



Kern County Subbasin
Groundwater Sustainability Agencies

**PUBLIC WORKSHOP:
AMENDED 2024
GROUNDWATER SUSTAINABILITY PLANS**

OCTOBER 3, 2024

MEETING AVAILABLE IN ENGLISH AND SPANISH

- This meeting is provided in English and Spanish. On Zoom, to select the language you would like to use:
 - Click the “Interpretation” icon
 - Click the language you would like to hear

MEETING HOUSEKEEPING

- This meeting is being recorded. A link to today's recording will be posted to the Kern GSP website after the meeting.
- Attendees are muted by default. There will be a Question and Answer period after the presentation.
- How to comment or ask a question:
 - Type the question in the "Chat"
 - Use the "Raise Hand" feature, and we will unmute you so you can ask your question. If calling in to the meeting instead of using the Zoom app, use the "Raise Hand" feature by pressing *9. We can then unmute you, and you can ask your question.

WELCOME & OBJECTIVES



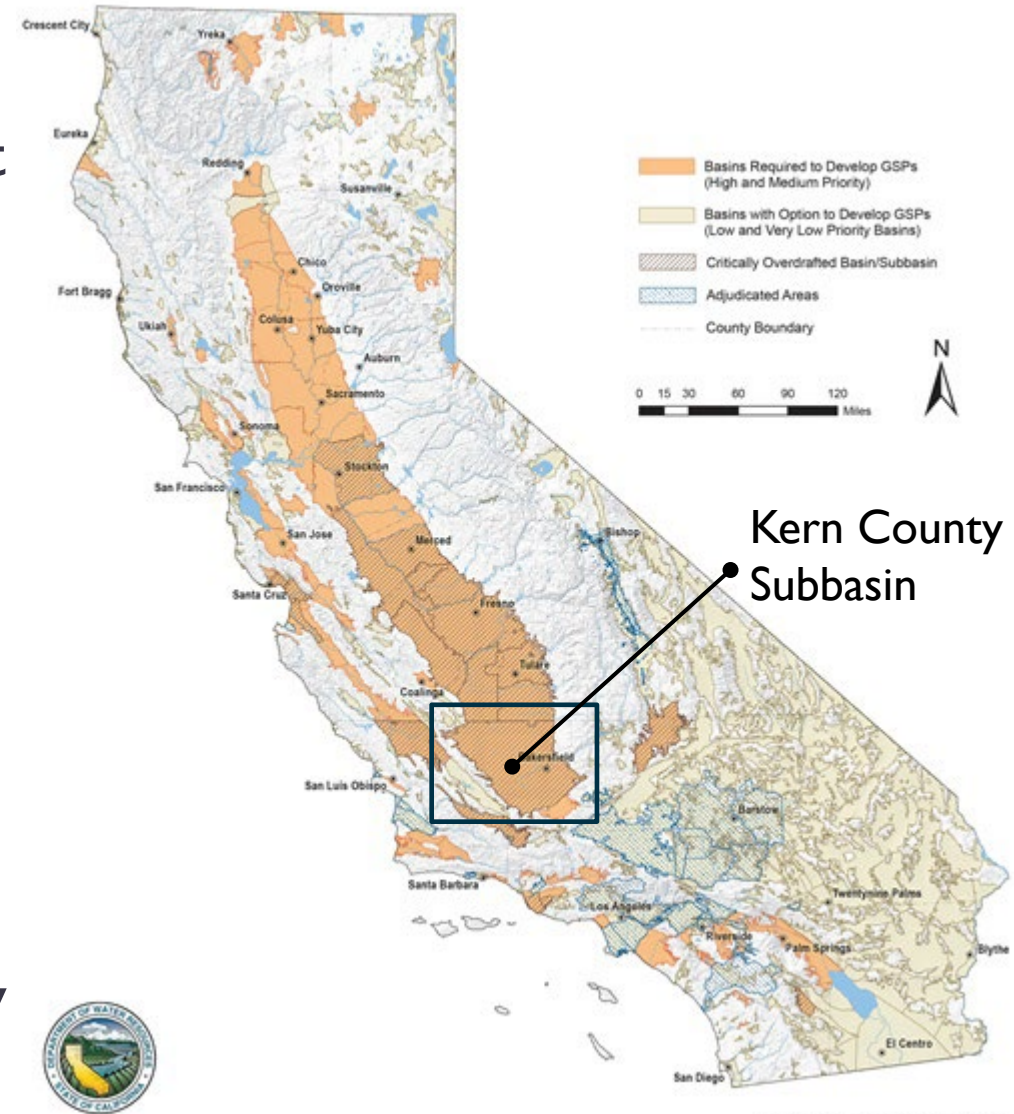
AGENDA

- Background
- Timeline
- 2024 Groundwater Sustainability Plans development process
- 2024 Plan overview
- 2024 Plan approach to address California Department of Water Resources (DWR) deficiencies
- Anticipated schedule leading to 2024 Plan adoption
- Next steps
- Questions and public comment

WHAT IS SGMA?

- SGMA = **Sustainable Groundwater Management Act**
 - Enacted in 2014 to manage California's groundwater resources and prevent over-extraction and undesirable results in California's high and medium priority basins (**like the Kern County Subbasin**)
 - Goal: achieve groundwater sustainability by 2040 by developing sustainability goals and approaches to achieve them in **Groundwater Sustainability Plans (GSPs)**
 - GSPs are written, implemented and enforced by local organizations called **Groundwater Sustainability Agencies (GSAs)**

GSAs write GSPs to achieve groundwater sustainability required by SGMA.

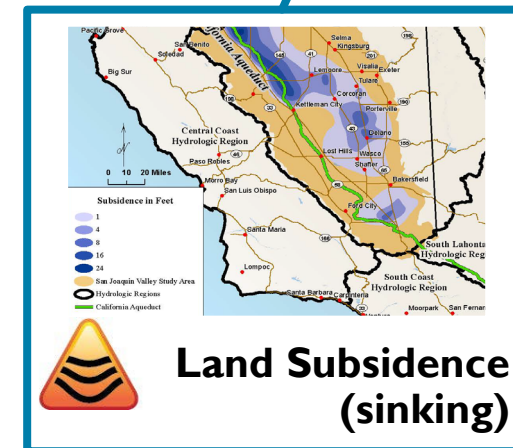
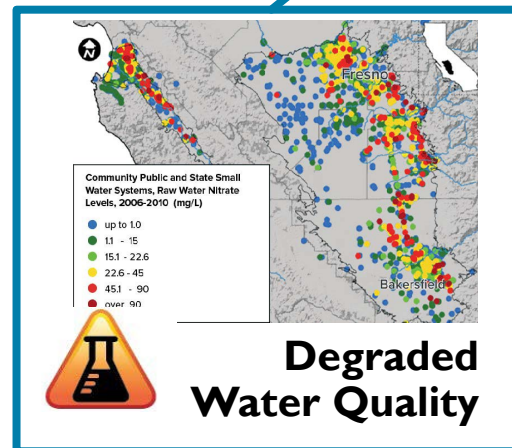
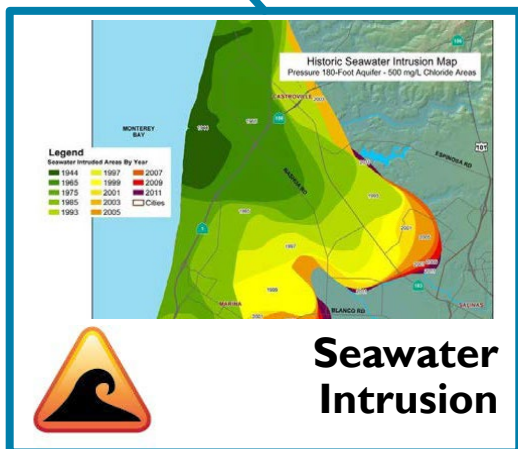
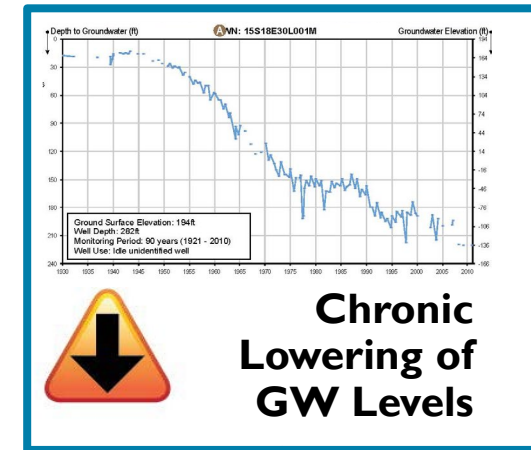
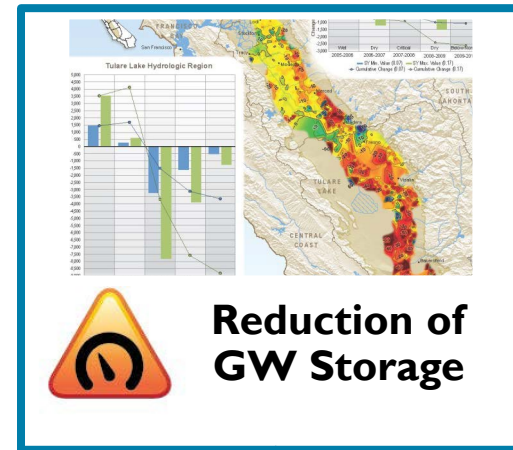
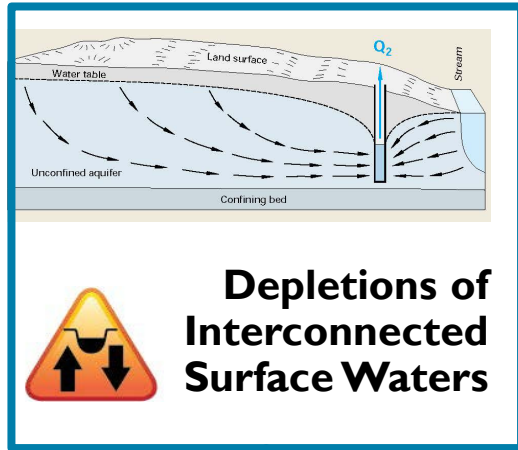


Department of Water Resources, Public Affairs Office, April 28, 2020

HOW WILL SGMA IMPACT GROUNDWATER USERS?

- **Stakeholder Input:** GSAs need your feedback for GSP development and implementation.
- **Monitoring:** Increased monitoring (water levels, water quality) and metering and reporting groundwater use may be required – check with your local GSA for details
- **Projects and Management Actions:** GSAs have developed individual plans to achieve sustainable groundwater conditions by 2040 that focus on demand reduction, water supply augmentation, monitoring and data collection, and coordination.
Management actions that may affect you include:
 - Demand management / individual water budgets
 - Land conversion incentives
 - Allocations
 - Domestic and small community well mitigation program

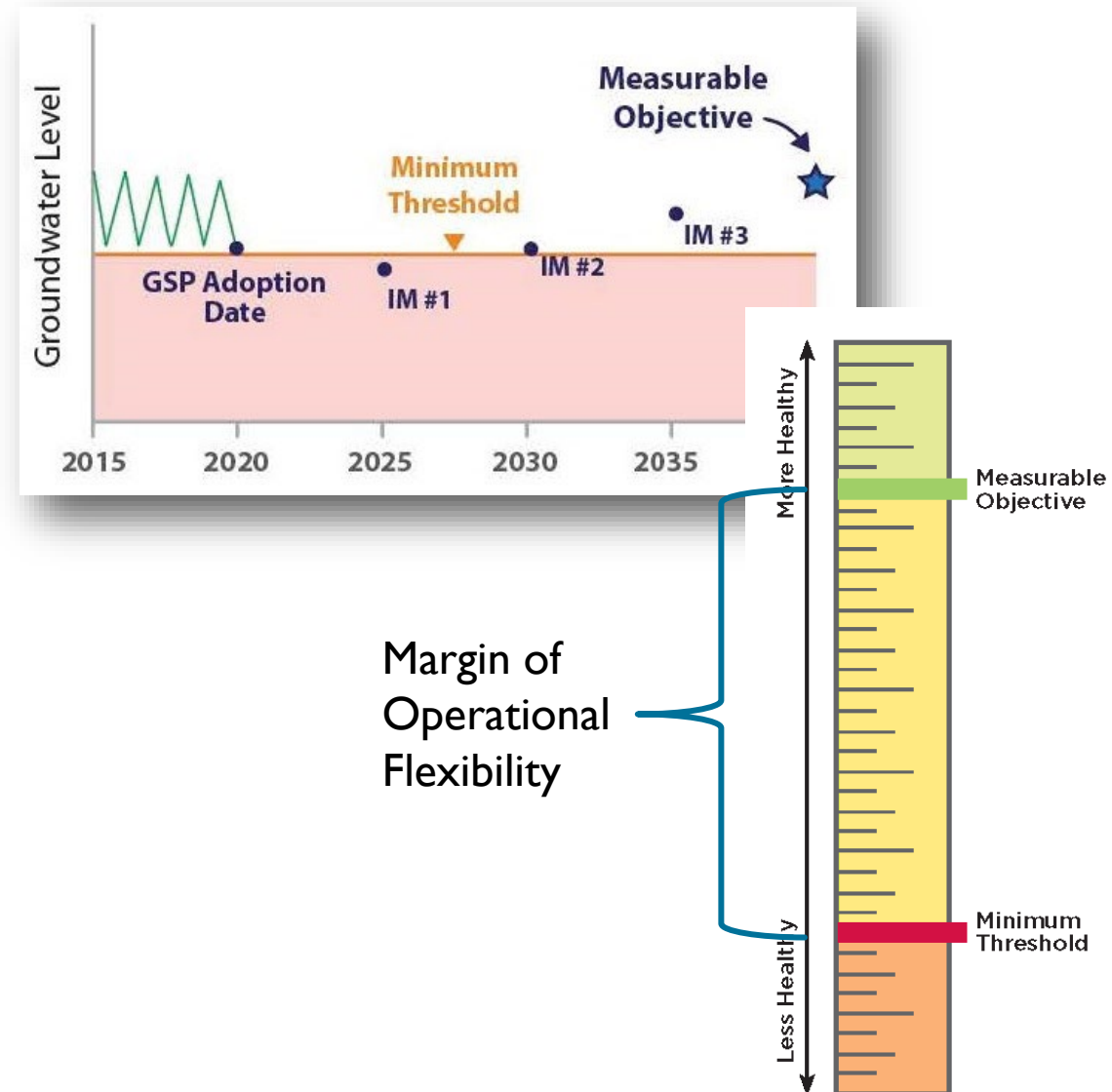
SUSTAINABILITY INDICATORS



SUSTAINABLE MANAGEMENT CRITERIA⁽¹⁾

For each Sustainability Indicator:

- **Minimum thresholds** (MTs) are the values that when exceeded may cause an undesirable result
- **Measurable Objectives** (MOs) are goals that reflect sustainable groundwater conditions
- **Interim Milestones** (IMs) are 5-year target values to reach sustainable conditions by 2040



KERN COUNTY SUBBASIN BACKGROUND

2017

GSA's Formed

2020

5 GSPs submitted to DWR

Jan 2022

DWR issued Incomplete Letter

July 2022

6 Revised GSPs submitted to DWR

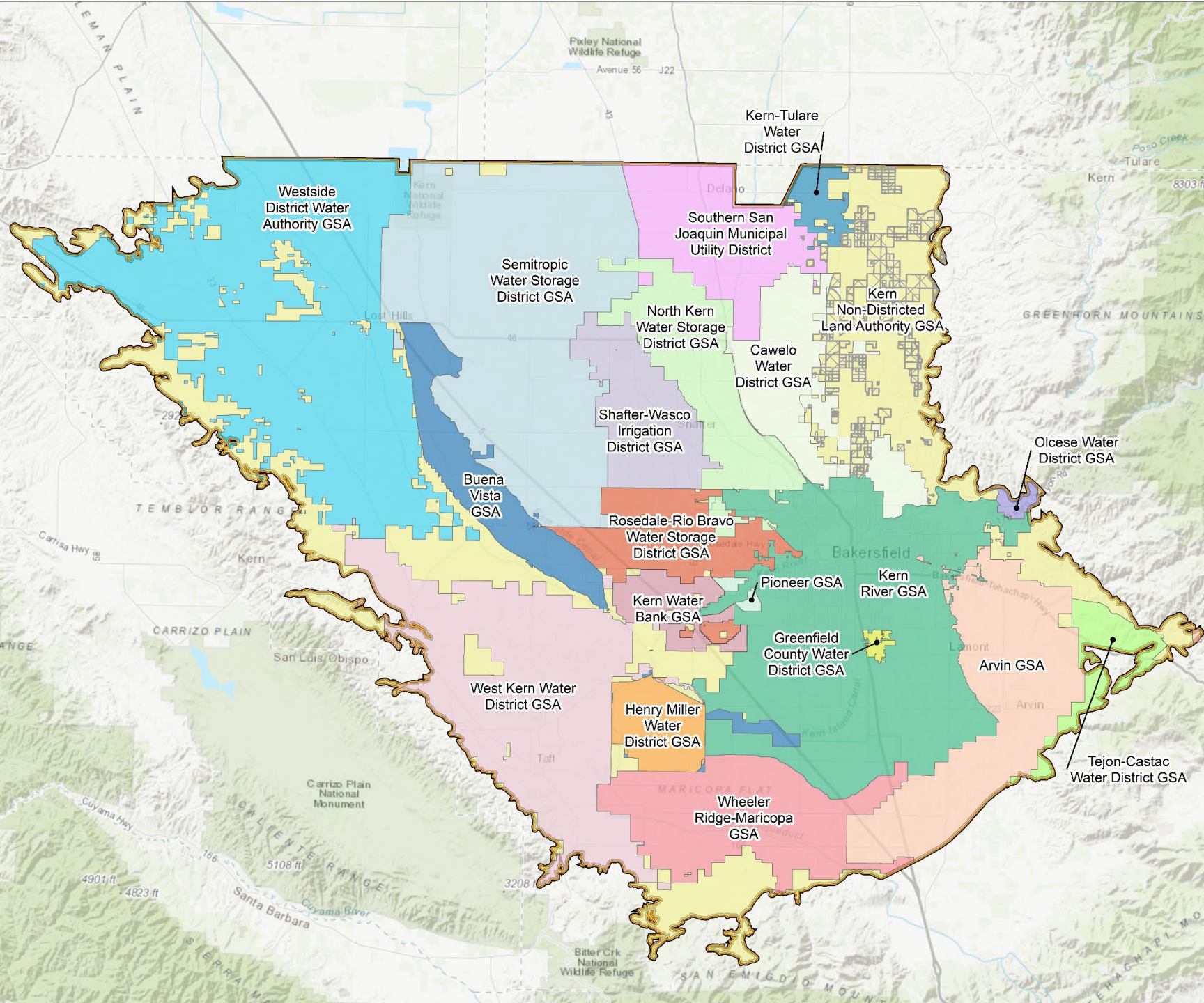
March 2023

DWR issued Inadequate Letter

March 2023-2024

7 Amended GSPs ("2024 Plan")

developed



SUBBASIN TIMELINE

SWRCB Consultation Period

March 2023

April 2023

May 2024

June 2024

October 2024

Feb 20, 2025

DWR
Inadequate Letter

Technical work
and 2024 Plan
development

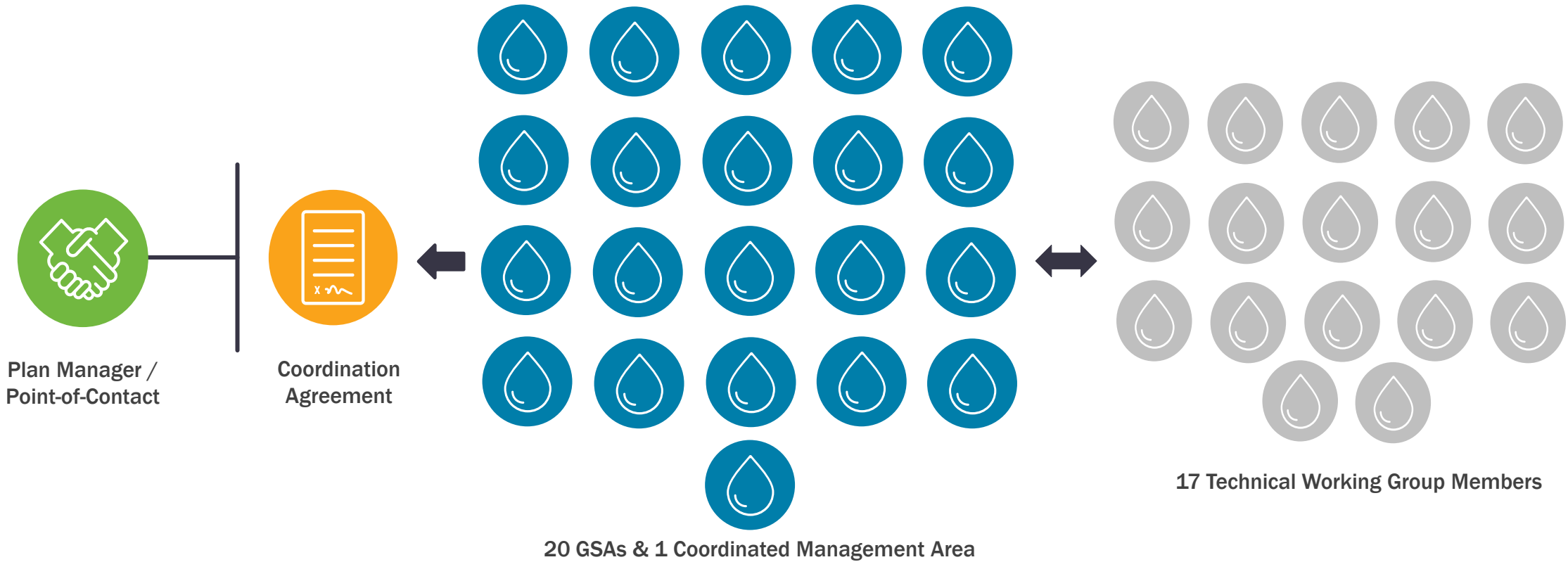
Draft 2024 Plan
released for public
comment

Subbasin Public
Workshops

SWRCB Public
Hearing Date



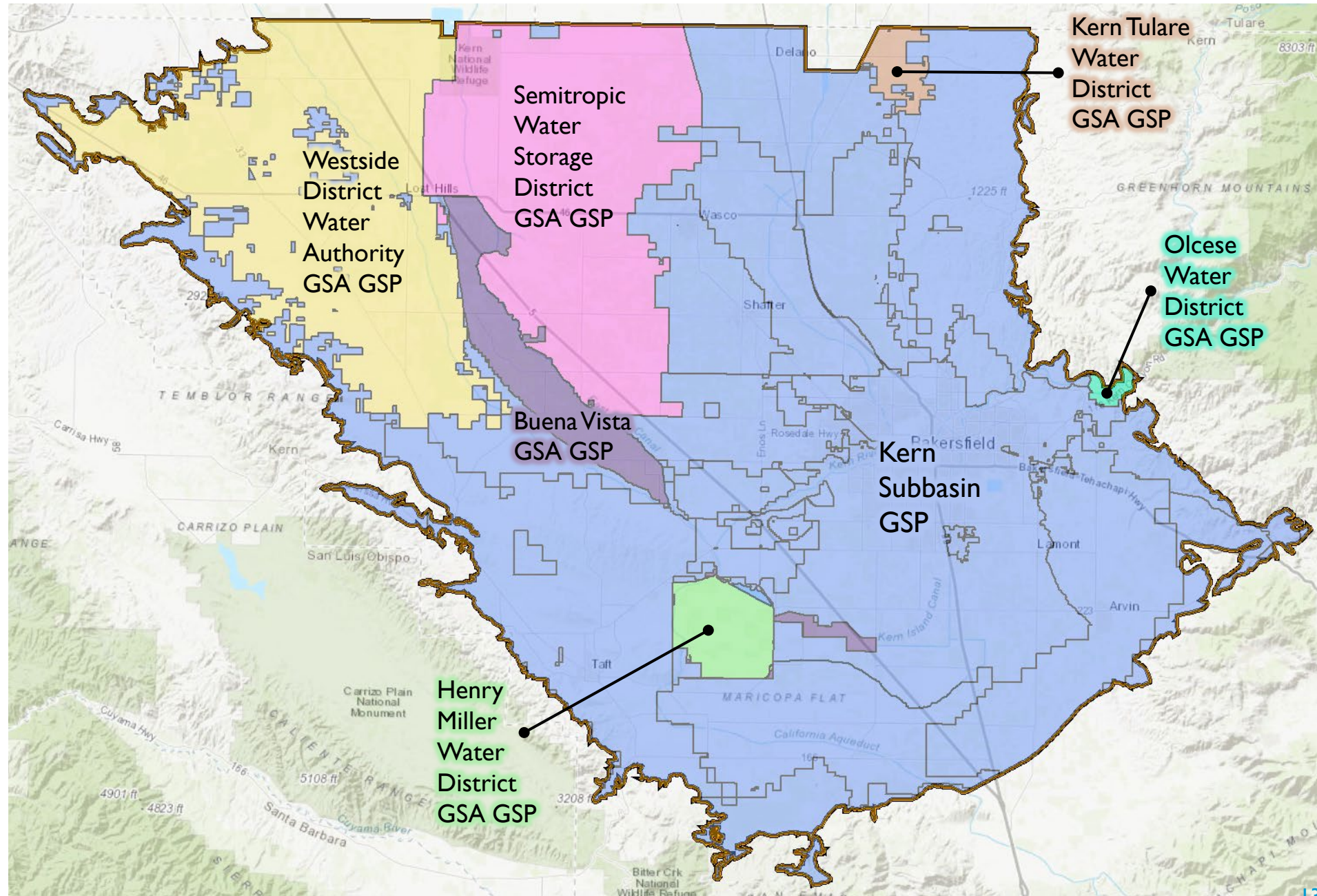
SUBBASIN 2024 PLAN DEVELOPMENT



- 160+ Virtual/In-Person Meetings
- \$1.3+ million project cost

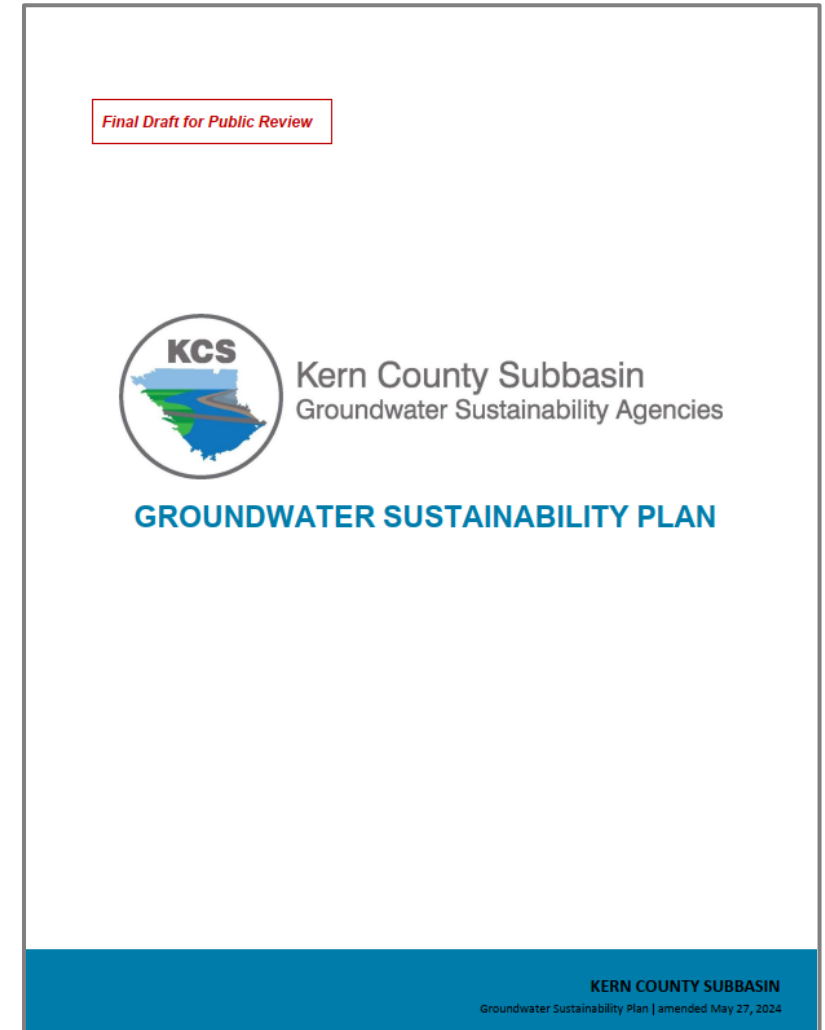
2024 PLAN STRUCTURE

7 almost identical GSPs +
1 Coordination Agreement make up the Amended 2024 Plan



2024 PLAN HIGHLIGHTS

- ✓ Coordinated development by experts and principals from 7 of the top groundwater consulting firms in the State.
- ✓ Significantly improved coordination across the Subbasin, which is the largest in the State.
- ✓ Consistent data and technically sound methodologies across the Subbasin.
- ✓ Revised Sustainable Management Criteria, including undesirable results, to be more protective.
- ✓ Coordinated Projects and Management Actions to achieve the Sustainability Goal.
- ✓ Funding an operational well mitigation program by 2025.



BENEFICIAL USES AND USERS

- Who or what GSAs are trying to protect
- Different beneficial uses/users have different needs



Water Supply

- Domestic
- Agricultural
- Municipal / Public Supply
- Small Communities
- Industrial



Environmental

- Interconnected Surface Water
- Groundwater Dependent Ecosystems (GDEs)



Physical

- Conveyance and Storage - Avoid Land Subsidence

EXTENSIVE STAKEHOLDER OUTREACH



Wells: Kern County Environmental Health & Division of Drinking Water



Well Monitoring & Mitigation: Kern Water Collaborative & Self-Help Enterprises



Subsidence: Friant Water Authority & California Aqueduct Subsidence Program



State Water Resources Control Board Staff: Technical consultation



SDACs: GSAs & GSA group committees with CSD representation



Direct outreach: landowner meetings



Inter-basin Coordination: White Wolf, Tule, Tulare Lake

2022 PLAN DEFICIENCIES IDENTIFIED IN DWR MARCH 2023 INADEQUATE LETTER

1. “The GSPs do not establish undesirable results that are consistent for the entire Subbasin.”
2. “The Subbasin’s chronic lowering of groundwater levels sustainable management criteria do not satisfy the requirements of SGMA and the GSP regulations.”
3. “The Subbasin’s land subsidence sustainable management criteria do not satisfy the requirements of SGMA.”

RESPONSE TO DWR DEFICIENCY #1

“The GSPs do not establish undesirable results that are consistent for the entire Subbasin.”

- ✓ **Consistent definitions and criteria for undesirable results for each applicable Sustainability Indicator.**
- ✓ **Comprehensive well inventory.**
- ✓ **Critical infrastructure definition and mapping.**
- ✓ **GSAAs are notified when there is a reported MT exceedance.**

RESPONSE TO DWR DEFICIENCY #2

“The Subbasin’s chronic lowering of groundwater levels sustainable management criteria do not satisfy the requirements of SGMA and the GSP regulations.”

- ✓ **Consistent methodology to establish groundwater level sustainable management criteria.**
- ✓ **Well impacts analysis and “depletion of supply” calculation to estimate potential impacts to drinking water users.**
- ✓ **Two key policies established:**
 - ✓ **Subbasin-wide MT Exceedance Policy**
 - ✓ **Subbasin-wide Well Mitigation Program**

SUBBASIN MT EXCEEDANCE POLICY

- Triggers immediate GSA action in the event of a single MT exceedance

Step 1: Identification of Initial Exceedance and Investigation of Area

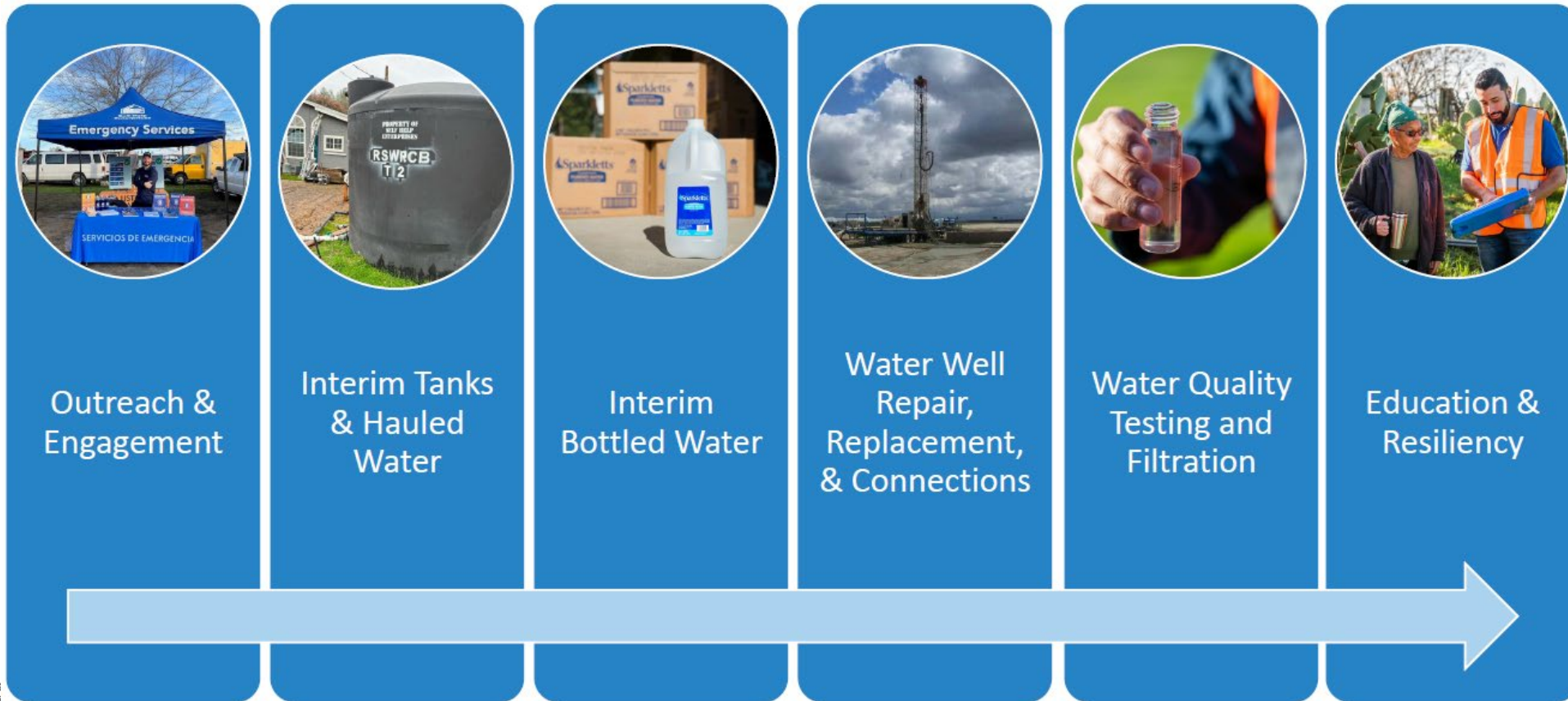
- Investigate area to determine if exceedance is isolated or systemic to a larger area
- Assess cause of exceedance (e.g., drought, activities within or outside of GSA authorities, operations in adjacent GSAs or basins)
- Provide copy of exceedance report to Subbasin GSAs

Step 2: Confer with Subbasin GSAs

- GSAs will consider implementing projects, management actions, or other response actions to prevent continued exceedance

SUBBASIN WELL MITIGATION PROGRAM

- Dewatered drinking water and small community wells will be addressed through a contract with **Self-Help Enterprises (SHE)**
- Water Quality will be addressed in partnership with **Kern Water Collaborative**
- Mitigation Programs currently under development, expected to be in-place by January 2025



RESPONSE TO DWR DEFICIENCY #3

“The Subbasin’s land subsidence sustainable management criteria do not satisfy the requirements of SGMA.”

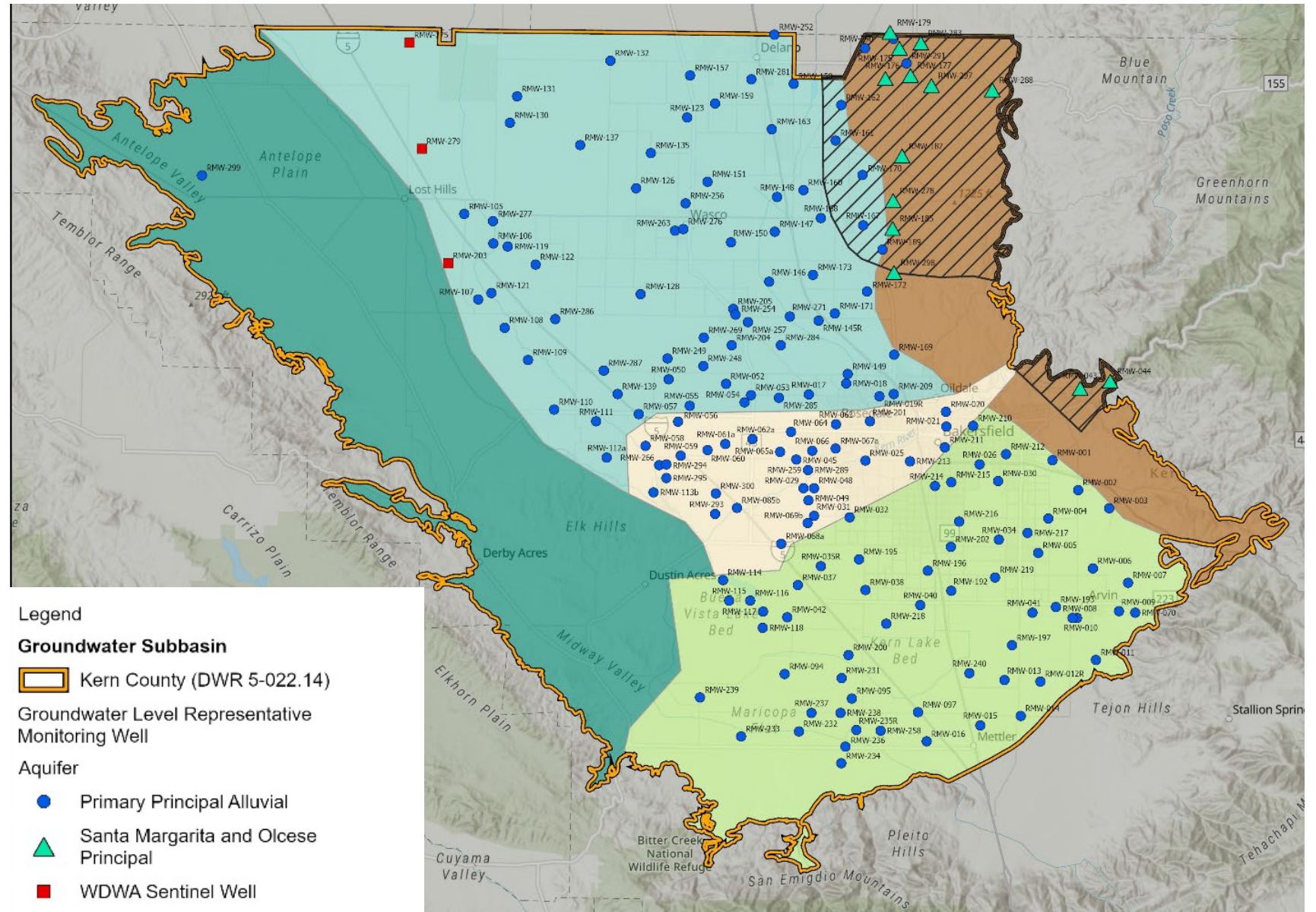
- ✓ **Consistent methodology to establish land subsidence sustainable management criteria both along Critical Infrastructure and across the Subbasin.**
- ✓ **Updated data and methodologies to differentiate between various causes of subsidence.**
- ✓ **Change in slope analysis to estimate subsidence impacts on critical infrastructure.**
- ✓ **Coordinated with key beneficial users of Regional Critical Infrastructure:**
 - ✓ **Friant Water Authority for the Friant-Kern Canal**
 - ✓ **California Aqueduct Subsidence Program (CASP) for the California Aqueduct**

OTHER PLAN UPDATES

- ✓ Identified six key water quality constituents
- ✓ Consistent methodology to establish water quality sustainable management criteria
- ✓ Assessed potential interconnected surface waters and groundwater dependent ecosystems
- ✓ Subbasin-wide representative monitoring networks for groundwater levels, groundwater quality, and land subsidence
- ✓ Subbasin projects and management actions focused on mitigation, coordination with regulatory programs, data gap filling, and white lands demand management
- ✓ Benefits anticipated from GSA-specific projects and management actions will overcome groundwater storage deficit and result in sustainable conditions by 2040

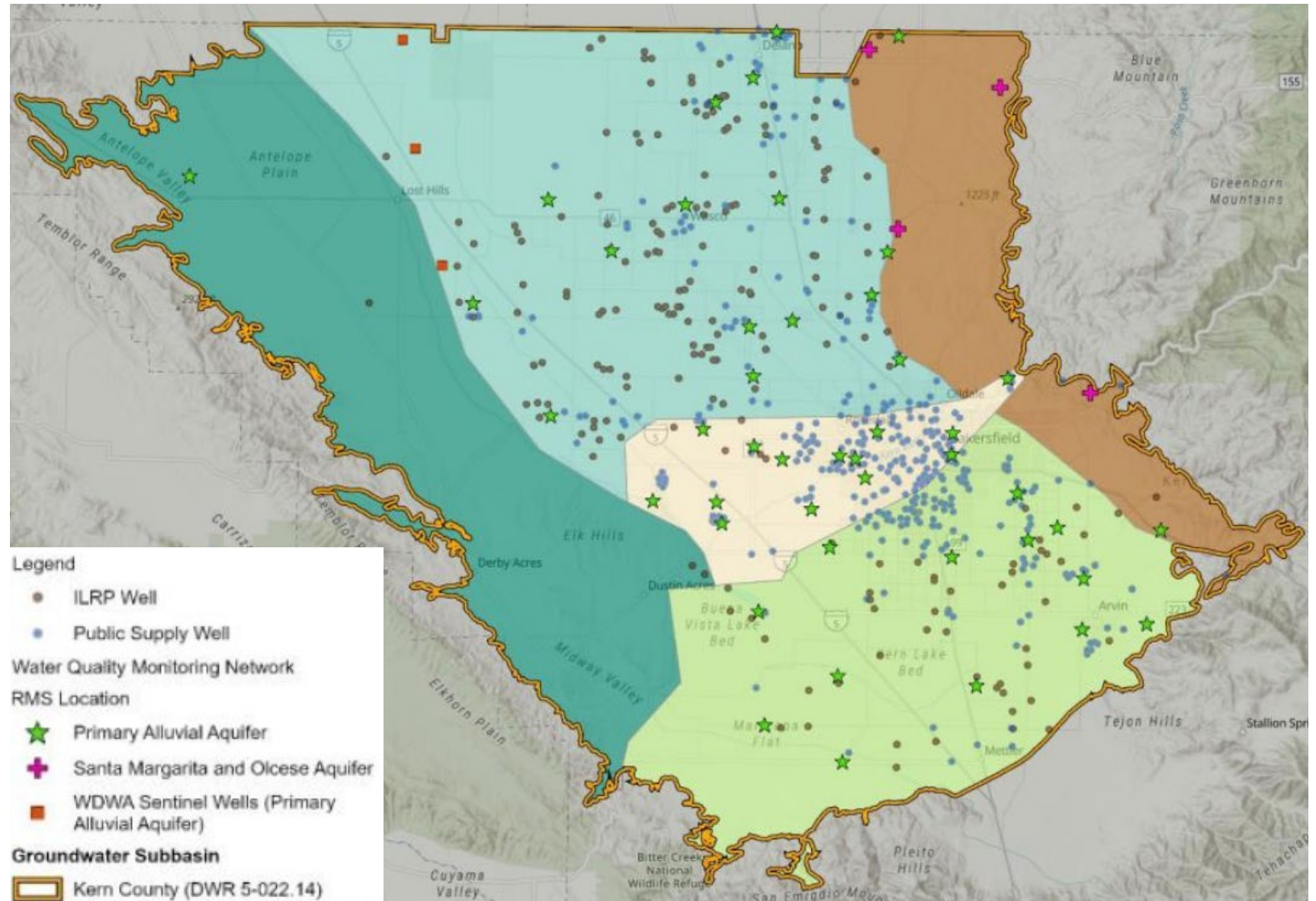
GROUNDWATER LEVEL MONITORING

- 184 wells
- GSAs establish access agreements with landowners
- GSAs will be collecting the depth to water data



GROUNDWATER QUALITY MONITORING

- Nitrate, nitrite, arsenic, total dissolved solids, uranium, 1,2,3-TCP
- 50+ wells:
 - GSAs establish access agreements with landowners
 - GSAs will be collecting the data
- Access public data:
 - Public supply wells
 - Irrigated lands monitoring wells



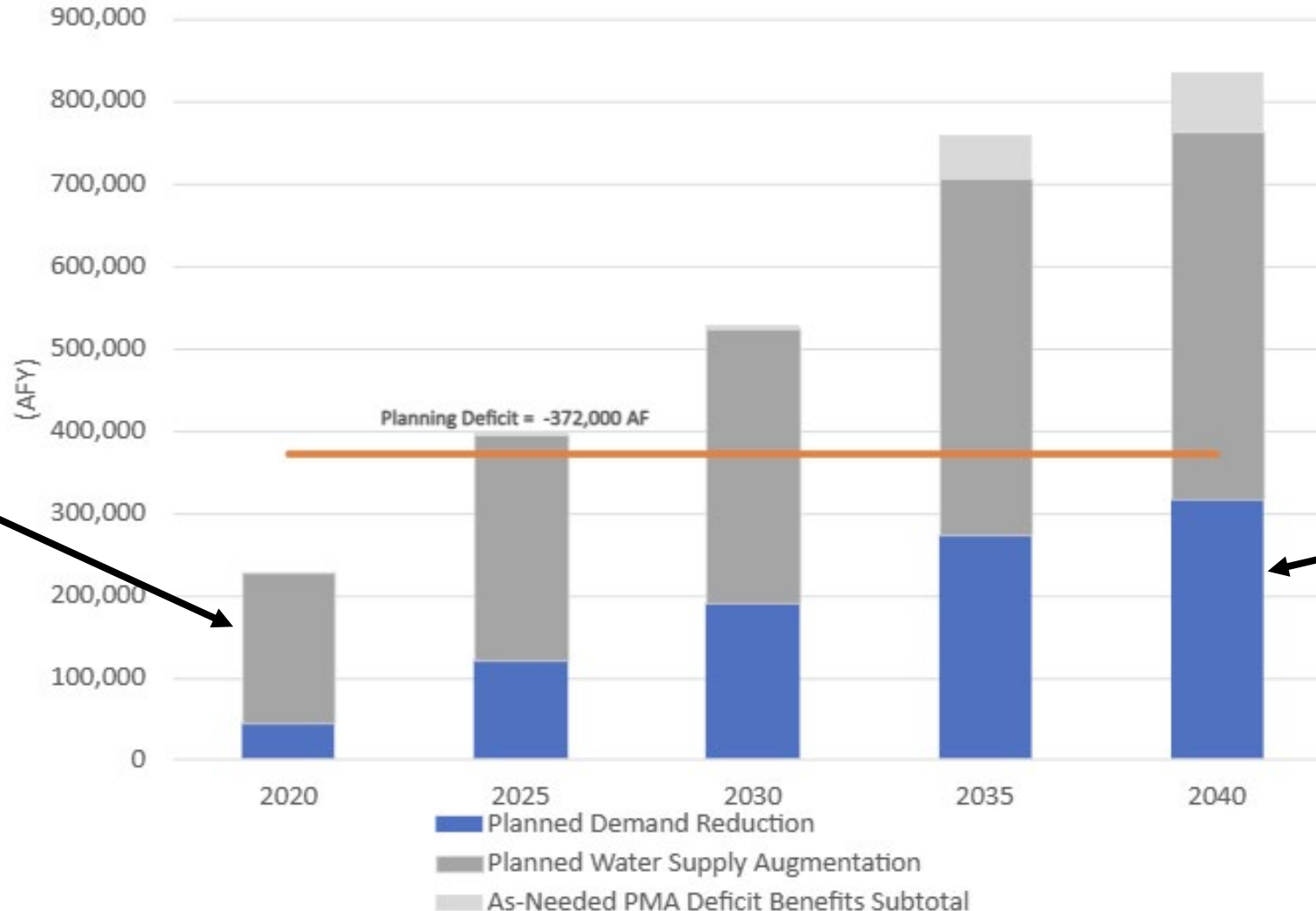
WATER BUDGETS TO ESTABLISH TARGETS FOR PROJECTS AND MANAGEMENT ACTIONS

- Total Subbasin storage deficit (overdraft) under climate change = 372,000 acre-feet per year
- Each GSA is assigned a target overdraft correction goal
- GSAs have identified individual projects and management actions and associated benefits to meet their goal

SUBBASIN PROJECTS AND MANAGEMENT ACTIONS

Projects: recharge basins, surface water delivery service area expansions, etc. have already been initiated.

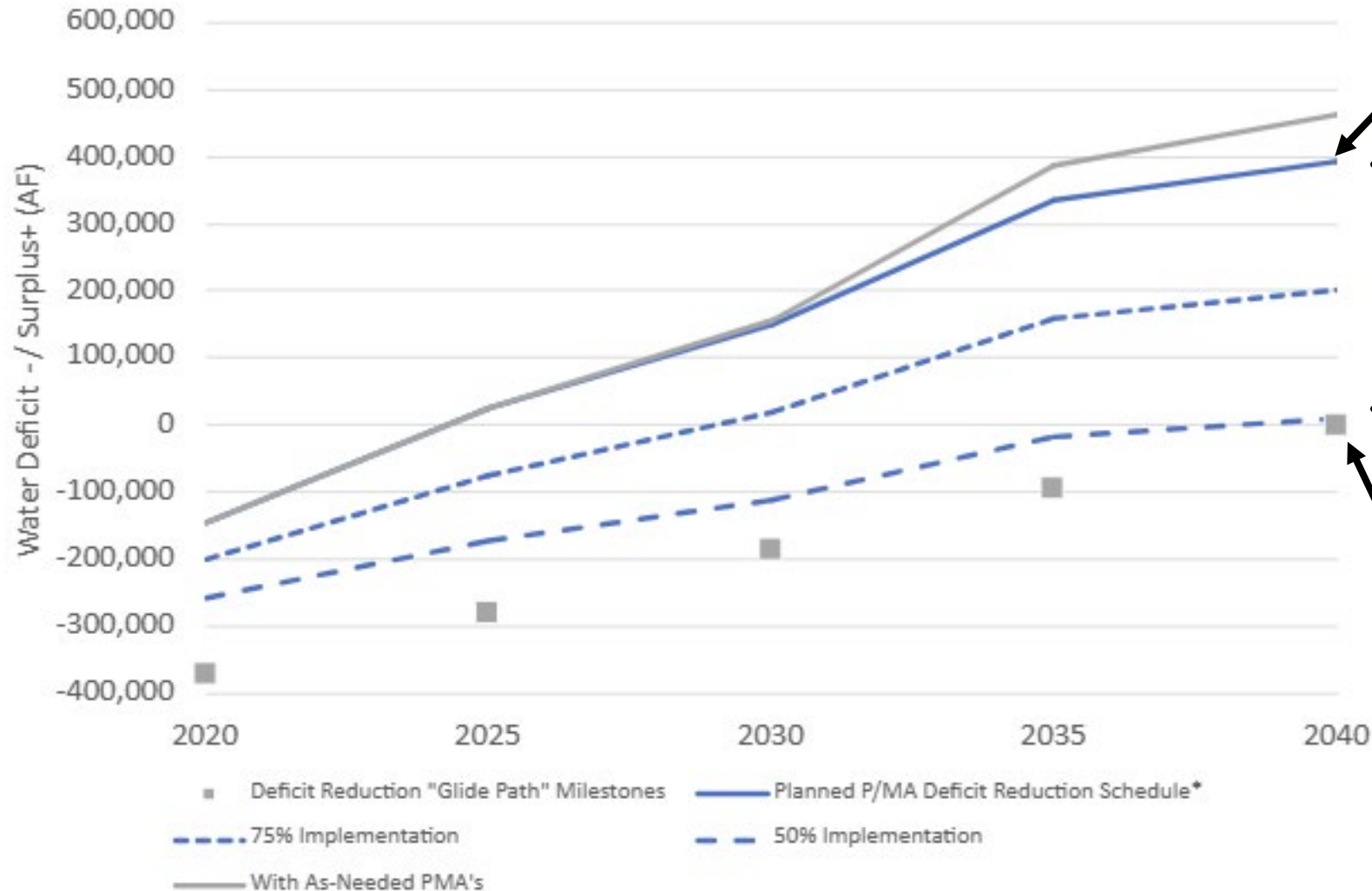
Kern County Subbasin P/MA Benefits by Category 354.44 (b)(1)



80% of the overdraft will be corrected by **demand reduction**: land conversion, water budgets, groundwater charges, pumping restrictions, etc.

SUBBASIN PROJECTS AND MANAGEMENT ACTIONS

Kern County Subbasin Projected-Future Scenerio
Deficit Reduction "Glide Path" 354.44 (b)(2)



Surplus of 400,000 AFY if all expected benefits are realized.

Safety factor to ensure Subbasin stays on track

GSA's will be in balance if half the expected benefits are realized.

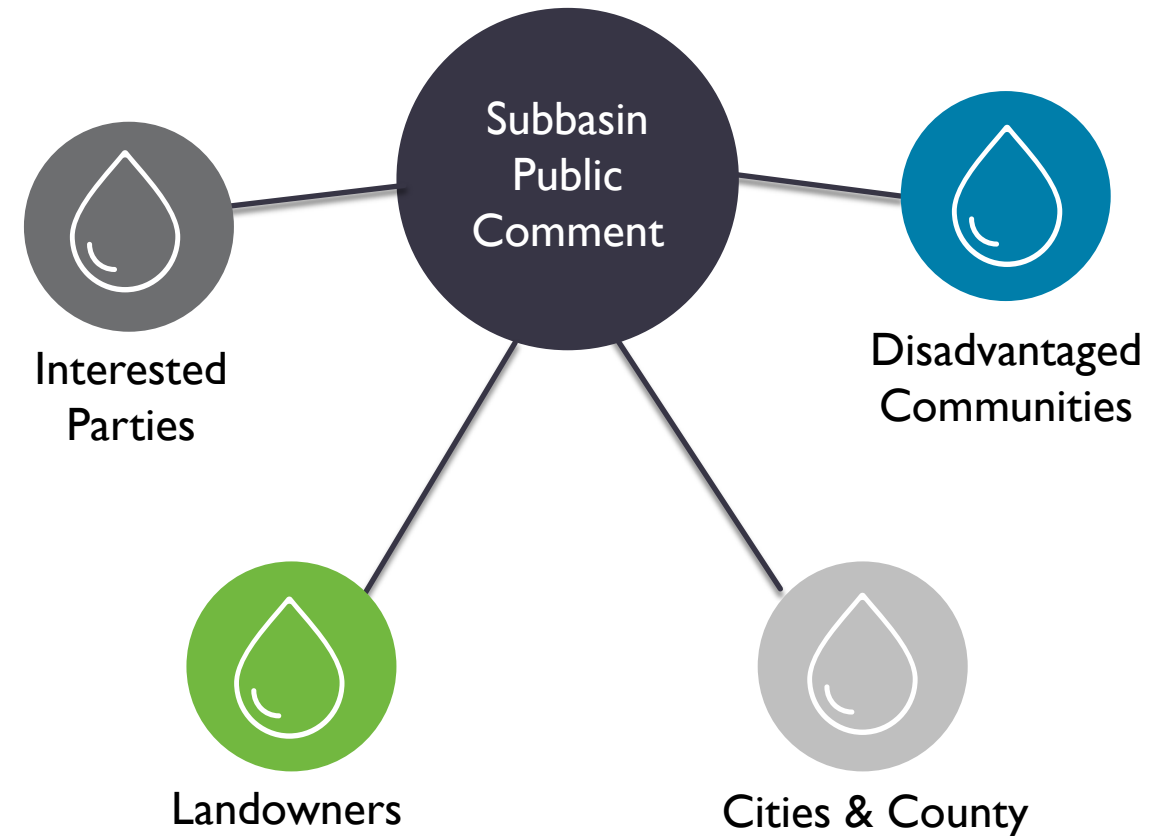
ANTICIPATED SCHEDULE LEADING TO PLAN ADOPTION*



**Subject to change*

NEXT STEPS

- Ongoing public outreach and engagement
- Receive and incorporate public comments
- Continued consultation with SWRCB and staff
- Prepare for Plan adoption in Winter 2024
- Formalize Partnerships



OPPORTUNITIES FOR PUBLIC COMMENT

- October 3rd Public Workshops
- 2024 Plan available online at: <https://kernngsp.com/>
- Email public comments to: comments@kernngsp.com
- December 2024 Public Hearing and Adoption
 - See above website and your water district/GSA websites for details



Scan me

How to Stay Informed:

- **Attend** GSA and GSA Group Meetings
- **Stay connected** through the Subbasin website, the Kern County Farm Bureau's listserv, and your local district or GSA
- **Get involved** by submitting public comment letters

QUESTIONS?



For follow up questions: Reach out to your local GSA

To find out which GSA represents your community: Contact the Subbasin Point of Contact Kristin Pittack at kpittack@rinconconsultants.com