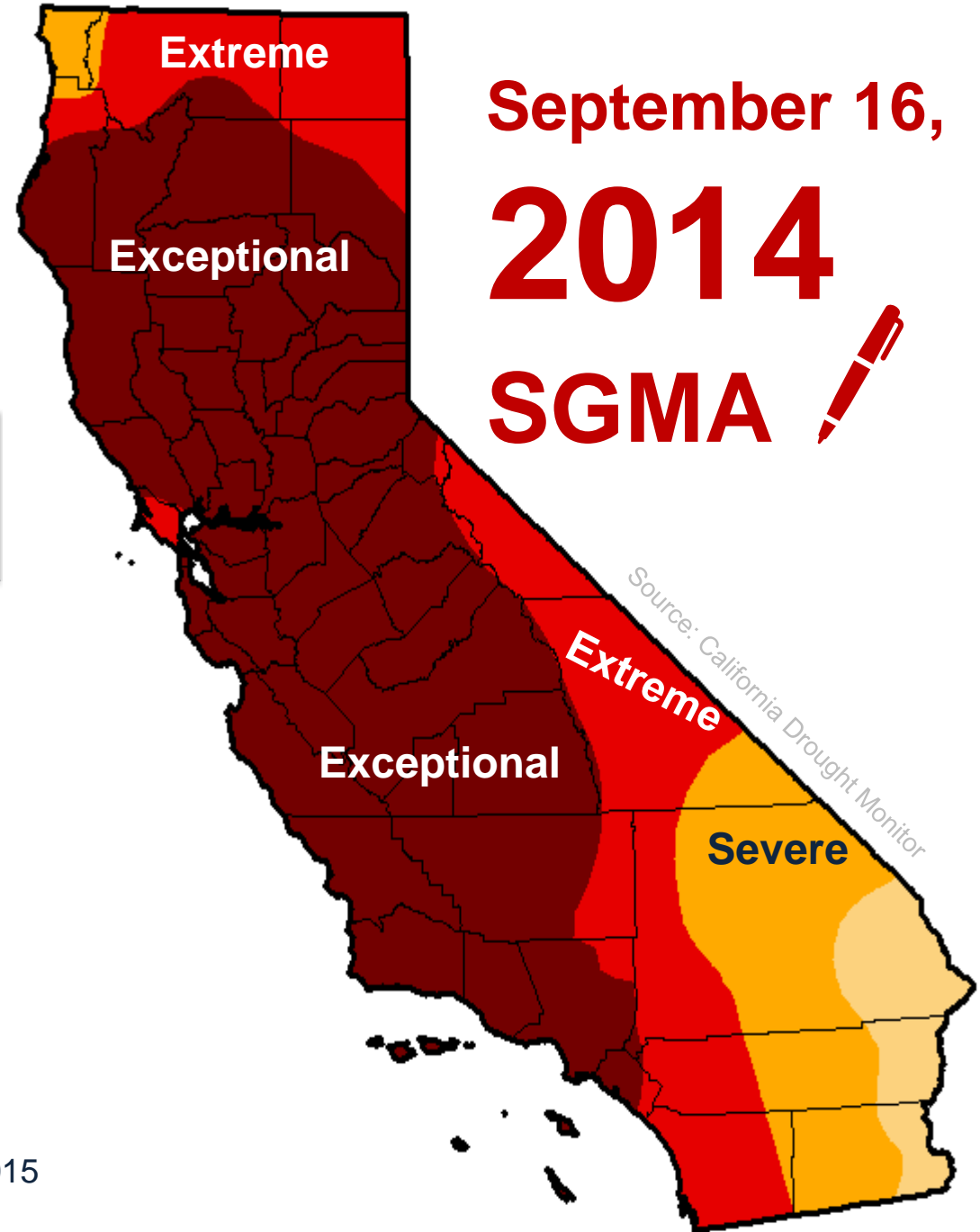
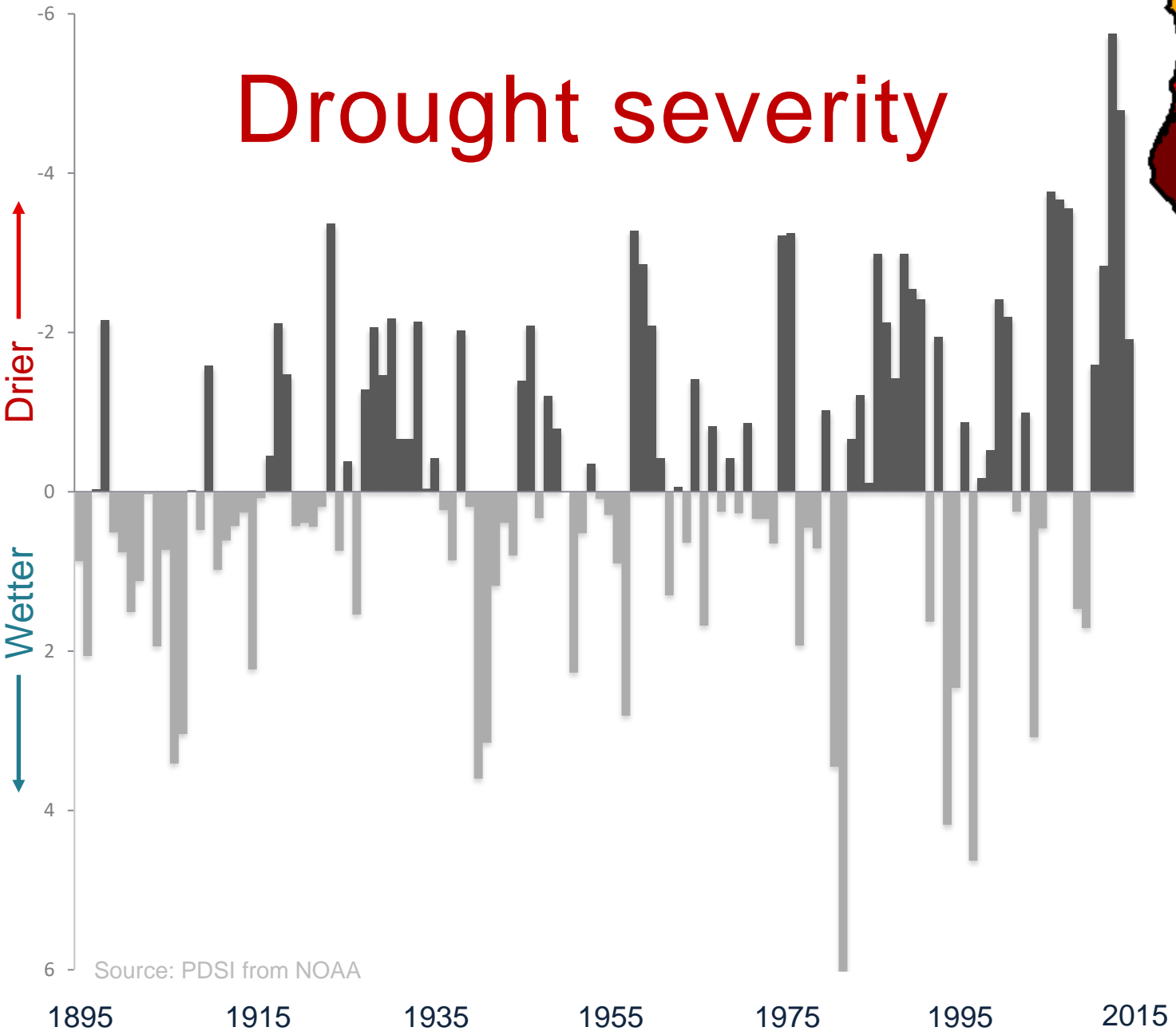
State Water Resources Control Board

A photograph of a large pipe discharging water into a body of water. The pipe is white and has a large opening where water is gushing out, creating a large splash. The pipe is situated on a rocky bank. In the background, there is a paved path and some trees. The overall scene is outdoors and appears to be a water treatment or discharge point.

TOPICS

- 1. SGMA basics**
- 2. DWR's determinations**
- 3. State intervention process**
- 4. Future Board considerations**
- 5. Next steps**

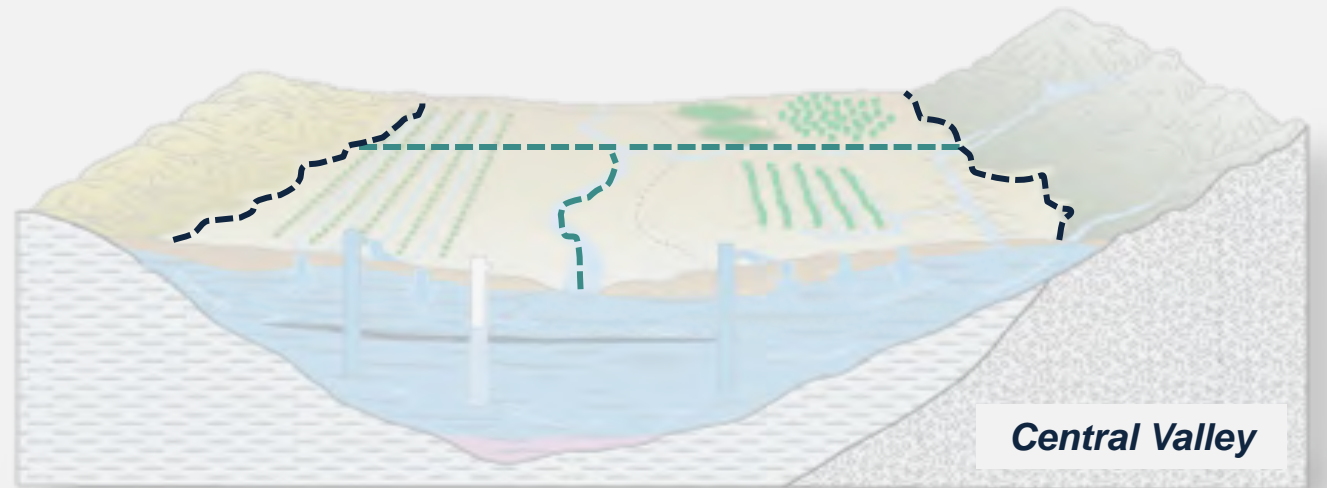
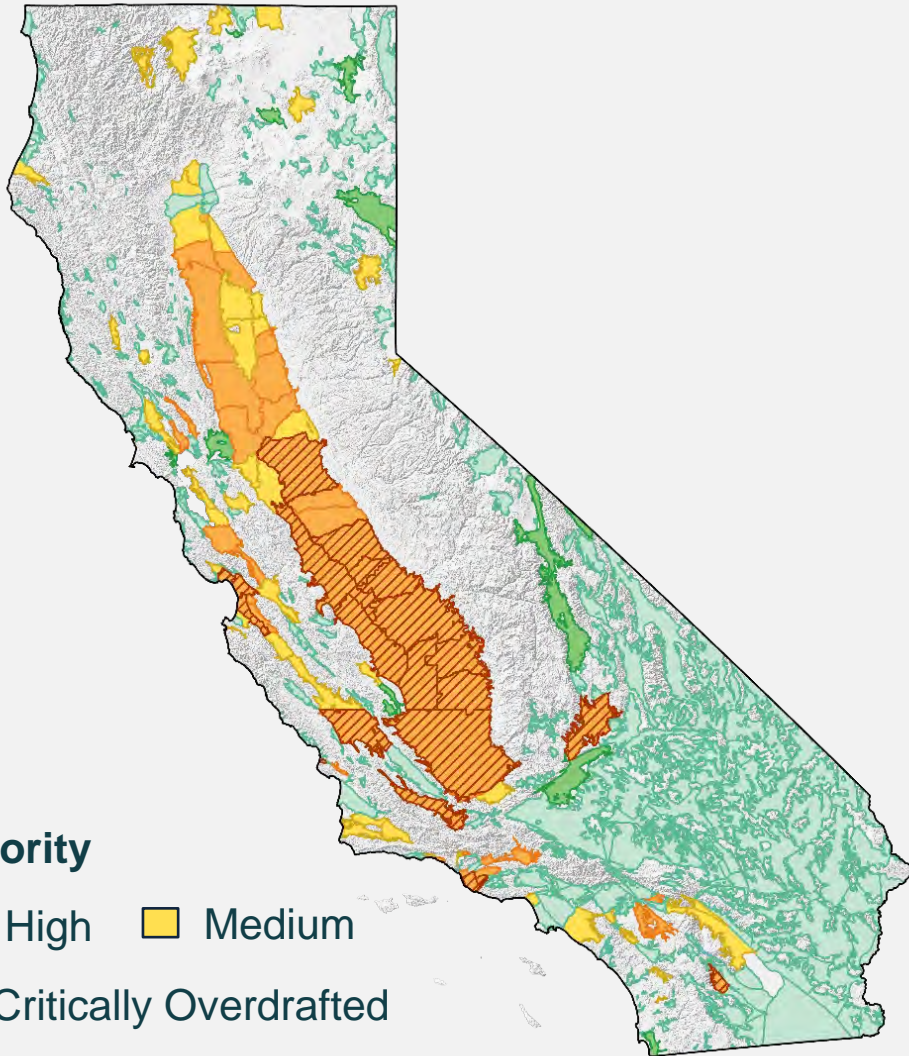
Drought severity



Source: California Drought Monitor

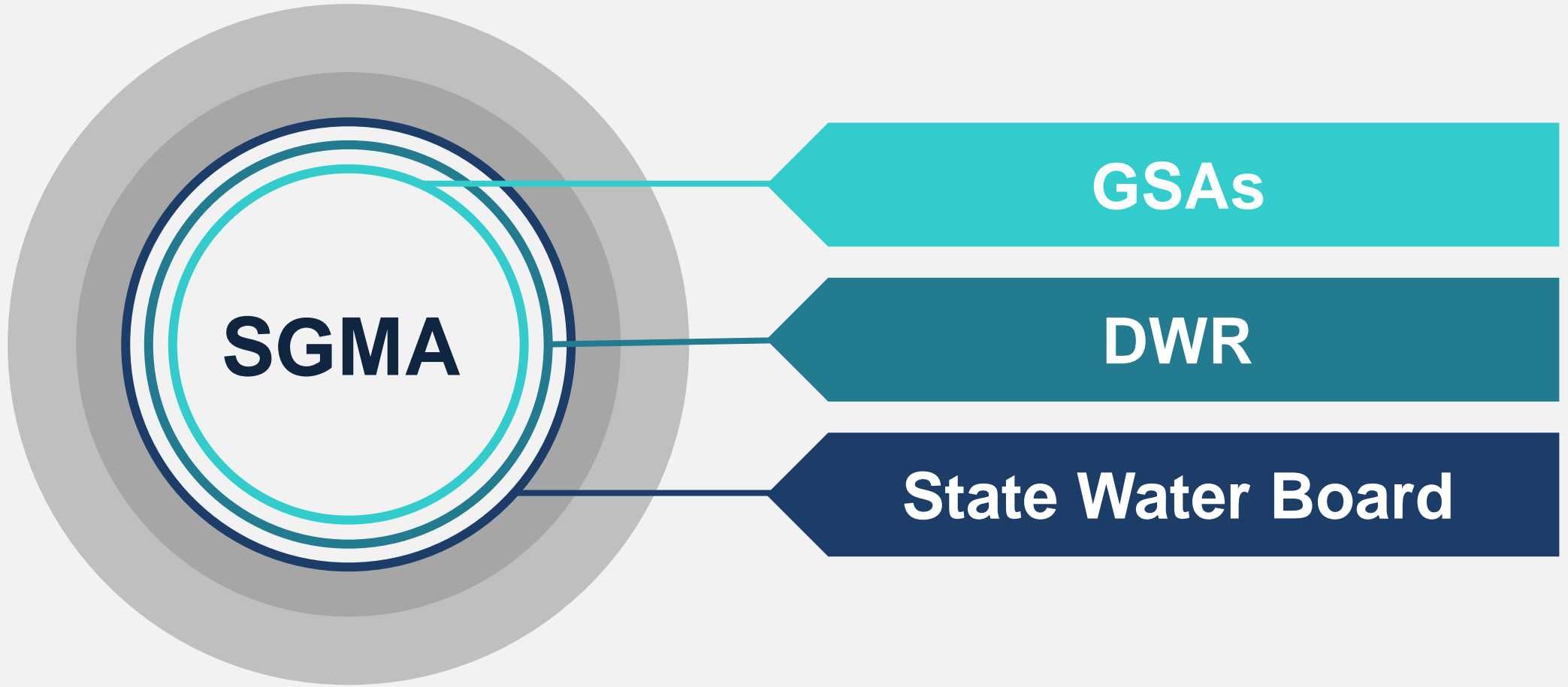
Source: PDSI from NOAA

SGMA AT THE BASIN SCALE



Basins & Subbasins

SGMA AUTHORITIES



GSAs

DWR

State Water Board

What is Sustainability?

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

Significant and unreasonable...



Lowering
GW Levels



Storage
Reduction



Seawater
Intrusion



Degraded
Quality



Land
Subsidence



Surface
Depletion

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

GSA's aren't required to address undesirable results occurring prior to 2015

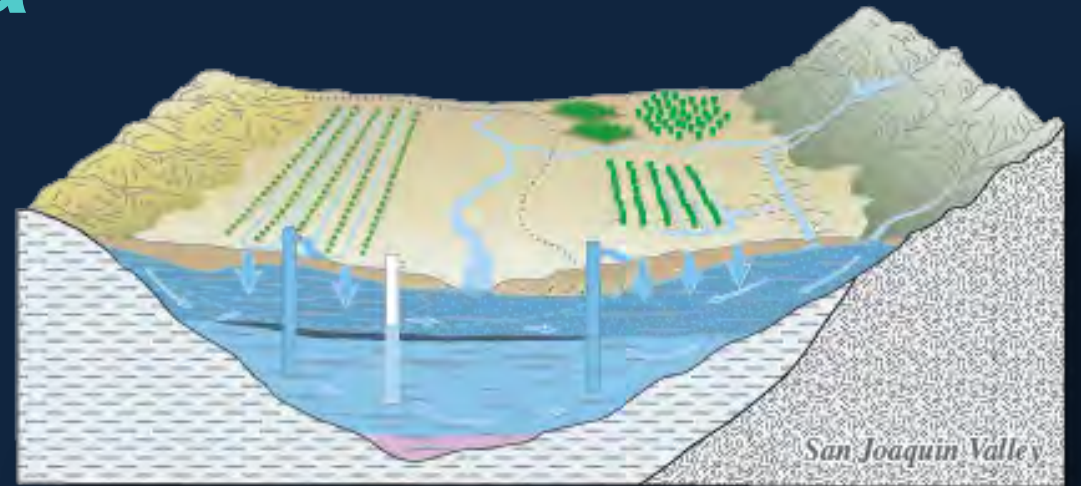
GSP Elements

Groundwater Conditions

Sustainability Criteria

Monitoring

Projects & Actions



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GSP & Alternatives Evaluation Submittals

- Critically Overdrafted (COD) Basins
 - **21 basins submitted 46 GSPs** by January 31, 2020
 - 12 of the 21 basins were deemed Incomplete by DWR in January 2022 and resubmitted their GSPs in July 2022
- High and Medium Priority Basins (Non-COD)
 - **63 basins submitted 65 GSPs** by January 31, 2022
 - DWR Approved 4 basins January 2023
- Alternatives to GSPs
 - Alternatives were initially submitted by January 1, 2017
 - DWR **Approved 9 Alternatives** in 2019
 - Basins submitted 9 Alternatives for Periodic Evaluation by January 1, 2022 (the five-year plan update)



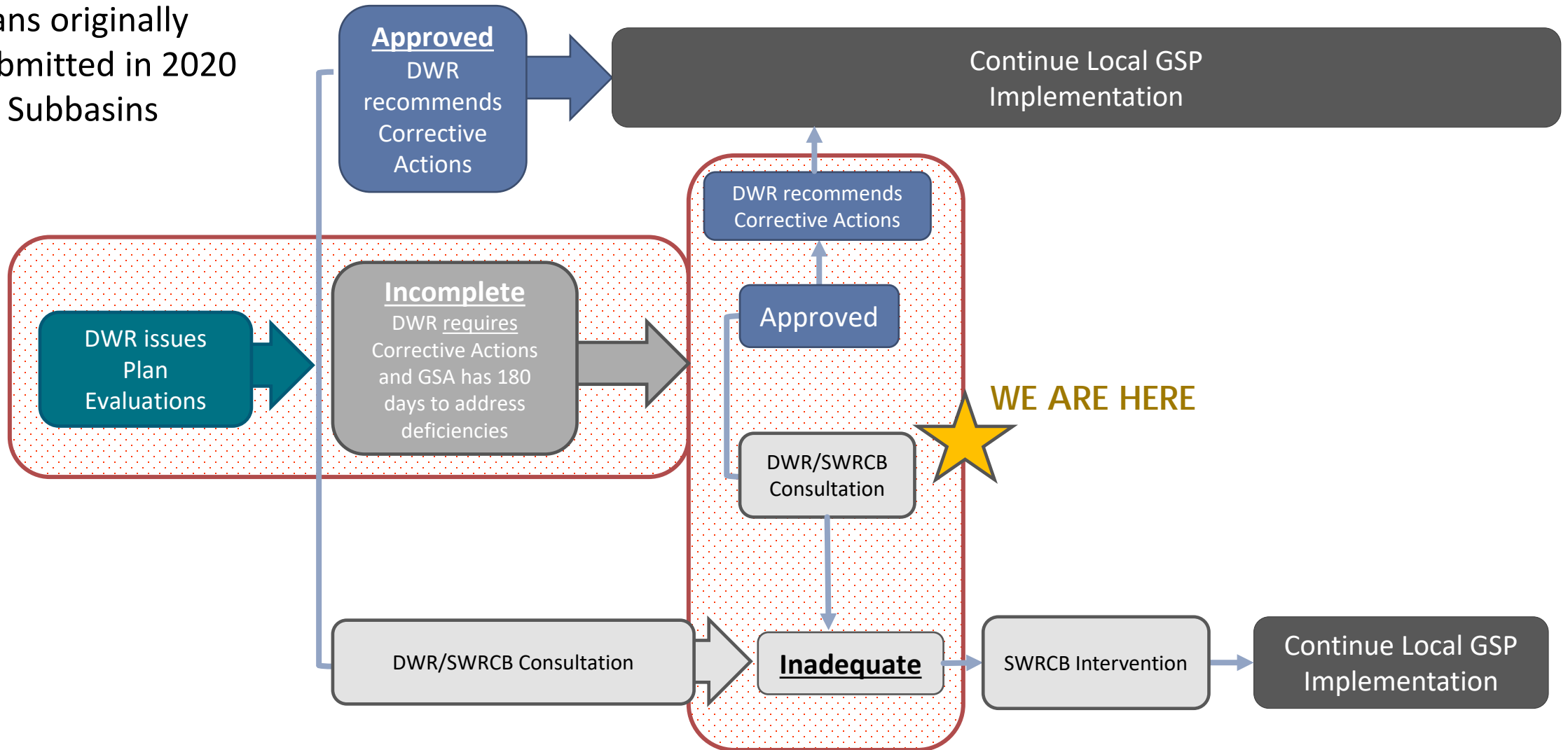
The screenshot shows the SGMA Portal website. The header includes the CA.GOV logo, Department of Water Resources, and SGMA PORTAL. A navigation menu contains Home, GSA, GSP, Alternatives, Adjudicated Areas, Basin Modification, and Resources. A sign-in button is in the top right. The main content area features a landscape image with the text 'SUBMIT AND VIEW SGMA INFORMATION AND DATA' and six circular icons: GSA Formation, GSP Submittal, Alternative Submittal, Adjudicated Areas, Basin Modification, and SGMA Portal Resources.

Please visit the SGMA Portal to find submitted Plans, Public Comments, and DWR Assessments:

<https://sgma.water.ca.gov/portal/>

SGMA Regulatory Pathways and Recent Determinations

- Plans originally submitted in 2020
- 12 Subbasins

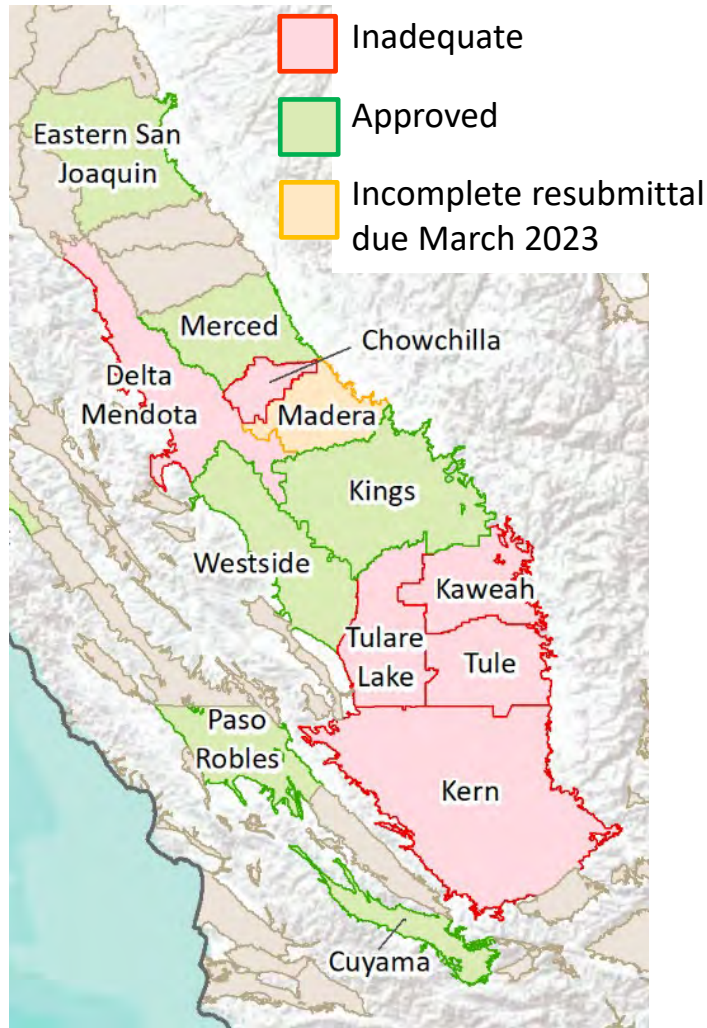


APPROVED SUBBASINS

APPROVED:

- Eastern San Joaquin Subbasin
- Merced Subbasin
- Westside Subbasin
- Paso Robles Subbasin
- Cuyama Subbasin
- Kings Subbasin*

*Multi-GSP Subbasin



Sufficient Action Taken to Address Deficiencies (General):

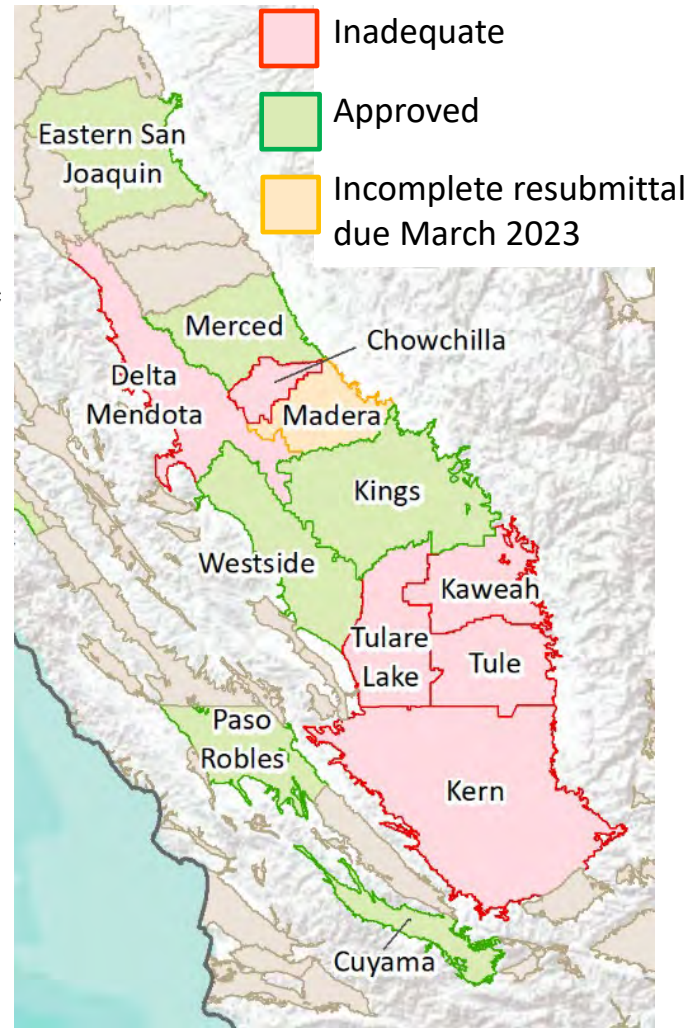
- **Groundwater Levels:** Conducted analysis to show effects on beneficial users, modified management criteria based on analysis of water levels, and proposed or developed detailed framework for well mitigation program
- **Land Subsidence:** Modified management criteria (minimum thresholds) related to subsidence rates/extent, identified critical infrastructure, and coordinating with key interested parties
- **Water Quality:** Collected additional data, coordinated with the Regional Boards, re-established management criteria consistent with state drinking water standards
- **Interconnected Surface Water (ISW):** Asking GSAs to continue to fill data gaps, collect additional monitoring data, and manage depletions of ISW and define segments of interconnectivity and timing

INADEQUATE SUBBASINS

INADEQUATE:

- Chowchilla Subbasin
- Tulare Lake Subbasin
- Delta Mendota Subbasin*
- Kaweah Subbasin*
- Tule Subbasin*
- Kern Subbasin*

*Multi-GSP Subbasin



Did Not Take Sufficient Action to Address Deficiencies (General):

- **Groundwater Levels:** did not conduct sufficient analysis to show effects on beneficial users, lowered management criteria of water levels, and did not propose or develop a detailed framework for well mitigation program
- **Land Subsidence:** Did not modify management criteria (minimum thresholds) related to subsidence rates/extent, significant subsidence anticipated beyond 2040, did not identify critical infrastructure or coordinate with key interested parties
- **Water Quality:** Established management criteria and defined undesirable results in a way that would not be applicable for extended periods of time

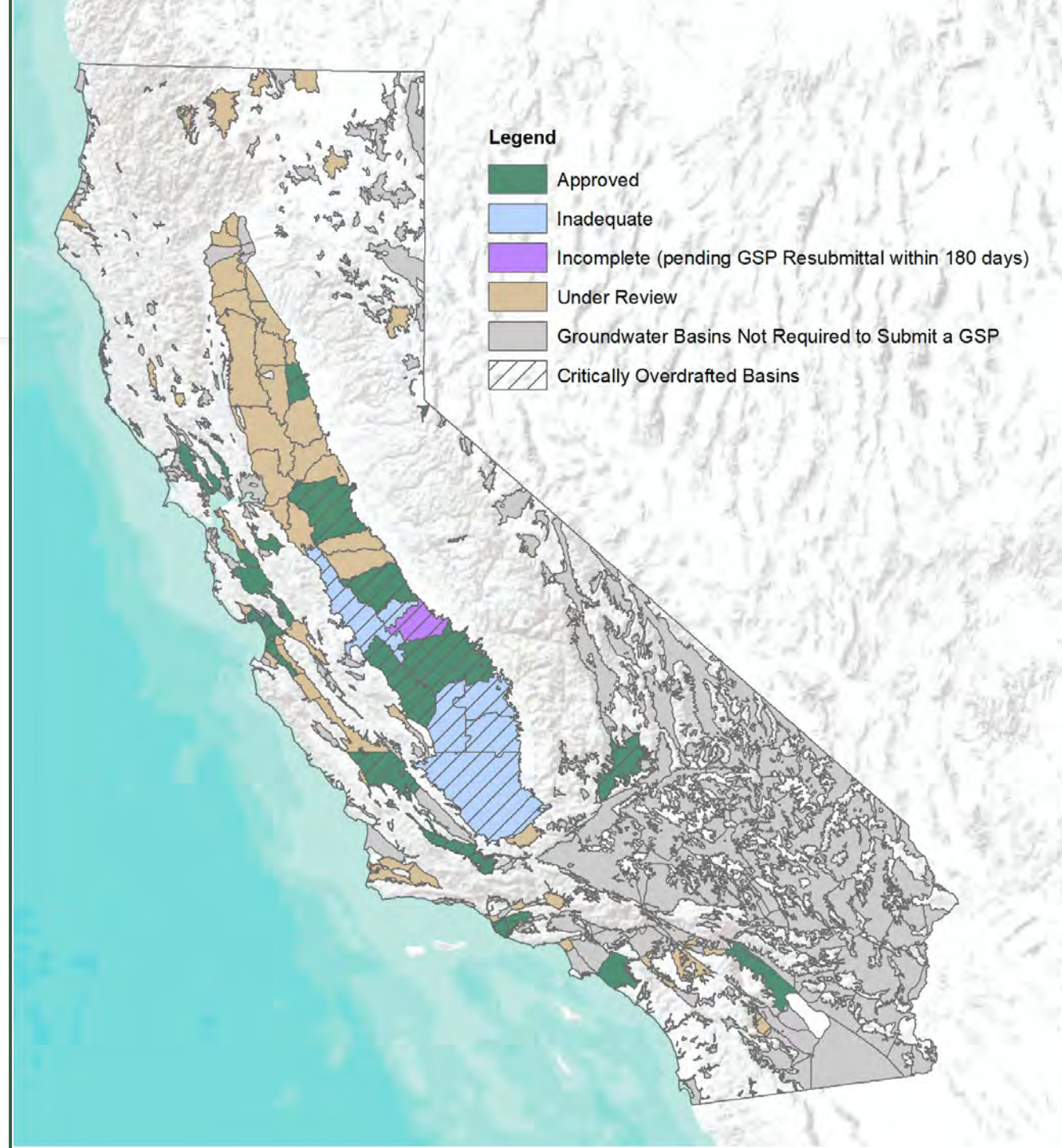
Approved Plan Determinations

18
Basins

Approved Basins:

1. Santa Cruz Mid-County Basin
2. 180/400 Foot Aquifer Subbasin
3. North Yuba Subbasin
4. South Yuba Subbasin
5. Oxnard Basin
6. Pleasant Valley Subbasin
7. Las Posas Basin
8. Indian Wells Valley Basin
9. Sonoma Valley Subbasin
10. Petaluma Valley Basin
11. Napa Valley Subbasin
12. Santa Rosa Plains Subbasin
13. Eastern San Joaquin Subbasin
14. Merced Subbasin
15. Paso Robles Subbasin
16. Cuyama Basin
17. Westside Subbasin
18. Kings Subbasin*

*Multi-Plan Basin



Non-Approved Plan Determinations

6
Basins

INADEQUATE BASINS:

1. Chowchilla Subbasin
2. Tulare Lake Subbasin
3. Delta Mendota Subbasin*
4. Kaweah Subbasin*
5. Tule Subbasin*
6. Kern Subbasin*

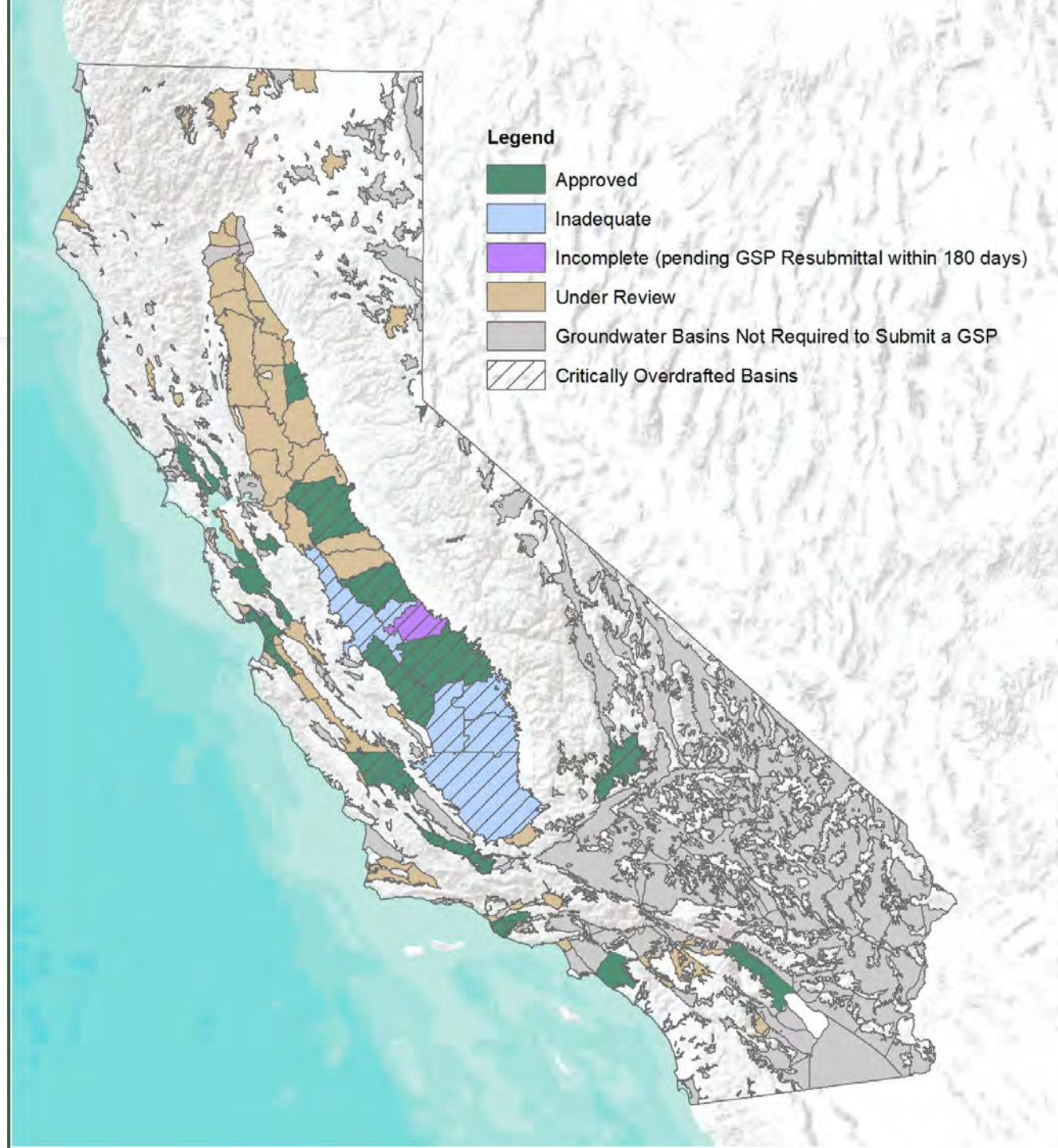
1
Basin

INCOMPLETE BASIN

(180 days to address deficiencies):

7. Madera Subbasin* – Resubmitted on March 24, 2023

**Multi-Plan Basins*



A photograph of a large pipe discharging water into a body of water. The pipe is white and has a large opening where water is gushing out, creating a large splash. The pipe is situated on a rocky bank. In the background, there is a path and some trees. The overall scene is outdoors and appears to be a water treatment or discharge point.

TOPICS

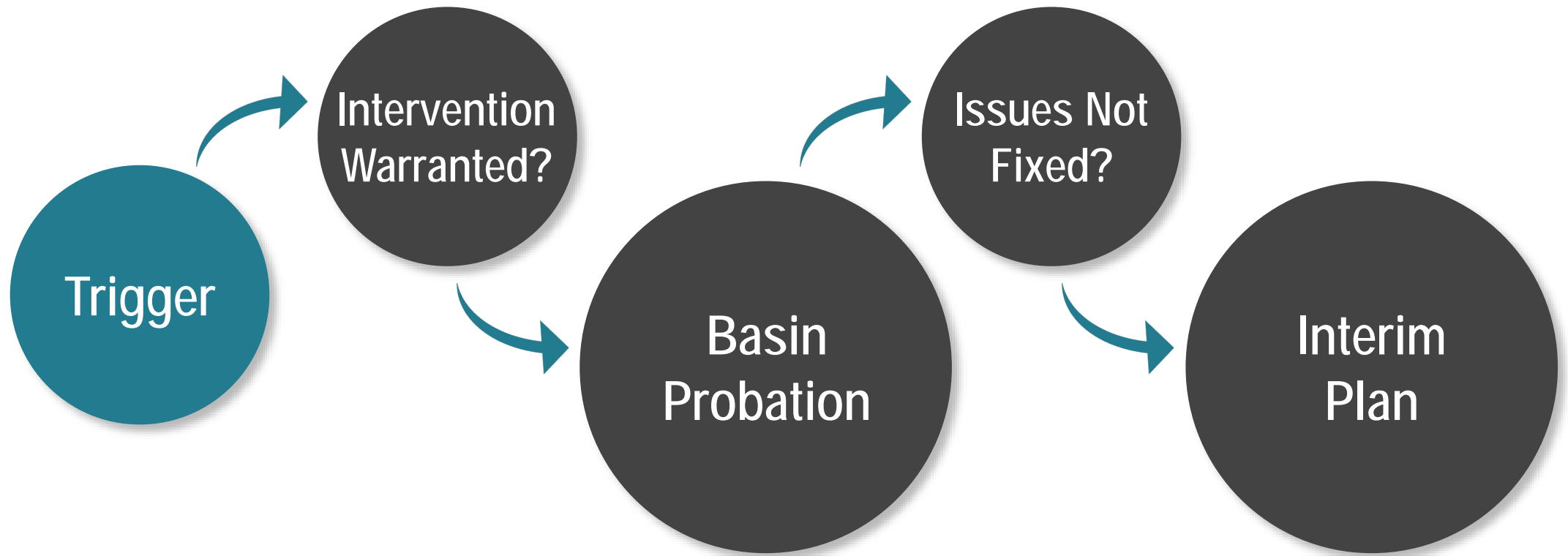
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Board Backstop Basics

- 1 Board only steps in when local efforts are inadequate
- 2 Backstop is triggered by deadlines and deficiencies
- 3 Board role is intended to be temporary



State 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.

GEARS Groundwater Extraction Annual Reporting System



Report Well Location and Parcel(s) of Use

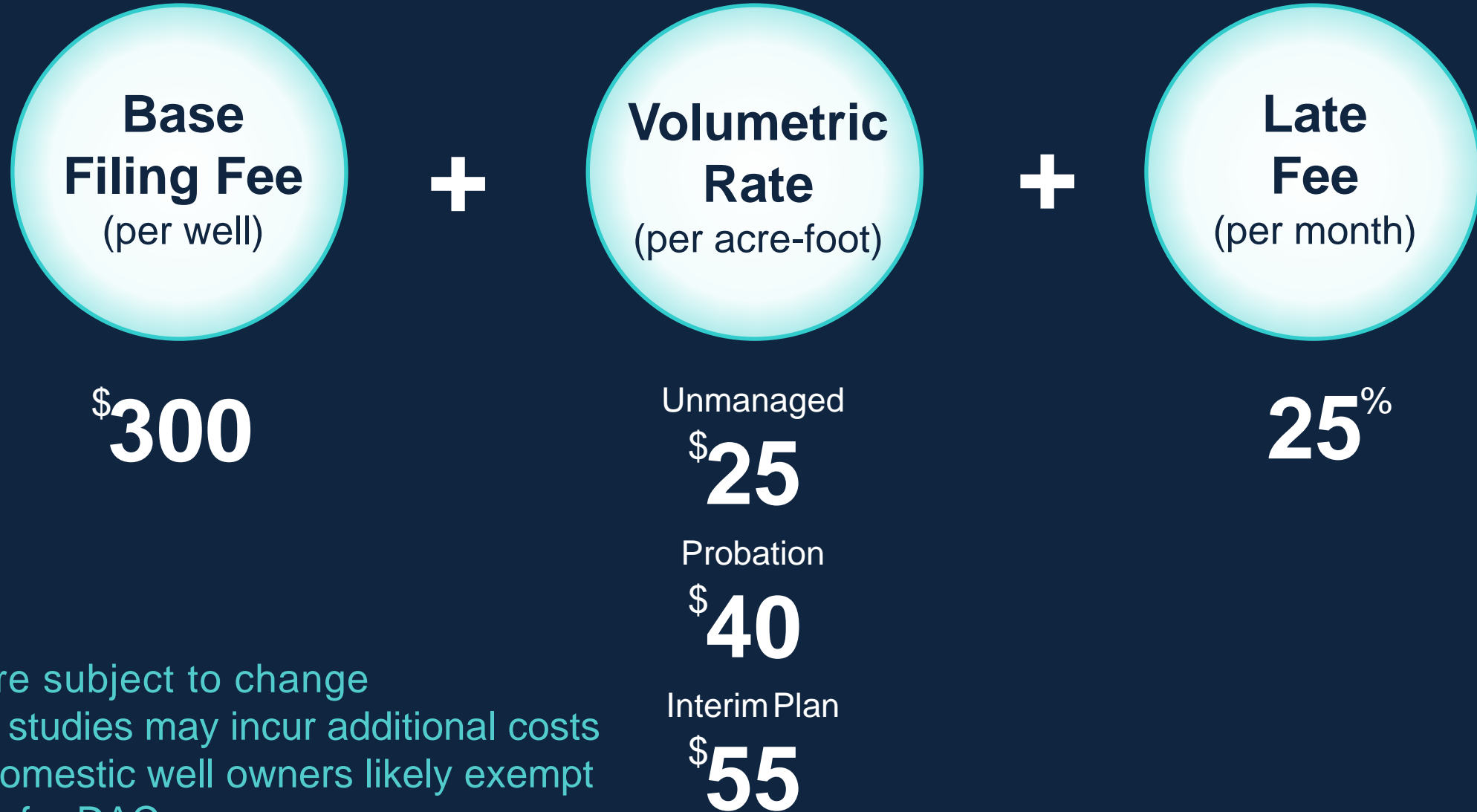
- Step 1: Select the "Add Well" button, then select the location on the map.

Complete! _____

- Step 2: Select the "Add Parcel(s) of Use" button, then select the parcel(s) on the map.

Submit

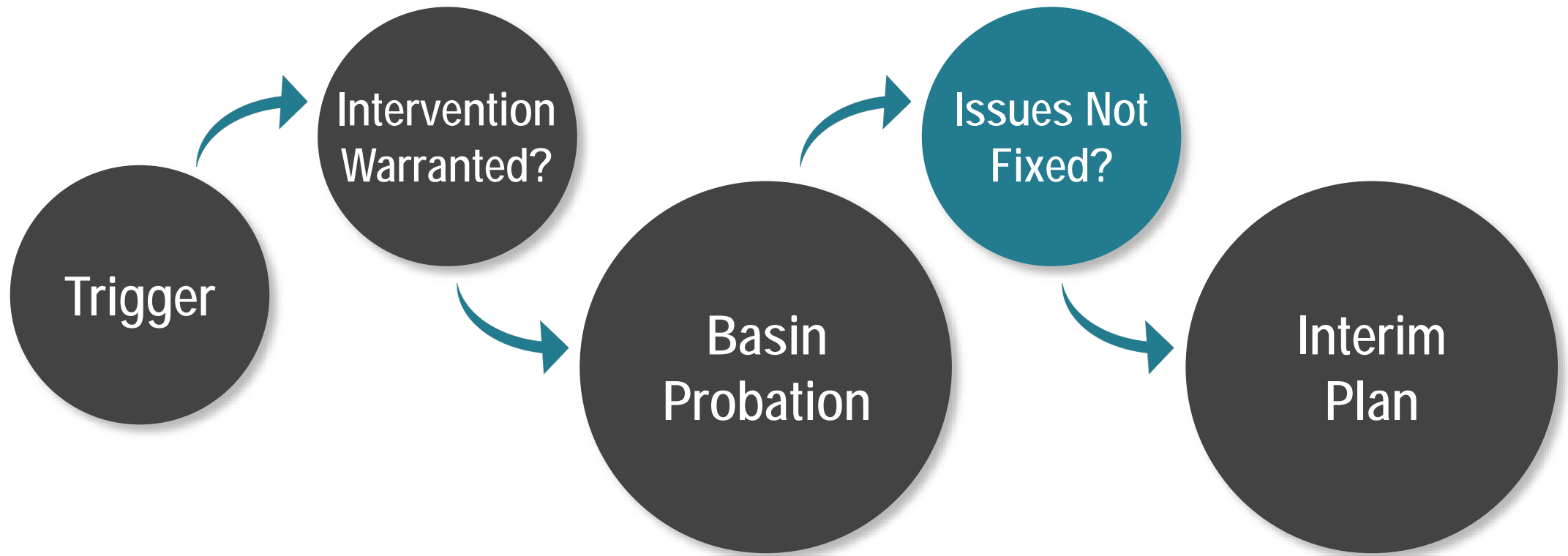
FEES: Pumpers who must report



Notes:

- Fees are subject to change
- Special studies may incur additional costs
- Small domestic well owners likely exempt
- Waivers for DACs

State Intervention





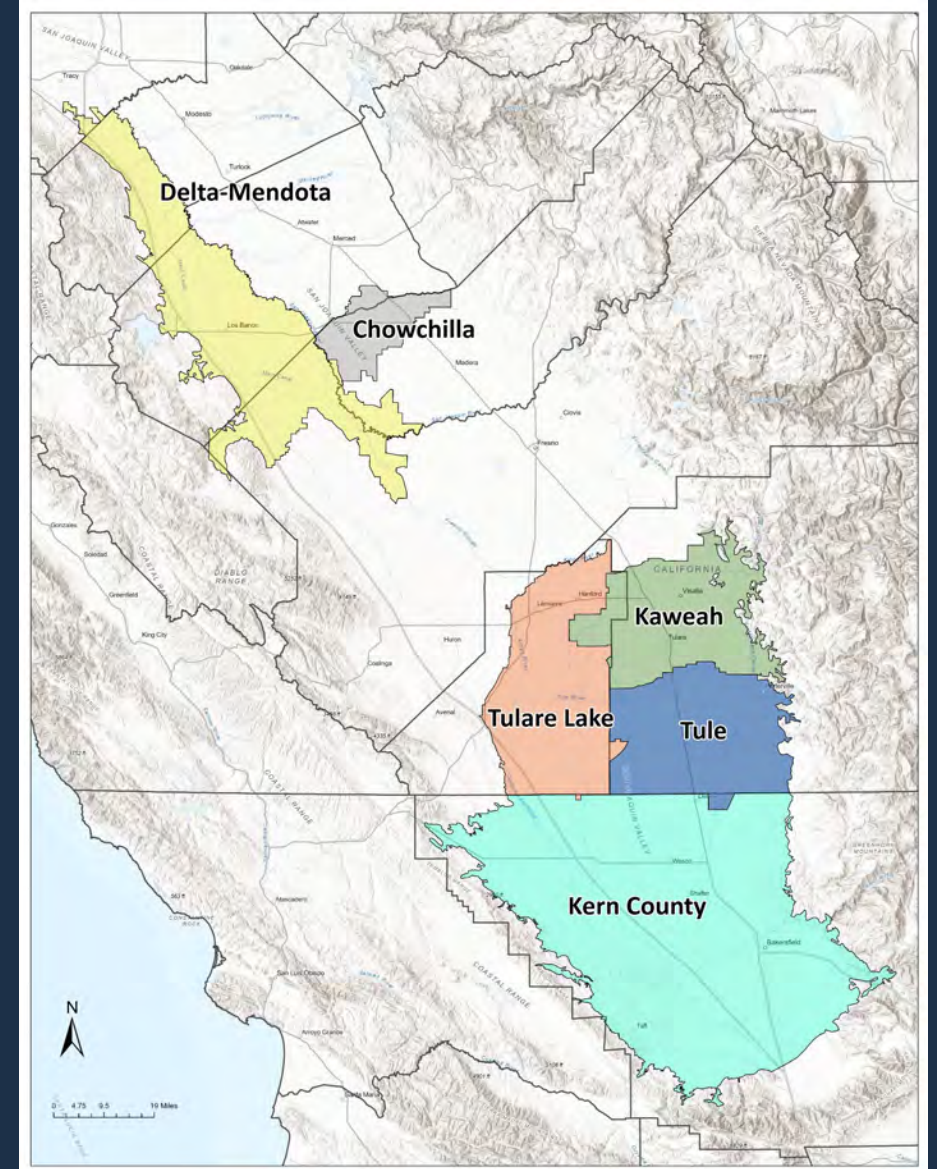
DWR Determinations

Groundwater Sustainability Plans

6
of 20

Basins with Inadequate Plans:

1. Chowchilla Subbasin
2. Delta-Mendota Subbasin
3. Kaweah Subbasin
4. Tule Subbasin
5. Kern County Subbasin
6. Tulare Lake Subbasin



State Intervention Timeline

If Board determines state intervention is warranted

DWR Determination
Inadequate?
Not likely to achieve sustainability

Board Consideration
Board receipt and evaluation of DWR determination

Noticing
Public notice of hearing and contact cities and counties
At least 90 days in advance of hearing*

Board Probationary Hearing
Board decides whether probation is warranted

If Basin Designated Probationary
Board collects data and fees; local agencies work to fix plan

If Deficiencies are Not Cured
Board consideration of developing and adopting an interim plan
After at least 1 year *

Board - DWR coordination

*Statutory minimum. Board has discretion.

TOPICS

A photograph of a large pipe discharging water into a body of water. The pipe is white and has a large opening where water is gushing out, creating a large splash. The pipe is surrounded by rocks and some vegetation. In the background, there is a paved path and some trees. The overall scene is outdoors and appears to be a water treatment or discharge point.

1. SGMA basics
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3. State intervention process
4. **Board considerations**
5. Next steps

Future Board Considerations

- ① Timelines for Hearings
How many basins and when?
- ② Prioritizing Basins
Order of probationary hearings

OPTIONS | Timelines for Hearings

- All six basins in close succession (3-6 months)
- One basin at a time (2-3 years)
- Three basins at a time (6-12 months)
- Other options

Example Timeline

2023-2025

May 2023



**Hearing Notice
Mailed**

Sep 2023



**Probation
Hearing**

Dec 2023



**Extraction
Measurement
Begins**

Sep 2024



**Earliest
Possible
Interim Plan
Notice**

Feb 2025



**First Reports
Due**

Apr 2025



First Fees Due

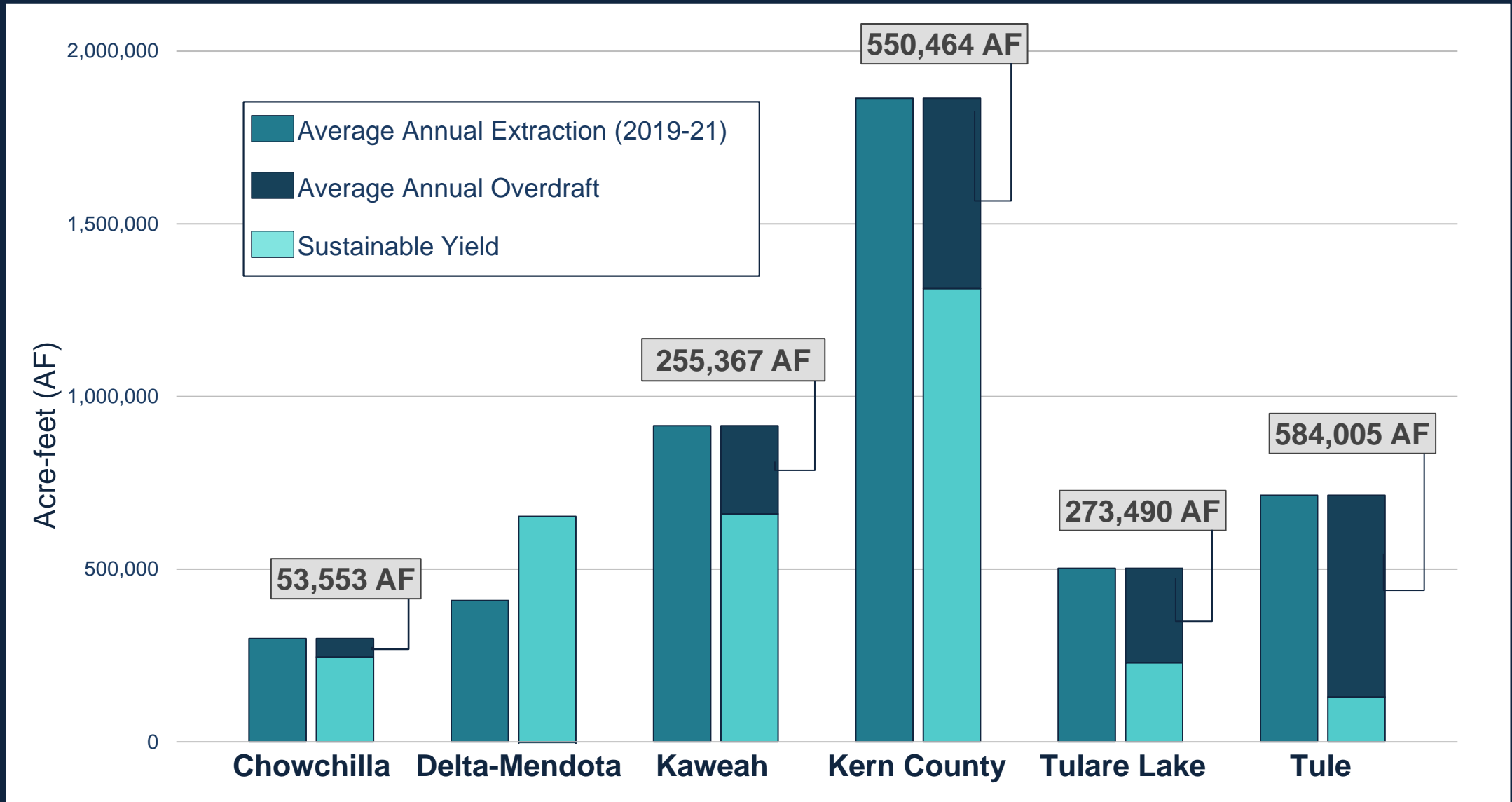
OPTIONS | Prioritizing Basins

- Basin overdraft
- Drinking water impacts
- Subsidence impacts
- Water quality degradation
- Implementation & coordination

OPTIONS | Prioritizing Basins

- **Basin overdraft**
- Drinking water impacts
- Subsidence impacts
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REPORTED BASIN OVERDRAFT



REPORTED BASIN OVERDRAFT

Basin	Sustainable Yield (SY)	Average Annual Extraction, 2019-2021	Average Annual Overdraft	Average Annual Extraction as % of SY
	Acre-feet per year			
Chowchilla	245,700	299,253	53,553	122%
Delta-Mendota	653,000	409,000	-244,000	63%
Kaweah	660,000	915,367	255,367	139%
Kern County	1,313,000	1,863,464	550,464	142%
Tulare Lake	229,220	502,710	273,490	219%
Tule	130,000	714,005	584,005	549%
Sum	3,230,920	4,703,799	1,472,879	N/A

OPTIONS | Prioritizing Basins

- Overdraft
- **Drinking water impacts**
- Subsidence impacts
- Water quality degradation
- Implementation & coordination

Subbasins with Inadequate Plans

Delta-Mendota

Chowchilla

Tulare Lake

Kaweah

Tule

Kern County

Livermore
San Mateo
Fremont
San Jose
Santa Cruz

Modesto
Turlock
Atwater
Merced
Los Banos

Salinas
Soledad
Greenfield
King City

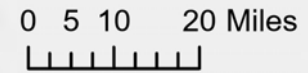
Fresno
Hanford
Coalinga
Avenal
Delano

Visalia
Tulare
Porterville

San Luis
Obispo

Bakersfield

Ridgecrest
California City

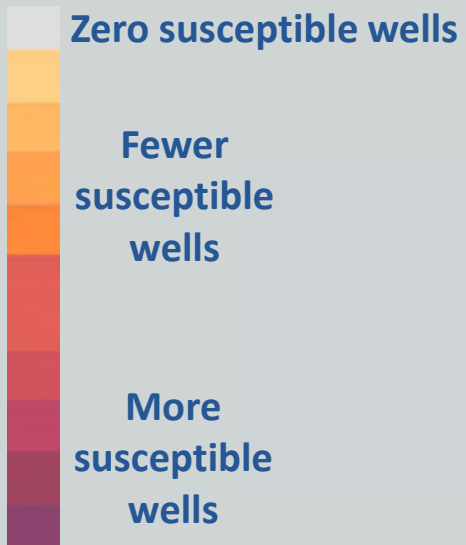


Barstow

Subbasins with Inadequate Plans

Dry Well Susceptibility

Density of domestic wells susceptible to going dry



Delta-Mendota
Susceptible: 161

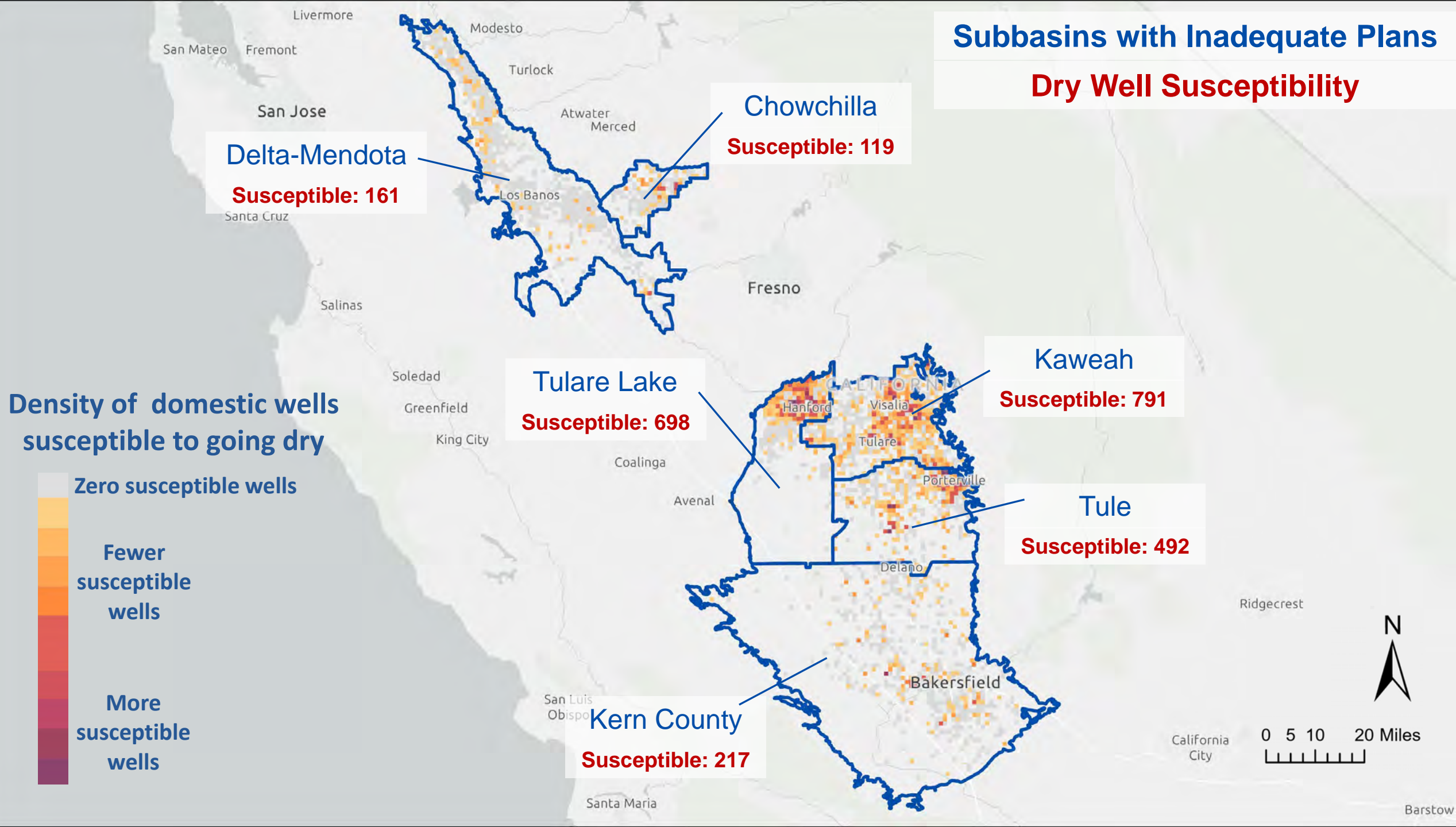
Chowchilla
Susceptible: 119

Tulare Lake
Susceptible: 698

Kaweah
Susceptible: 791

Tule
Susceptible: 492

Kern County
Susceptible: 217



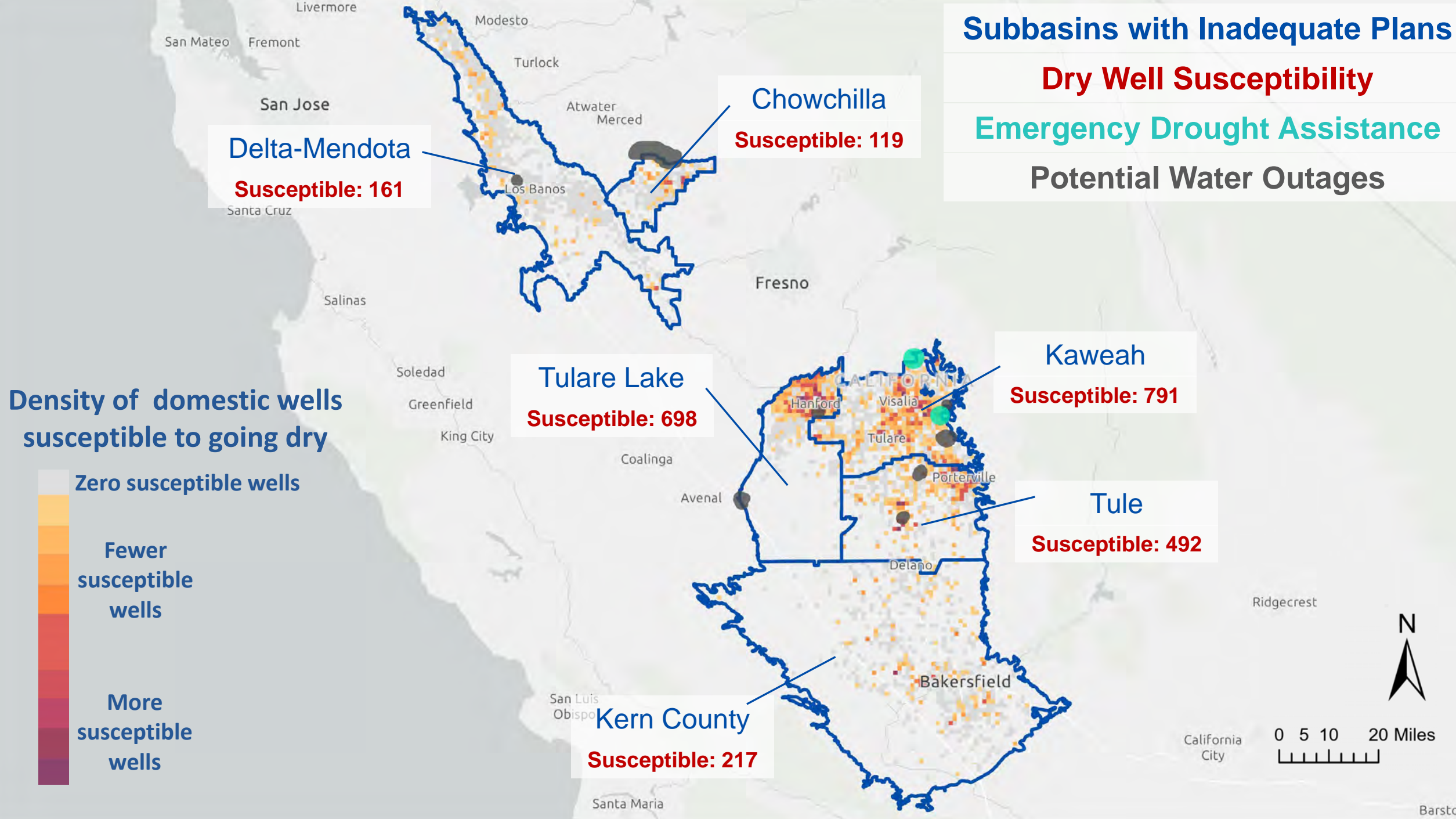
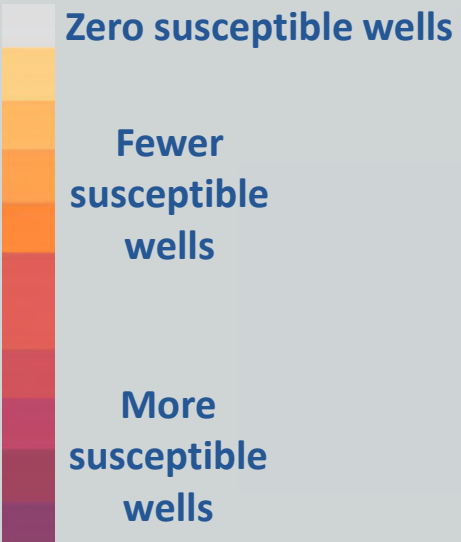
Subbasins with Inadequate Plans

Dry Well Susceptibility

Emergency Drought Assistance

Potential Water Outages

Density of domestic wells susceptible to going dry



Delta-Mendota
Susceptible: 161

Chowchilla
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Tulare Lake
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Subbasins with Inadequate Plans

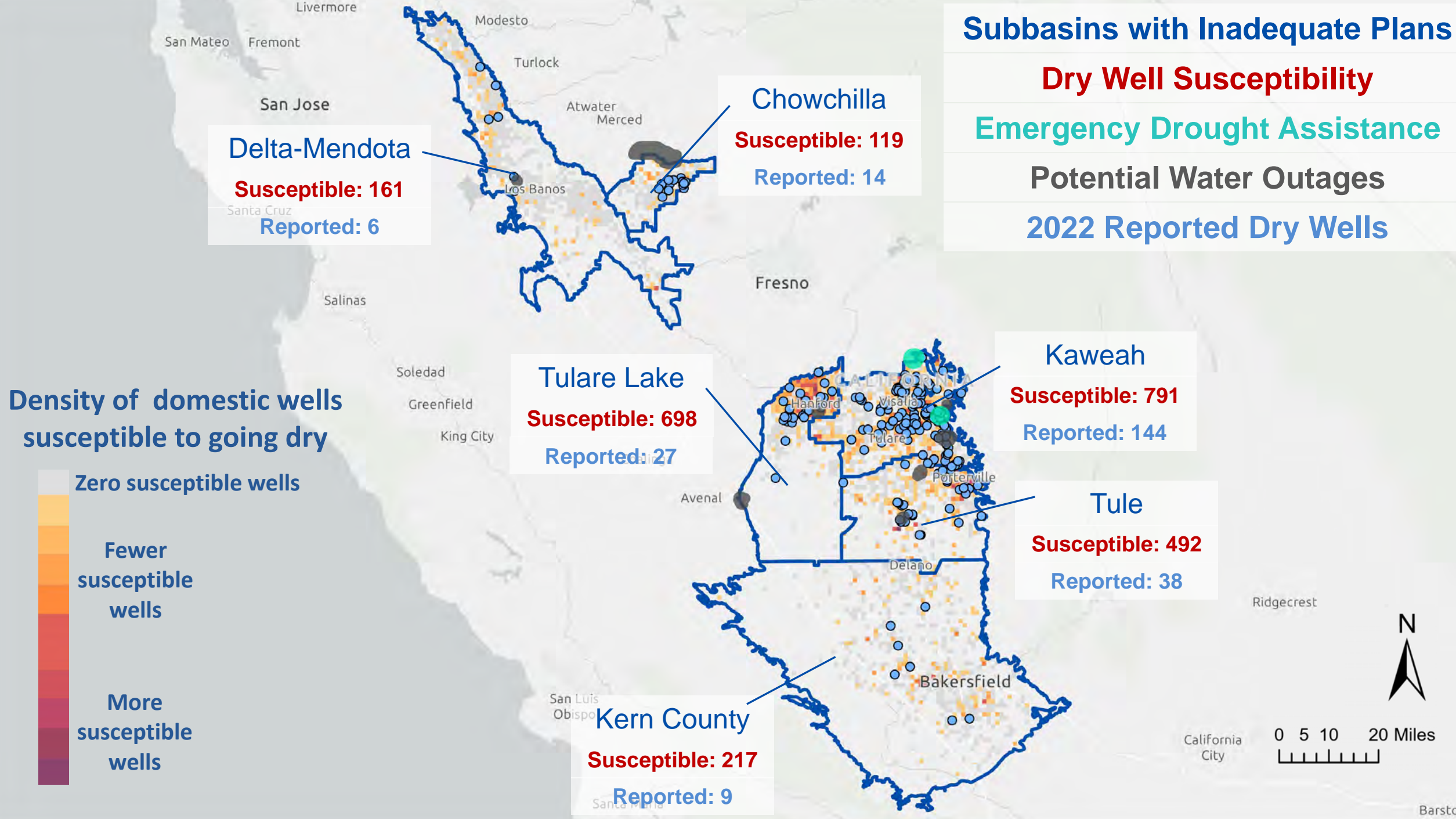
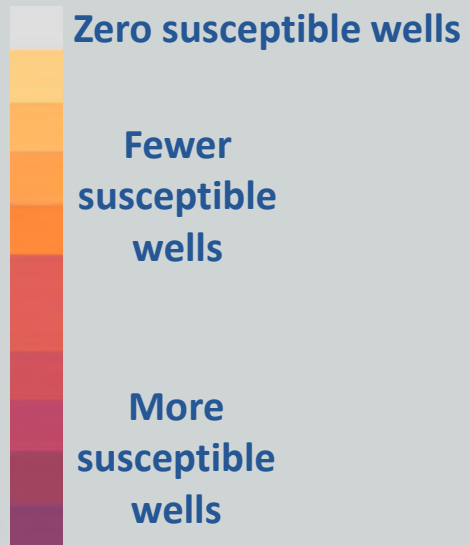
Dry Well Susceptibility

Emergency Drought Assistance

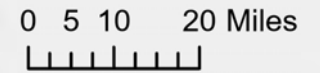
Potential Water Outages

2022 Reported Dry Wells

Density of domestic wells susceptible to going dry



Ridgecrest



California City

Barstow

OPTIONS | Prioritizing Basins

- Overdraft
- Drinking water impacts
- **Subsidence impacts**
- Water quality degradation
- Implementation & coordination

RECENT SUBSIDENCE

Subsidence from InSAR Jun 2015 to Jan 2023



Delta-Mendota
Average -0.4 ft

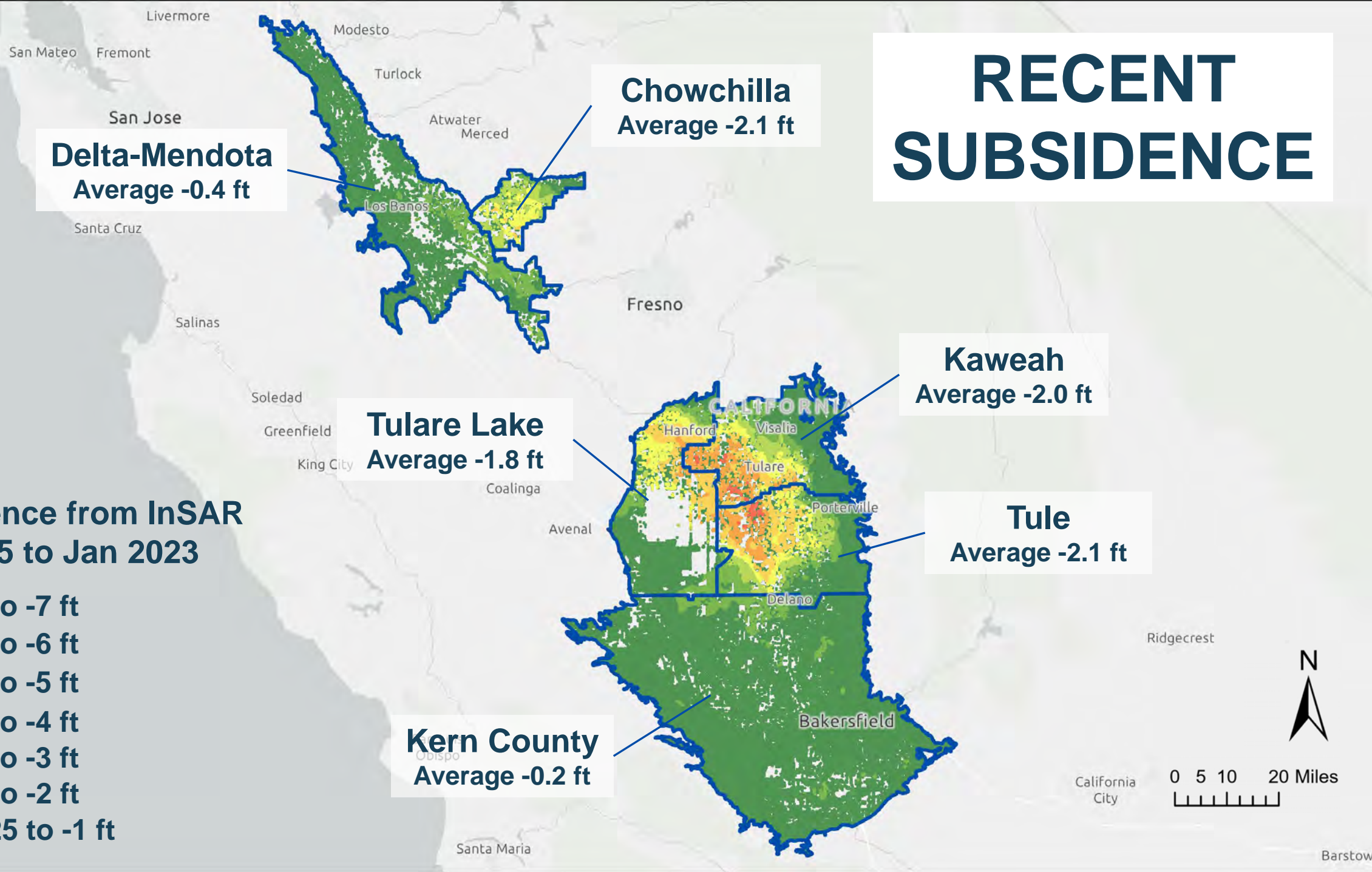
Chowchilla
Average -2.1 ft

Tulare Lake
Average -1.8 ft

Kaweah
Average -2.0 ft

Tule
Average -2.1 ft

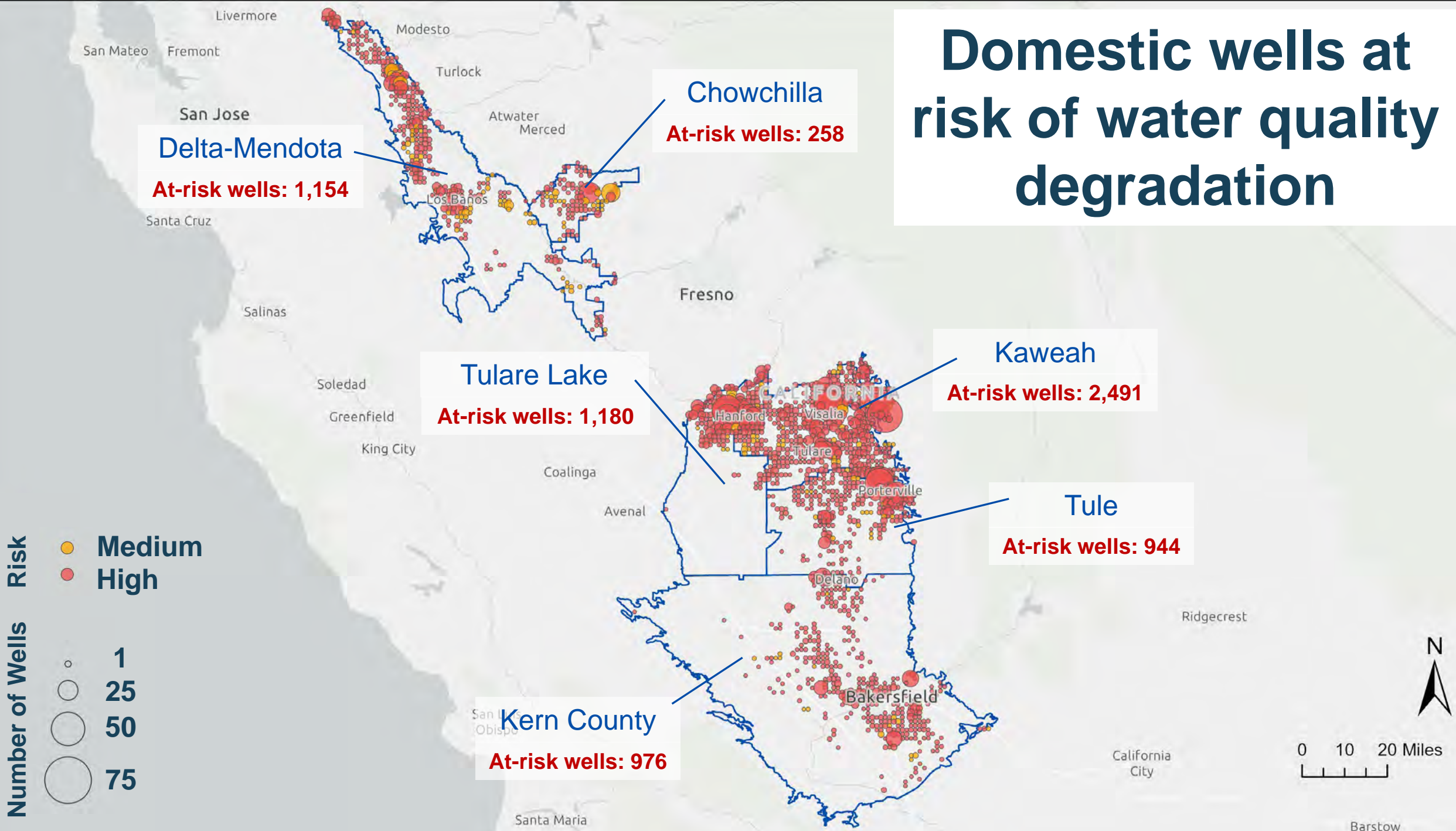
Kern County
Average -0.2 ft



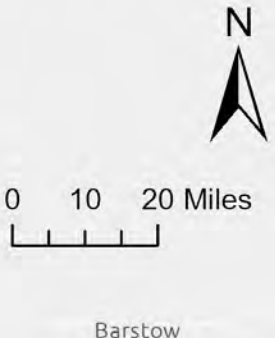
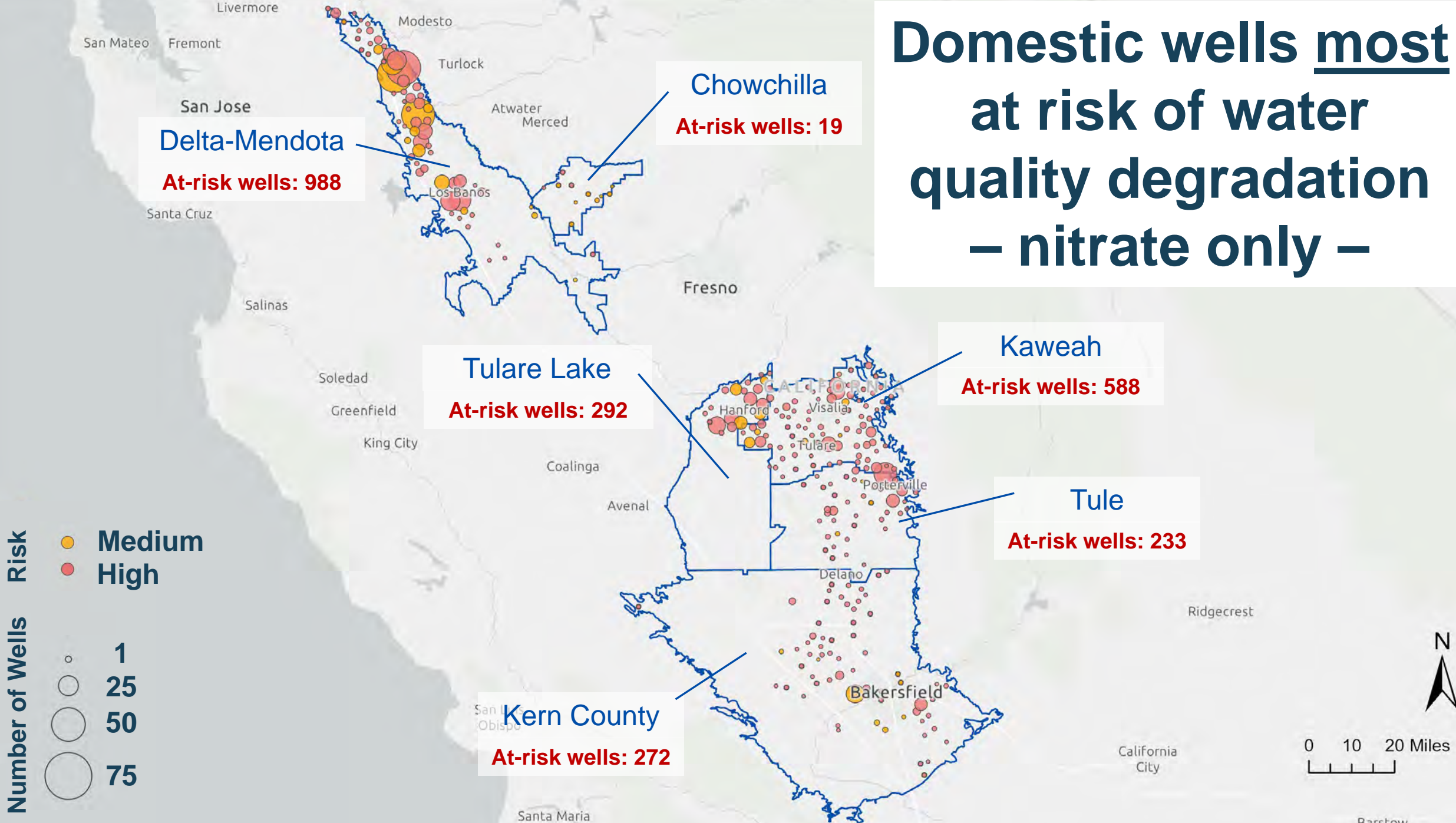
OPTIONS | Prioritizing Basins

- Overdraft
- Drinking water impacts
- Subsidence impacts
- **Water quality degradation**
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Domestic wells at risk of water quality degradation



Domestic wells most at risk of water quality degradation – nitrate only –



OPTIONS | Prioritizing Basins

- Overdraft
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- Subsidence impacts
- Water quality degradation
- **Implementation & coordination**

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STEPS if Moving to Hearing

- Minimum 90-day & 60-day notices
- Draft deficiencies identified
- Public comment period
- Outreach and public engagement
- Staff evaluation of information received

BOARD RESOURCES

- GSA Look-Up Map tool
- Fact Sheets
- Water Quality Map tool

The collage features three overlapping digital resources:

- Basin and Groundwater Sustainability Act**: A map tool interface with a search bar and a map of California showing various basins.
- SGMA Groundwater Quality Visualization Tool**: A data visualization tool showing "Wells Data with Detections greater than the Comparable Concentration Value" and "Impacted Well Locations".
- Sustainable Groundwater Management Act Fact Sheet**: A document titled "Sustainable Groundwater Management Act Frequently Asked Questions" with the following text:

Groundwater, the Sustainable Groundwater Management Act, and State Intervention

What is groundwater?

Groundwater is water found beneath the Earth's surface. When rain falls to the ground, some of it flows along the surface in streams and rivers; some of it is used by plants; some of it evaporates and returns to the air; and some of it sinks into the ground and becomes groundwater. Groundwater makes up a significant portion of the Earth's fresh water.

Groundwater exists in - and slowly moves through - *aquifers*. Aquifers are made of layers of gravel, sand, sandstone, fractured rock, or other types of sediment. Large amounts of water can accumulate in aquifers. One or more aquifers can make up a

Natalie Stork & John Coburn

Groundwater Management Program

SGMA@waterboards.ca.gov

www.waterboards.ca.gov/sgma

