



North American Groundwater Subbasin (NASb) Groundwater Sustainability Plan Update

Public Workshop #1
November 19, 2025

NORTH AMERICAN SUBBASIN
Groundwater Sustainability Plan



PREPARED FOR:

RD1001 GSA

Sacramento Groundwater Authority GSA

South Sutter Water District GSA

Sutter County GSA

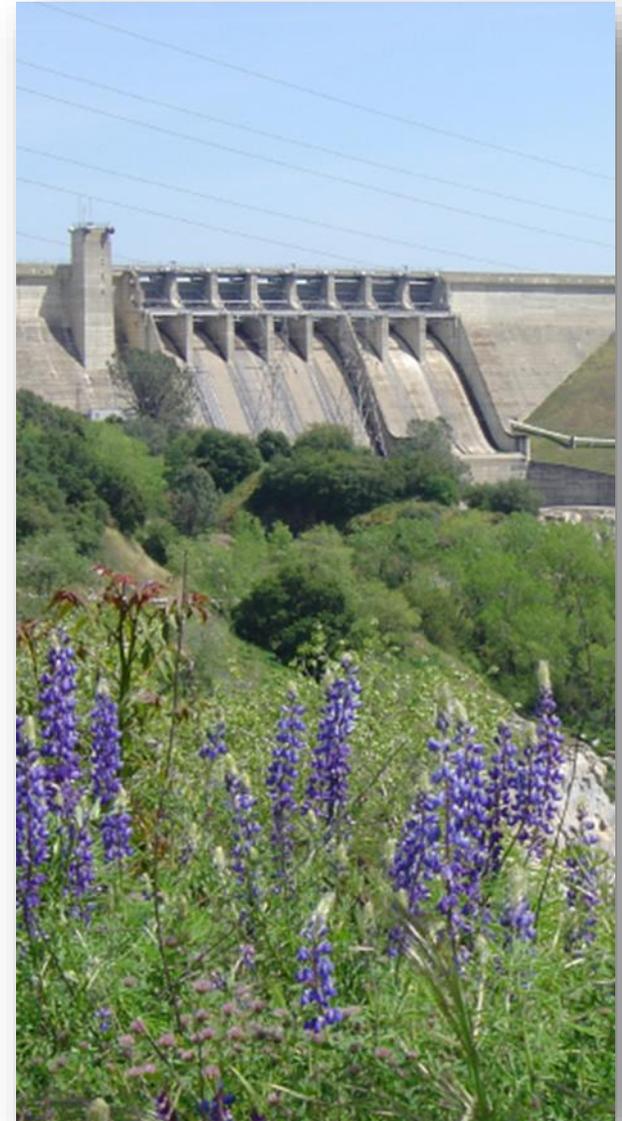
West Placer County GSA

DECEMBER 2021



Agenda

- Welcome and Meeting Purpose
- SGMA Background
- GSP Amendment
 - Groundwater Level Sustainable Management Criteria & Groundwater Dependent Ecosystems
 - Land Subsidence Sustainable Management Criteria
- Timeline
- Questions/Comments



Welcome and Meeting Purpose

Meeting Purpose

- Provide an update on the progress of GSP and SGMA implementation
- Strengthen understanding of the approach to maintaining sustainability
- Present proposed approach to revising two sustainable management criteria
- Seek input

A copy of the presentation, along with additional meeting materials, will be available at <https://nasbgroundwater.org/>

How to Engage During the Meeting

- **On Zoom:**
 - “Raise hand” function to speak or
 - Type question in comment box
- **Via telephone:**
 - *9 to “Raise Hand”
 - *6 to unmute when called on

SGMA Background

Sustainable Groundwater Management Act (SGMA)

Local Control



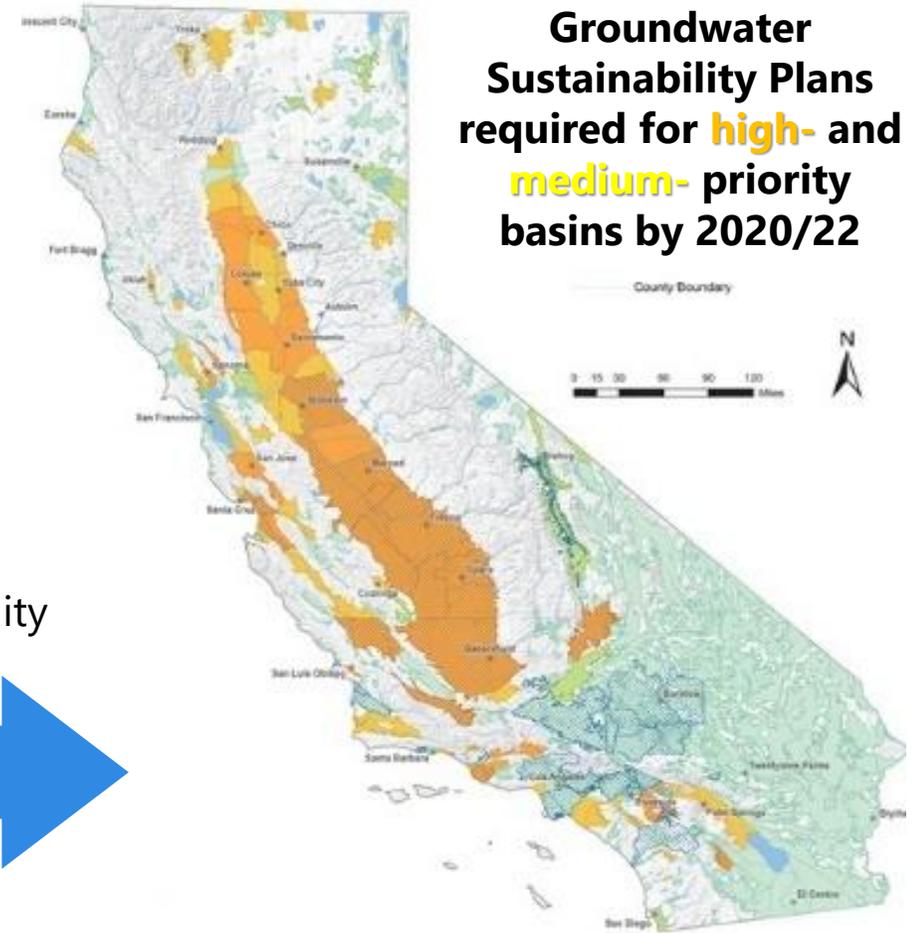
"A central feature of these bills is the recognition that groundwater management in California is best accomplished locally."

Governor Jerry Brown,
September 2014

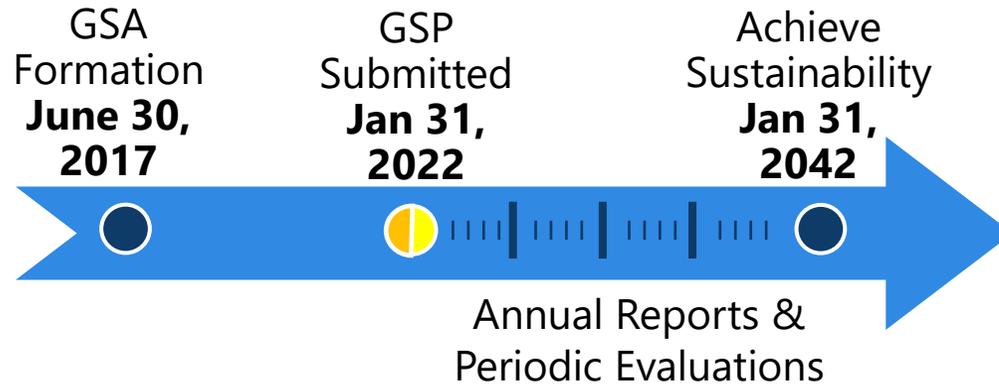
Roles



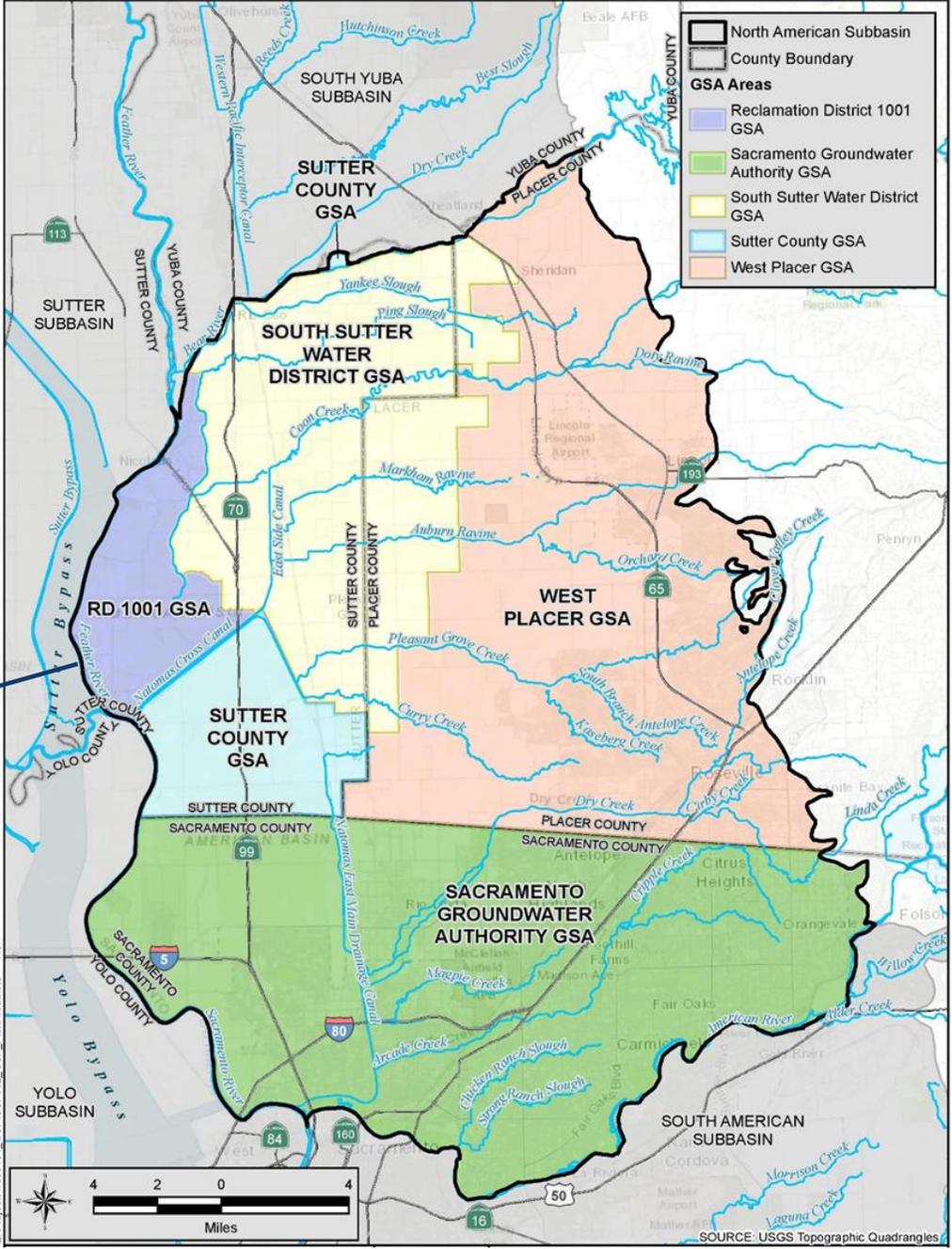
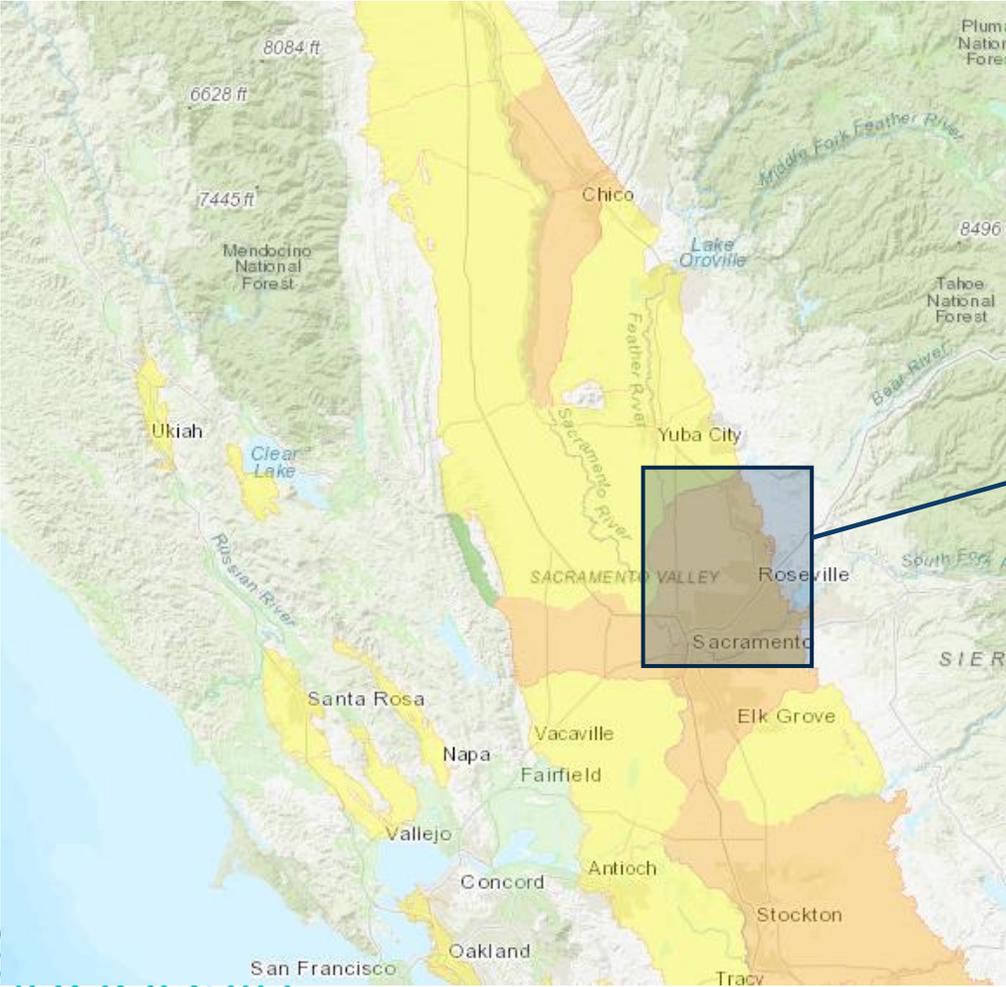
Groundwater Basins



SGMA Timeline



Groundwater Sustainability Agencies (GSAs)



NASb Overview/GSA Introduction

Reclamation District 1001 (RD 1001 GSA)

Kimberly Reese | Reclamation District 1001
1959 Cornelius Ave | Rio Oso, CA 95674
530-656-2318 | kreese@rd1001.org

Sacramento Groundwater Authority GSA (SGA GSA)

Trevor Joseph | Manager of Technical Services | Sacramento Groundwater Authority
2295 Gateway Oaks Drive, Suite 100 | Sacramento, CA 95833
(916) 967-7692 | tjoseph@rwah2o.org

South Sutter Water District GSA

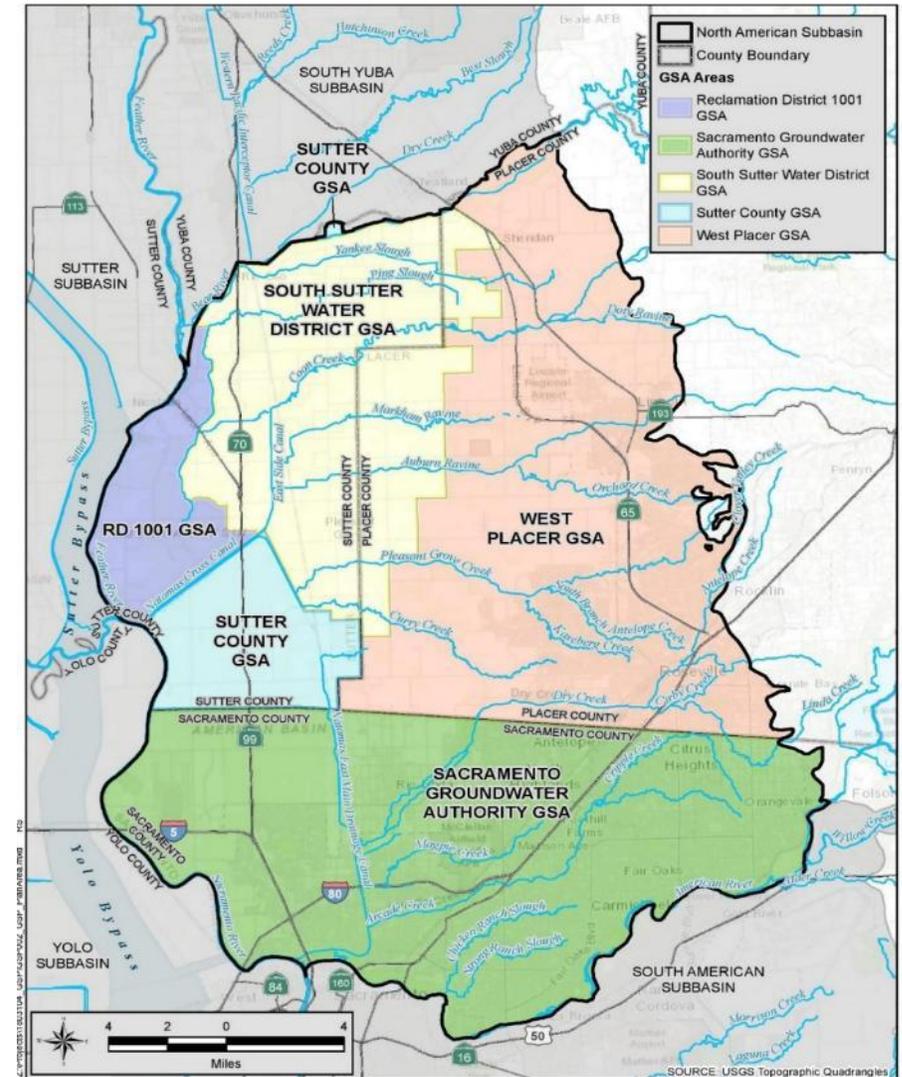
Hayden Cornwell | General Manager | South Sutter Water District
2464 Pacific Ave | Trowbridge, CA 95659
530-656-2242 | hcornwell@southsutterwd.com

Sutter County GSA

Guadalupe Rivera | Principal Engineer | Sutter County
1130 Civic Center Blvd. | Yuba City, CA 95993
530-822-7400 | grivera@co.sutter.ca.us

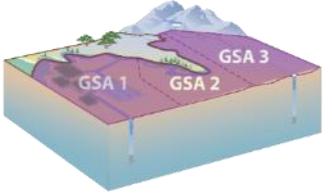
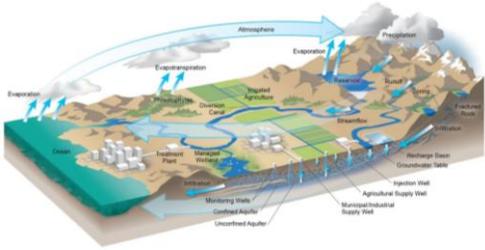
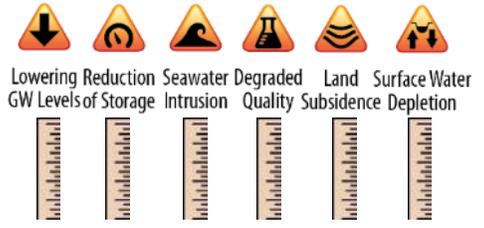
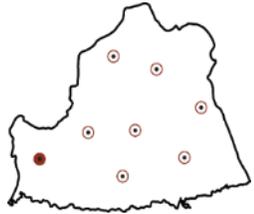
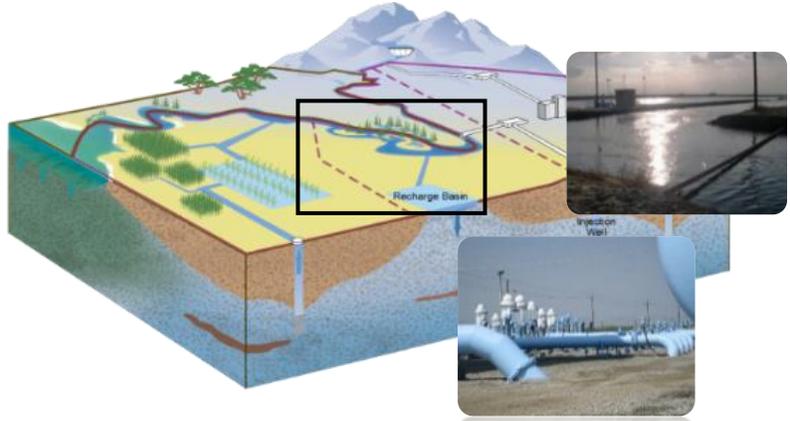
West Placer GSA

Christina Hanson | Public Works Manager | Placer County
3091 County Center Drive, Suite 170 | Auburn, CA 95603
530-886-4965 | chanson@placer.ca.gov



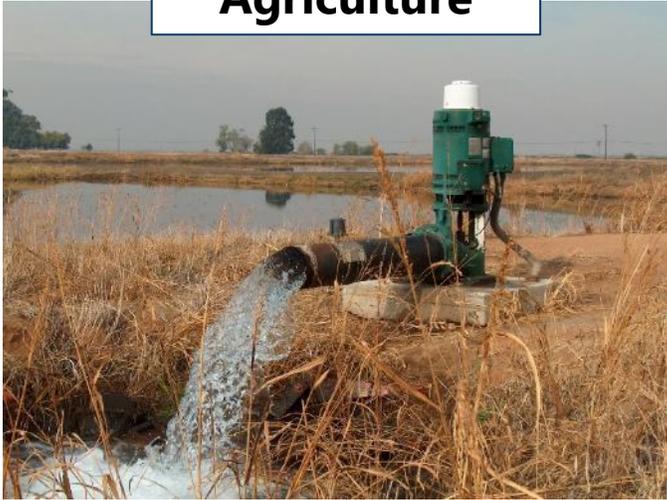
NASb Website: nasbgroundwater.org

Groundwater Sustainability Plan (GSP) Regulations & Sections

GSP Development Phases	1. Understand water users and existing basin conditions	2. Develop criteria that consider beneficial uses and users	3. Develop and implement management actions and/or projects to ensure basin is sustainable
<p>GSP Regulation Requirements</p>	<p>Who - Administrative Information -</p>  <p>What - Basin Setting -</p> 	<p>Where - Sustainability Indicators -</p>  <p>- Monitoring Network -</p> 	<p>How - Projects & Management Actions -</p> 
<p>NASb GSP Sections</p>	<p>1. Administrative Information</p> <ol style="list-style-type: none"> 1. Introduction 2. Agency Information 3. Description of Plan Area 4. Notice and Communications <p>2. Basin Setting</p> <ol style="list-style-type: none"> 1. Hydrogeologic Conceptual Model 2. Groundwater Conditions 3. Water Budgets 	<p>3. Sustainable Management Criteria</p> <p>4. Monitoring Network</p>	<p>5. Projects & Management Actions</p> <p>6. Plan Implementation</p>

Beneficial Uses and Users

Agriculture



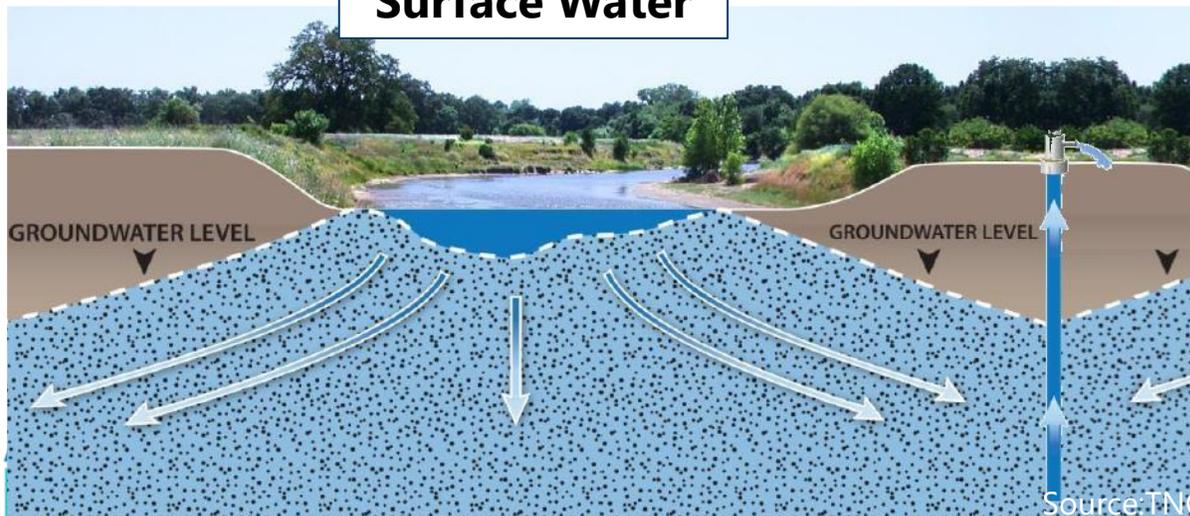
Municipal



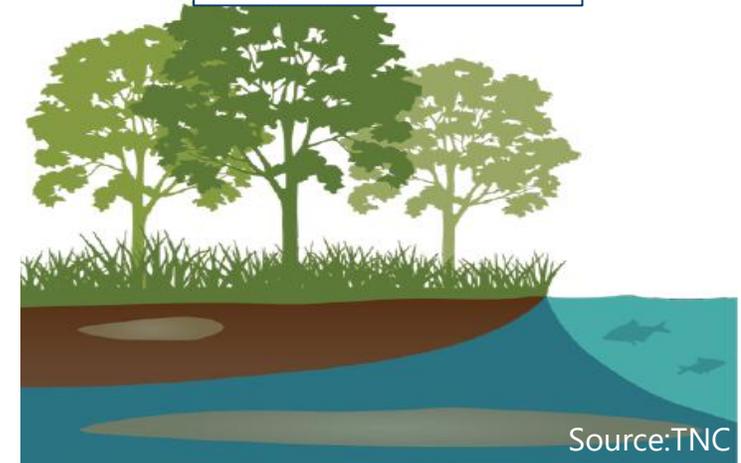
Domestic



Surface Water



Environment



GSP

Goal: Ensuring sustainability through projects and programs that will assist in meeting goals

Current Status: Submitted in December 2021; approved by DWR in July 2023 with six corrective actions

Annual Report

Goal: Provides information on groundwater conditions and implementation of GSP for the prior water year

Current Status: The fourth annual report for Water Year 2024 was submitted to DWR in March 2025

Periodic Evaluation

Goal: Periodically review the GSP to ensure that proposed projects and programs are helping the basin meet its sustainability goals

Current Status: In progress, to be submitted by January 2027

GSP Amendment

Approach to GSP Amendment



Review DWR Feedback



Consider what has and hasn't worked for the Subbasin



Integrate new data and modeling results



Refine management criteria



Conduct outreach & gather feedback

DWR's Recommended Corrective Actions

**Bottom of Basin
Definition**

Data Gaps

**Water Quality
Criteria**

**Subsidence
Criteria**

**Interconnected
Surface Water
Criteria**

**Monitoring
Network
Documentation**

Sustainability Indicators

Today's topics



Chronic lowering of groundwater levels

Land subsidence



Degraded water quality



Reduction of groundwater storage

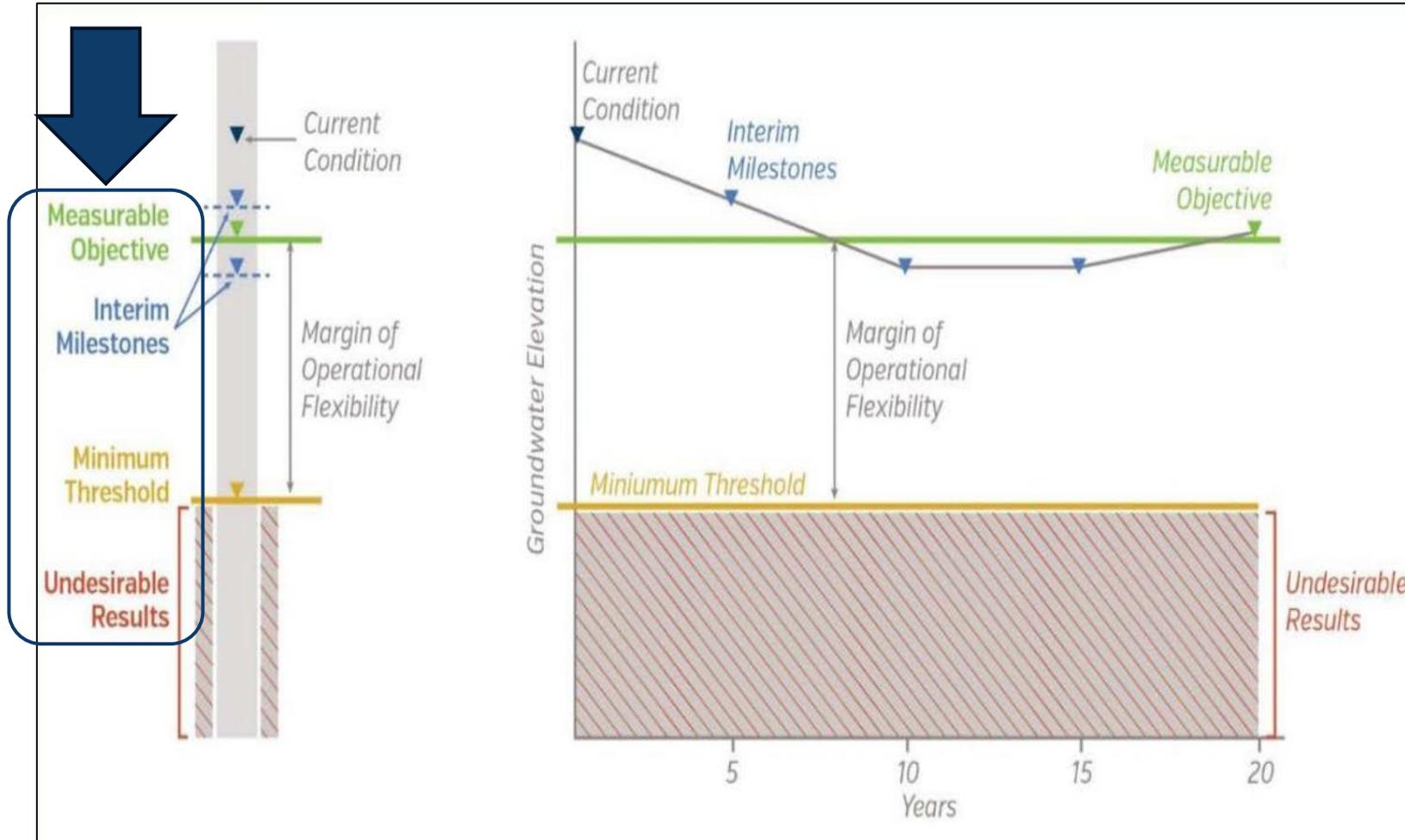


Seawater intrusion



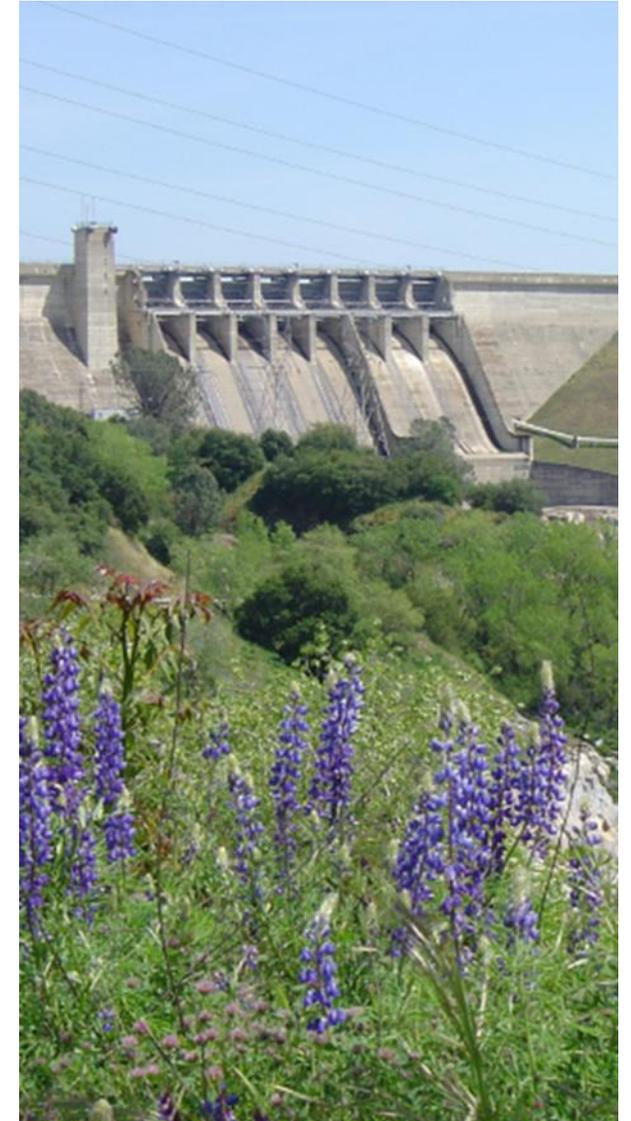
Depletions of interconnected surface waters

What are Sustainable Management Criteria?



A Break for Questions/Discussion

- **On Zoom:**
 - “Raise hand” function to speak or
 - Type question in comment box
- **Via telephone:**
 - *9 to “Raise Hand”
 - *6 to unmute when called on

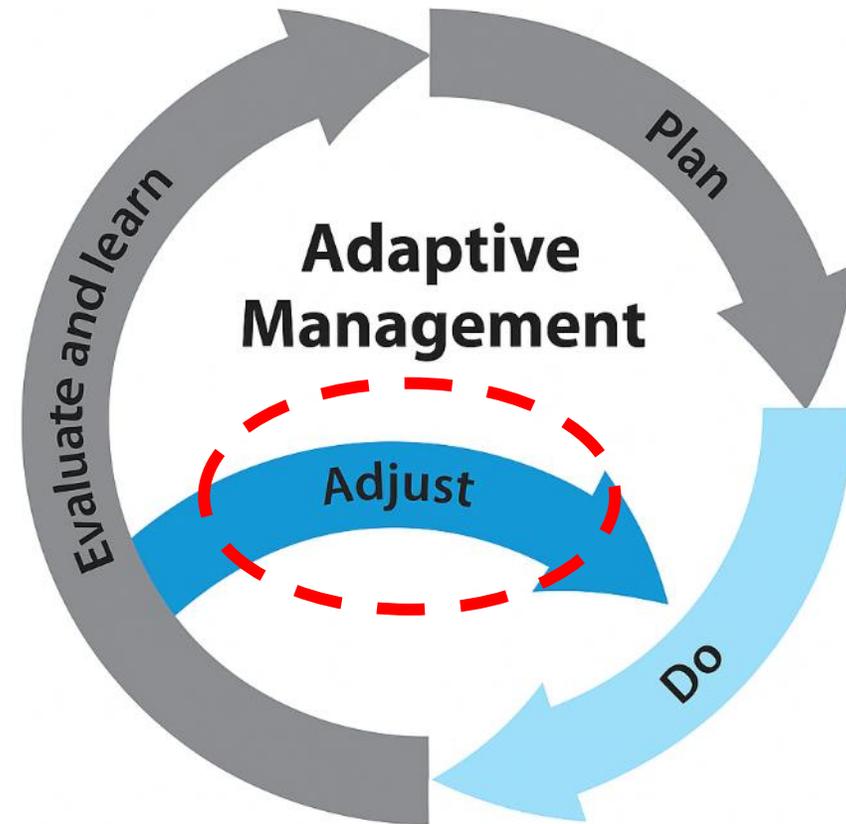




Groundwater Level Sustainable Management Criteria & Groundwater Dependent Ecosystems

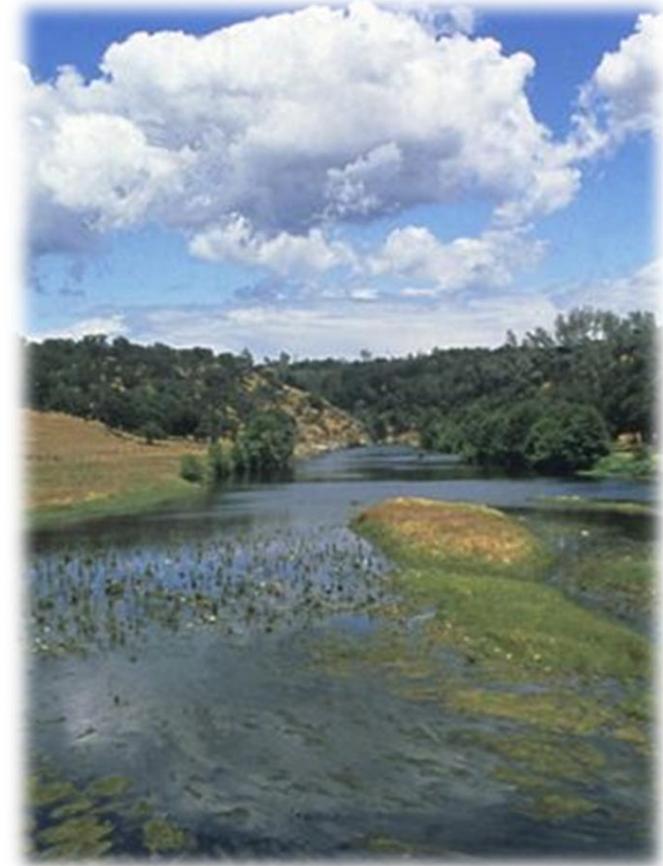
Why update Groundwater Level Criteria?

- **New data and information** on groundwater conditions and impacts to users
- **Knowledge gained** in implementation
- **Additional time** to consider best approaches



Undesirable Results: What are we trying to avoid?

- Groundwater Dependent Ecosystems cannot survive
- Agricultural landowners cannot sustain crops
- Domestic wells go dry, and owners do not have access to water
- Determined by Minimum Threshold exceedances



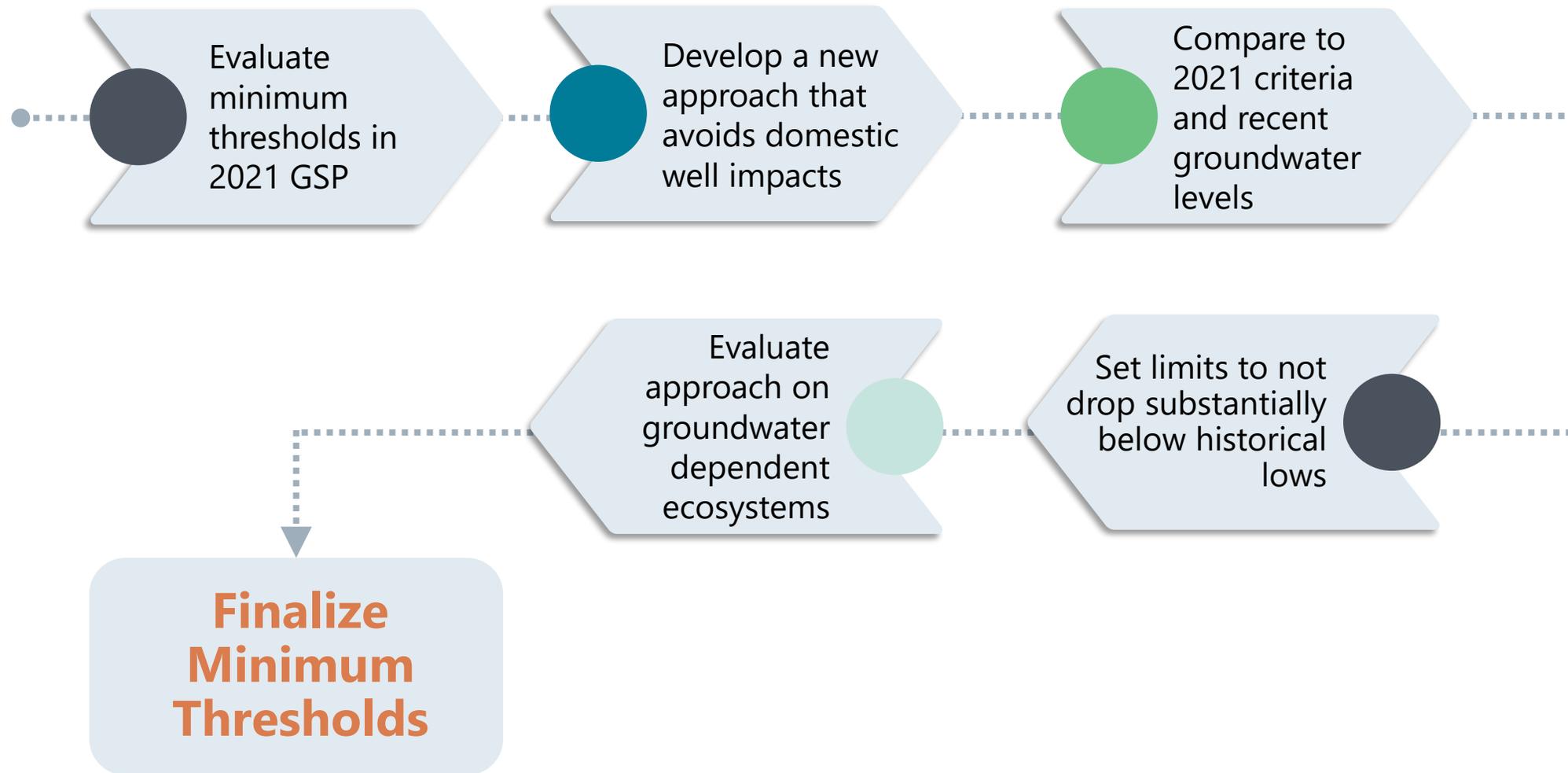
Undesirable Results Definition

- Definition would stay the same as the 2021 GSP:

An Undesirable Result occurs when 20% or more of all Representative Monitoring Sites exceed the Minimum Threshold for two consecutive fall measurements.



Approach to Minimum Thresholds



Minimum Thresholds Development

Collected domestic, agricultural, and municipal well data near each monitoring site

Identified shallowest domestic well in each area

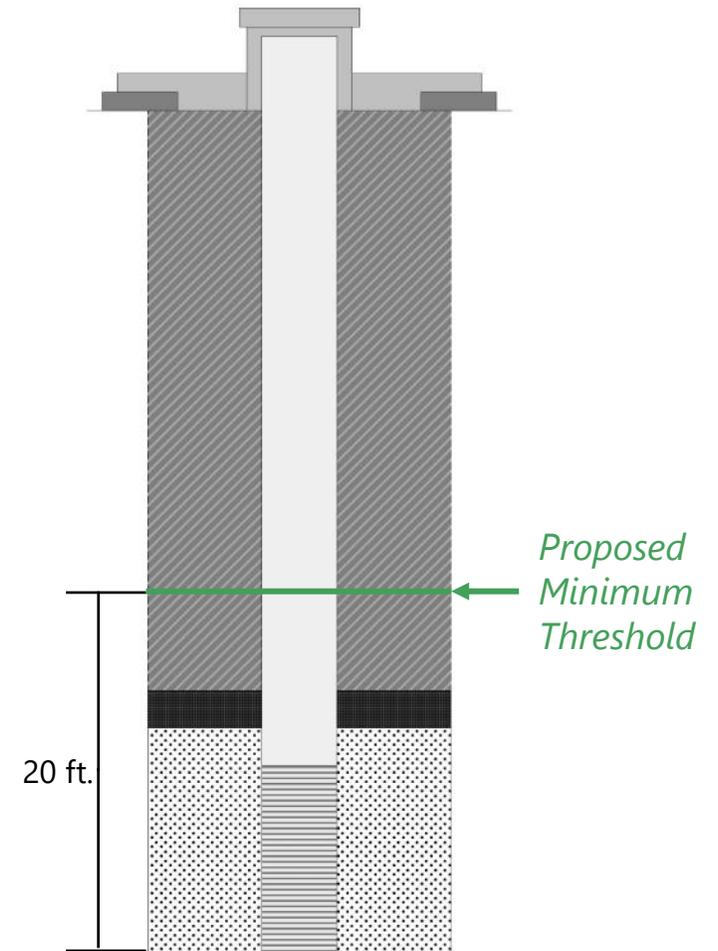
Set the Proposed Minimum Threshold at 20 feet above the bottom of the shallowest domestic well

Adjusted thresholds that were substantially below historical lows



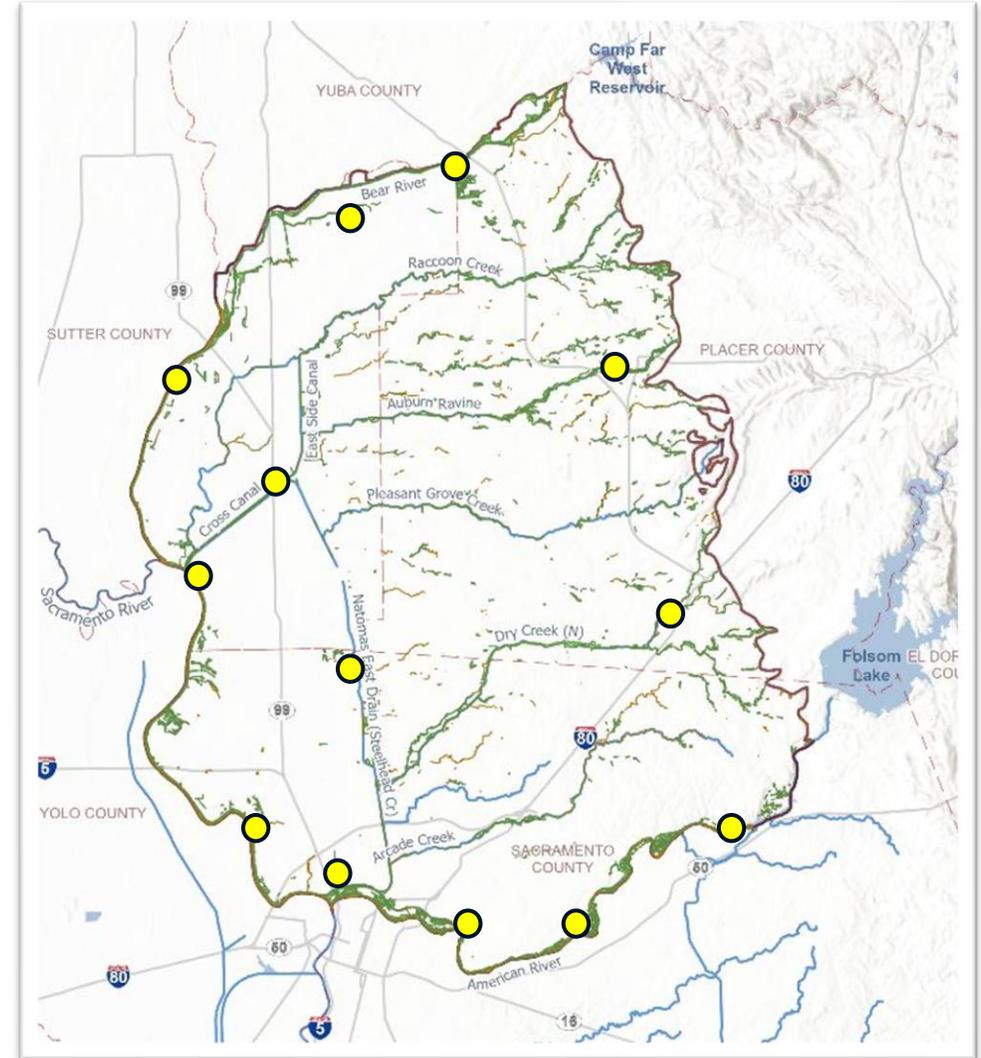
Proposed Minimum Threshold

- Protects domestic wells and groundwater dependent ecosystems
- Gives buffer for drought conditions
- Avoids significant and unreasonable effects



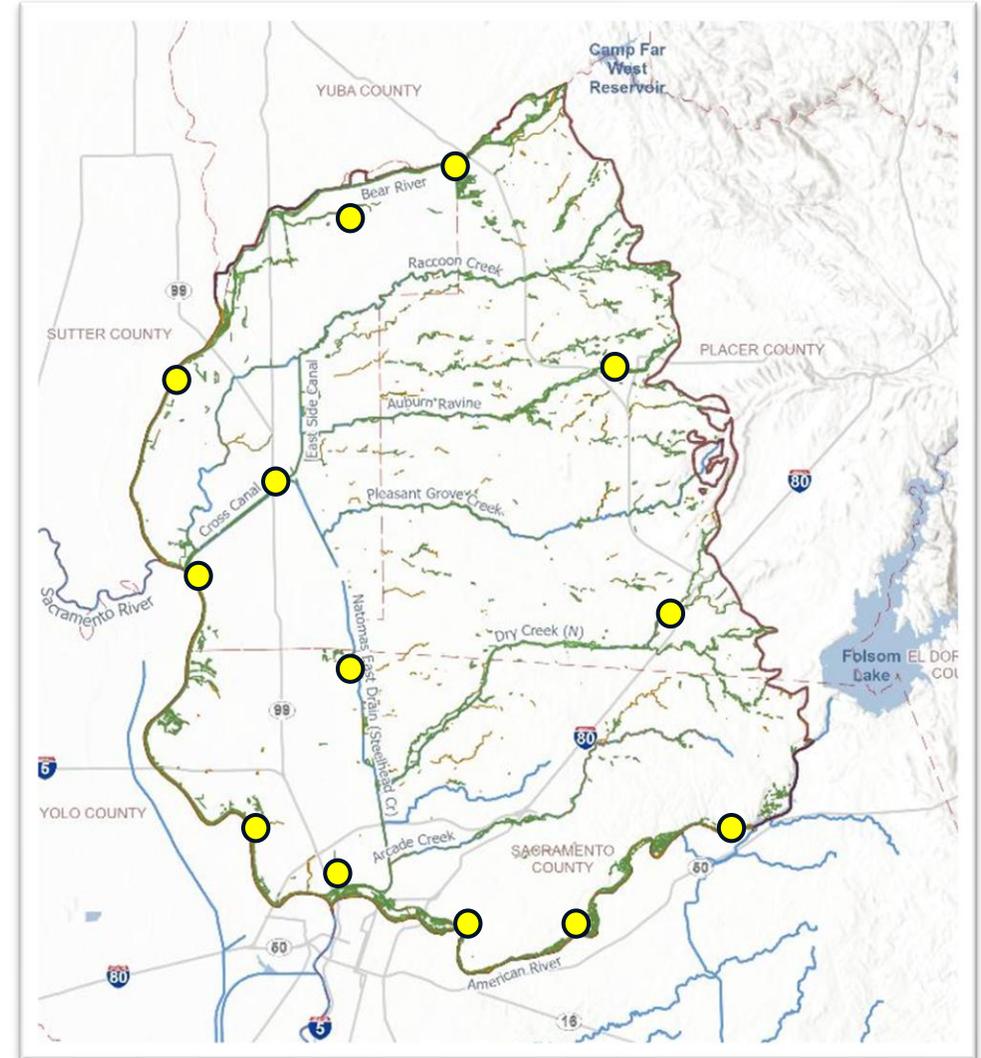
Groundwater Dependent Ecosystems & Minimum Thresholds

- Goal is to determine if Proposed Minimum Thresholds are protective of groundwater dependent ecosystems (GDEs)
- Studies recommend water table ≤ 30 ft. below ground for GDEs such as the Valley Oak



Groundwater Dependent Ecosystems & Minimum Thresholds

- Evaluated Minimum Thresholds at sites in:
 - Areas with likely GDEs
 - Top of Screen depths approximately ≤ 50 ft. below ground
- Proposed Minimum Thresholds range from **8 ft.** to **28 ft.** below ground



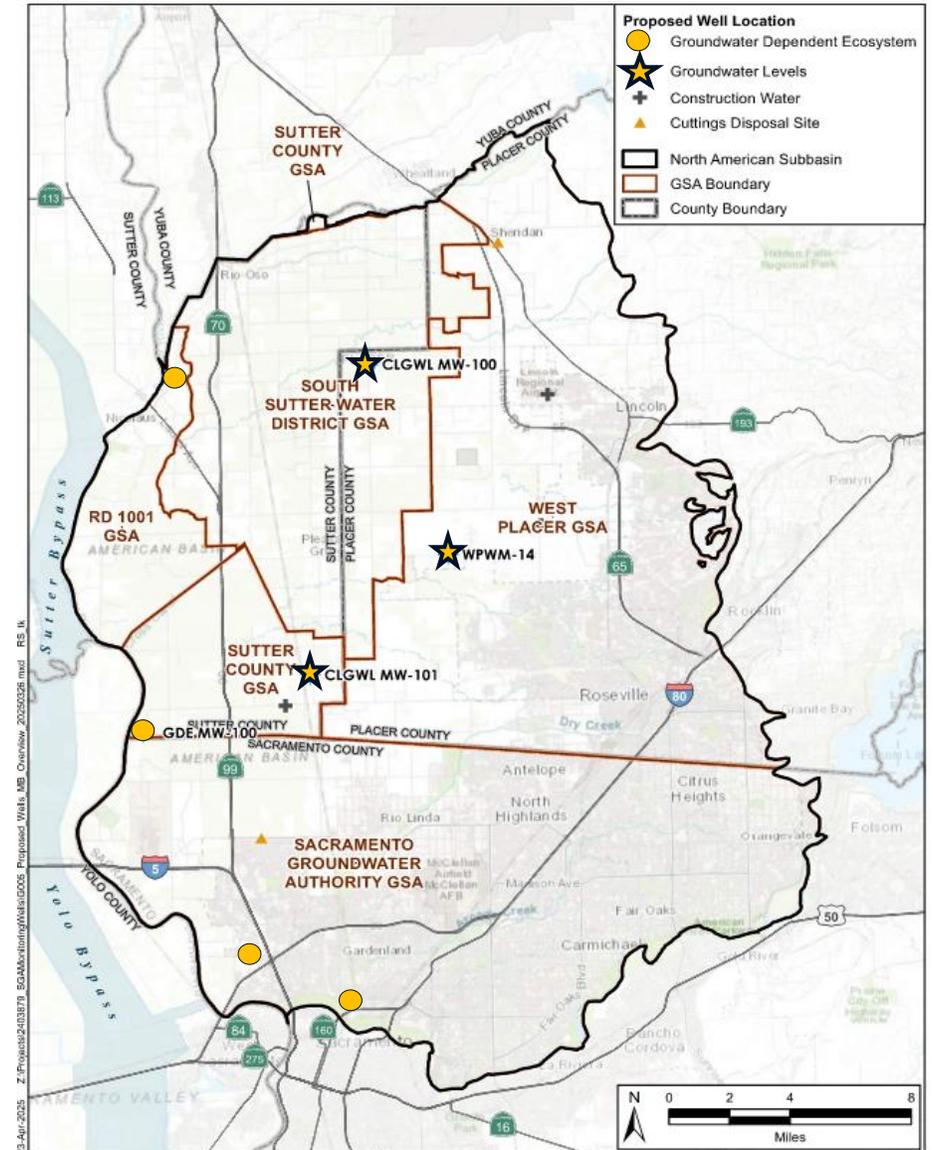
Groundwater Dependent Ecosystems Analysis

- A GDE analysis comparing NDVI/NDMI and depth-to-water is underway
- The Nature Conservancy's GDE Pulse has created a dataset that correlates vegetation data and remote sensing data
- The goal is to determine any correlation to water levels and GDE health



Addressing Data Gaps

- Seven monitoring wells will be installed by April 2026
- Four will provide data to better understand GDEs and interconnected surface water
- Three will be for groundwater level monitoring



Approach to Measurable Objectives & Interim Milestones



Review potential issues in the 2021 GSP



Define sustainable groundwater conditions



Set Interim Milestones as step-by-step progress towards the new Measurable Objective

Measurable Objectives & Interim Milestones Development

Found that the 2021 GSP's Measurable Objectives were set lower than historic low water levels.

Defined "sustainable conditions" based on historical groundwater data

Reviewed historical groundwater levels to check whether:

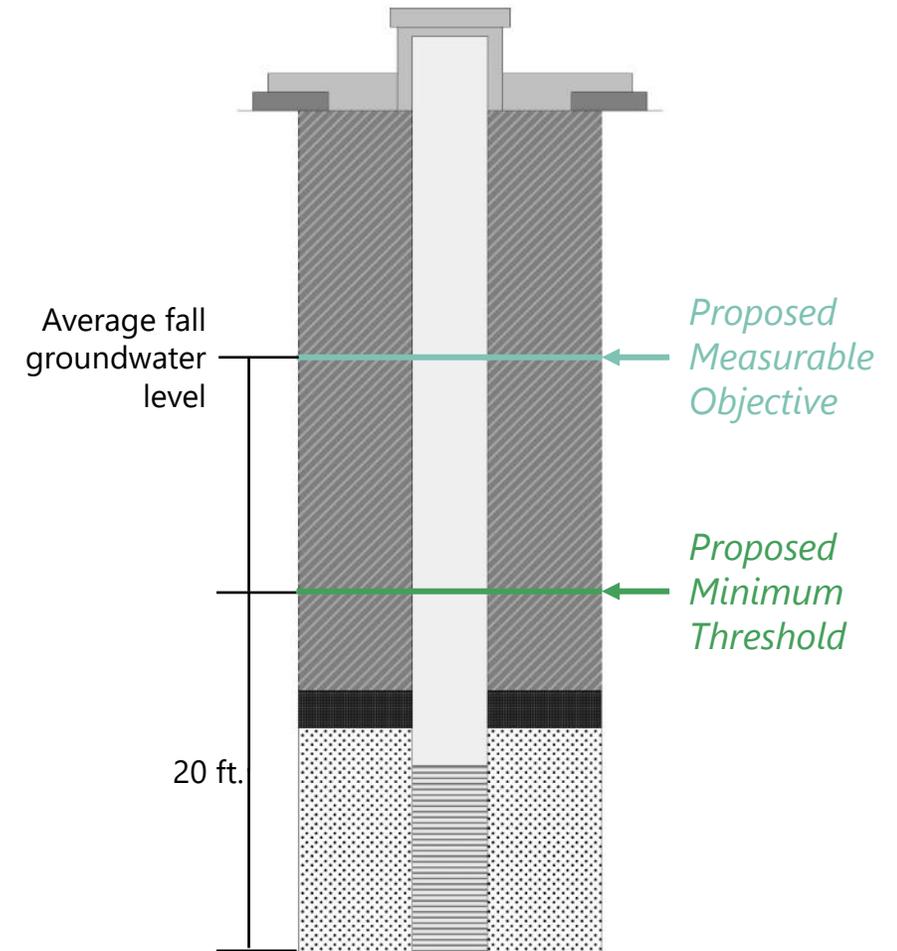
- Sustainable conditions occurred during non-dry or critically dry years, and
- Fall measurements were suitable for monitoring along with Minimum Thresholds

Chose the average fall groundwater level for the Measurable Objective and updated Interim Milestones to move toward that goal



Proposed Measurable Objectives

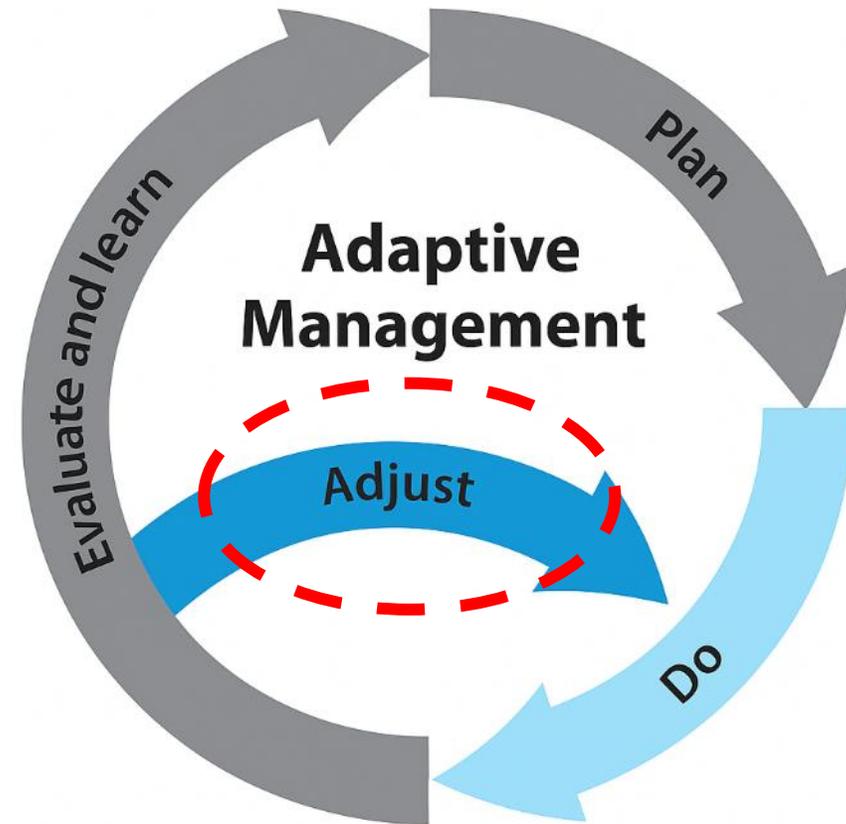
- Incorporates sustainable groundwater conditions experienced during non-dry or critically dry water years
- Based on fall measurements for better tracking with Minimum Thresholds
- Measurable Objectives would increase at 20 sites (~50% of monitoring network)



Land Subsidence Sustainable Management Criteria

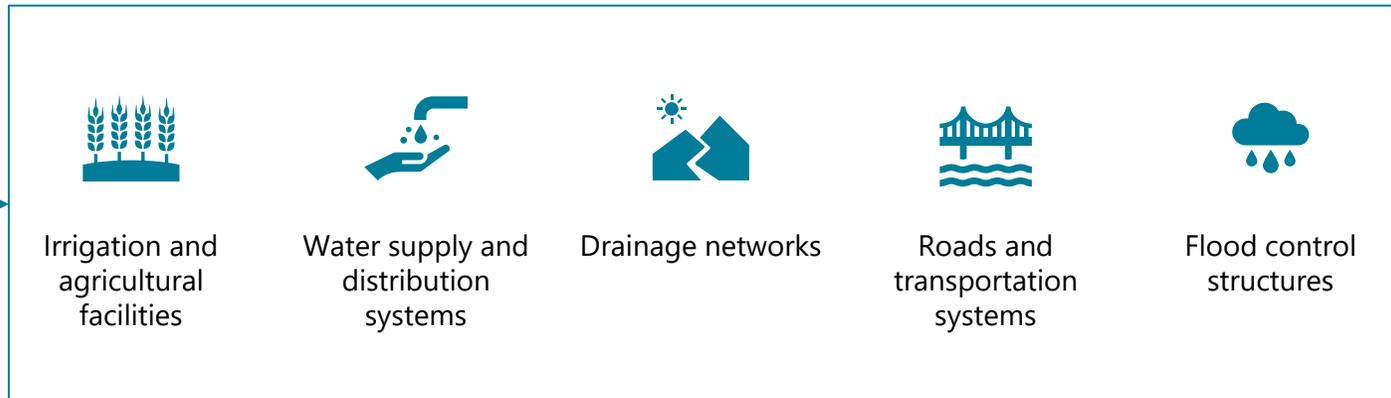
Why update Land Subsidence Criteria?

- **Recommended Corrective Action** from DWR
- **New data and information** on land surface elevations and DWR guidance
- **Knowledge gained** in implementation
- **Additional time** to consider best approaches



Undesirable Results: What are we trying to avoid?

- When subsidence becomes permanent (inelastic), the land cannot return to its previous elevation
- This can damage critical infrastructure



Undesirable Results Definition

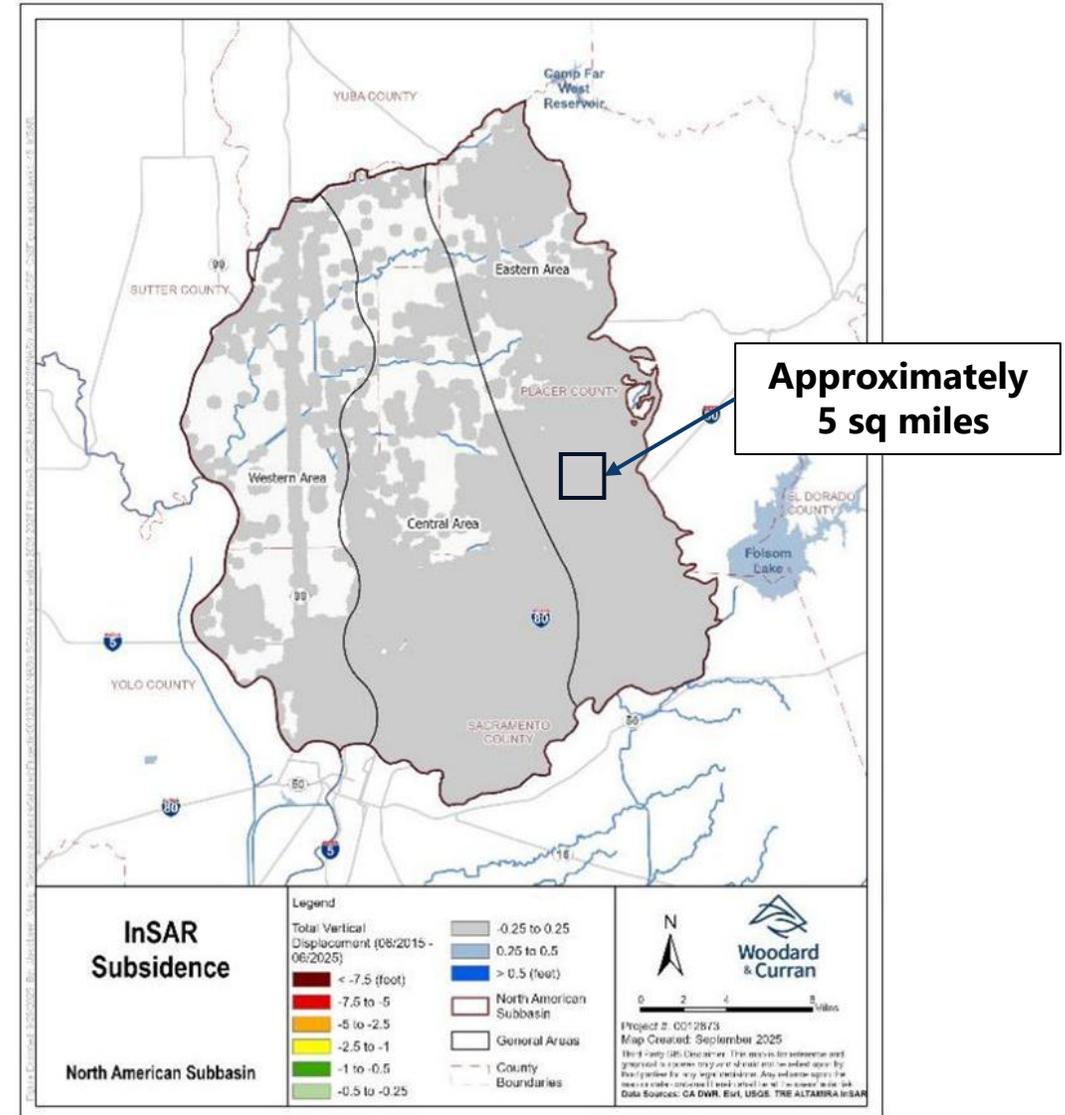
- New definition would be linked to Minimum Thresholds:

An Undesirable Result for inelastic land subsidence occurs when the Minimum Threshold is exceeded.



Proposed Minimum Threshold

- The rate of subsidence exceeds:
 - 0.5 feet over a five-year period, +/- measurement error
 - Over an area covering at least 5 or more square miles
- Monitored by annual InSAR data



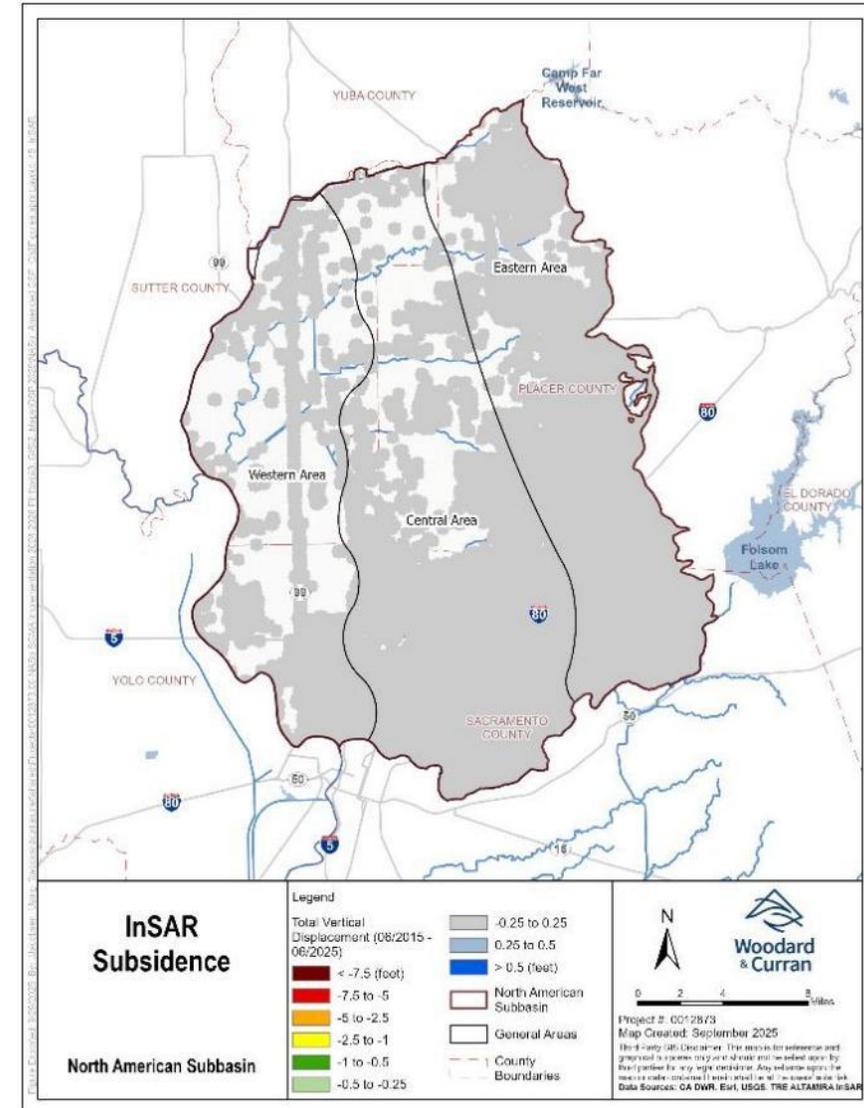
Proposed Measurable Objective & Interim Milestones

■ DWR Guidance

- Measurable Objectives for subsidence should be set to avoid or minimize subsidence

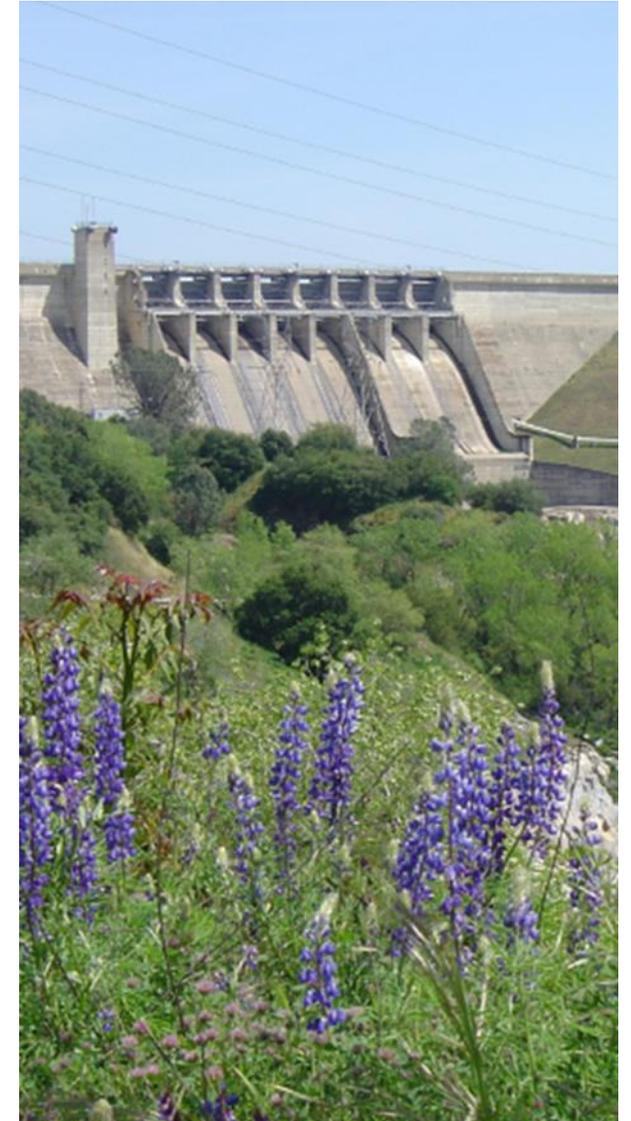
■ NASb Approach

- 0.0 feet over a five-year period, +/- measurement error
- Interim Milestones are set the same as Measurable Objective



A Break for Questions/Discussion

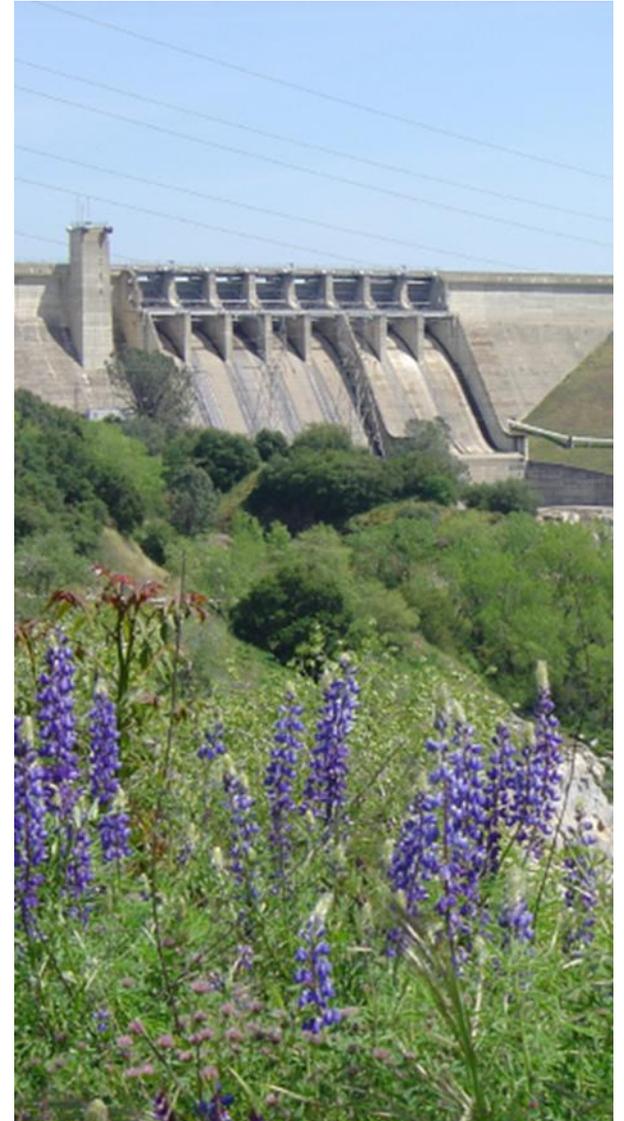
- **On Zoom:**
 - “Raise hand” function to speak or
 - Type question in comment box
- **Via telephone:**
 - *9 to “Raise Hand”
 - *6 to unmute when called on



Timeline

Upcoming Public Engagement

- **January 22, 2026**
 - Water Quality
 - Interconnected Surface Water
 - Groundwater Model (CoSANA) Upgrade & Water Budgets
- **March 12, 2026**
 - Projects & Management Actions
 - GSP Implementation
 - Periodic Evaluation
- **Fall/Winter 2026**
 - Public Comment on GSP Amendment
 - GSP Amendment Adoption



Questions/Comments?

Thank You!