Merced GSP Coordination Committee

Coordination Committee Meeting – March 21, 2022

Meeting will begin at 10 am – thank you for joining us!

Merced Irrigation-Urban GSA
Merced Subbasin GSA
Turner Island Water District GSA-1

Image courtesy: Veronica Adrover/UC Merced

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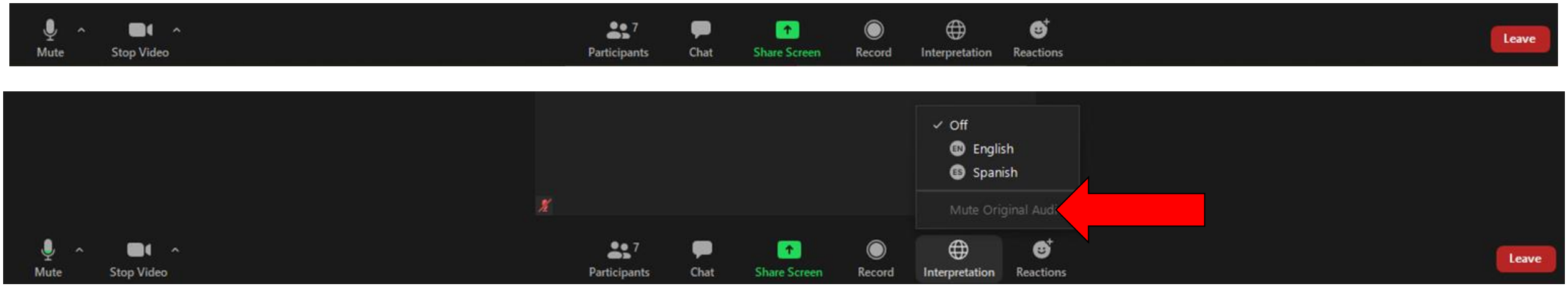
Welcome, Instructions for Zoom
Bienvenidos, Instrucciones para Zoom

We have two language audio channels available. English only speakers, please select English.

Si solamente habla español, debe seleccionar un canal de idioma



The meeting will have simultaneous interpreting, so you are welcome to comment in your native language.
La junta será interpretada simultáneamente, así que le invitamos a que haga comentarios en su lenguaje nativo.

Agenda

1. Call to Order and Welcome
2. Roll Call
3. State of Emergency Teleconference Findings
4. Approval of February 7, 2022 Meeting Minutes
5. Public Comment
6. Reports
   a) GSA Reports
   b) Current Basin Conditions
   c) Report on plan(s) to address changes to the Merced County Groundwater Ordinance.
7. Grant Updates
   a) SGM Implementation Planning and Projects Grant Update
   b) Prop 68 Round 3 Planning
   c) 2020 SGM Implementation Grant
   d) SDAC Grant
8. Water Year 2021 Annual Report
9. Comments on Groundwater Sustainability Plan by the Department of Water Resources
10. Next Steps and Adjourn

Image courtesy: Veronica Adrover/UC Merced

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Roll Call

Representative	GSA
Hicham ElTal	Merced Irrigation-Urban GSA
Stephanie Dietz	Merced Irrigation-Urban GSA
Justin Vinson	Merced Irrigation-Urban GSA
Daniel Chavez	Merced Irrigation-Urban GSA
Ken Elwin *(alternate)*	Merced Irrigation-Urban GSA
Mike Gallo	Merced Subbasin GSA
Nic Marchini	Merced Subbasin GSA
Eric Swenson	Merced Subbasin GSA
George Park *(alternate)*	Merced Subbasin GSA
Kel Mitchel	Turner Island Water District GSA #1
Tim Allan *(alternate)*	Turner Island Water District GSA #1

Image courtesy: Veronica Adrover/UC Merced

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State of Emergency Teleconference Findings

Image courtesy: Veronica Adrover/UC Merced

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State of Emergency Teleconference Findings

- All meetings of the Committee's legislative bodies are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963), so that any member of the public may attend, participate, and watch the Committee's legislative bodies conduct their business
- The Brown Act, Government Code section 54953(e), makes provisions for remote teleconferencing participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions
- Those conditions exist per the continuing State of Emergency due to the impacts of COVID-19.
- The Coordination Committee will consider the circumstances of the State of Emergency and determine whether to make the following findings that any of the circumstances exist per AB 361:
  - The State of Emergency continues to directly impact the ability of the members to meet safely in person and/or
  - State or Local Officials continue to impose or recommend measures to promote social distancing.

Image courtesy: Veronica Adrover/UC Merced

Approval of Meeting Minutes

Image courtesy: Veronica Adrover/UC Merced

Approval of Meeting Minutes

- February 7, 2022

Questions/Comments from Public:

If you would like to make a comment, please type the comment in the chat or raise your hand to request to be taken off mute

Image courtesy: Veronica Adrover/UC Merced

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Reports

Image courtesy: Veronica Adrover/UC Merced

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GSA Reports

- Updates from each GSA on activities they are undertaking in their own jurisdiction:
  - Merced Subbasin GSA
  - Merced Irrigation-Urban GSA
  - Turner Island Water District GSA #1

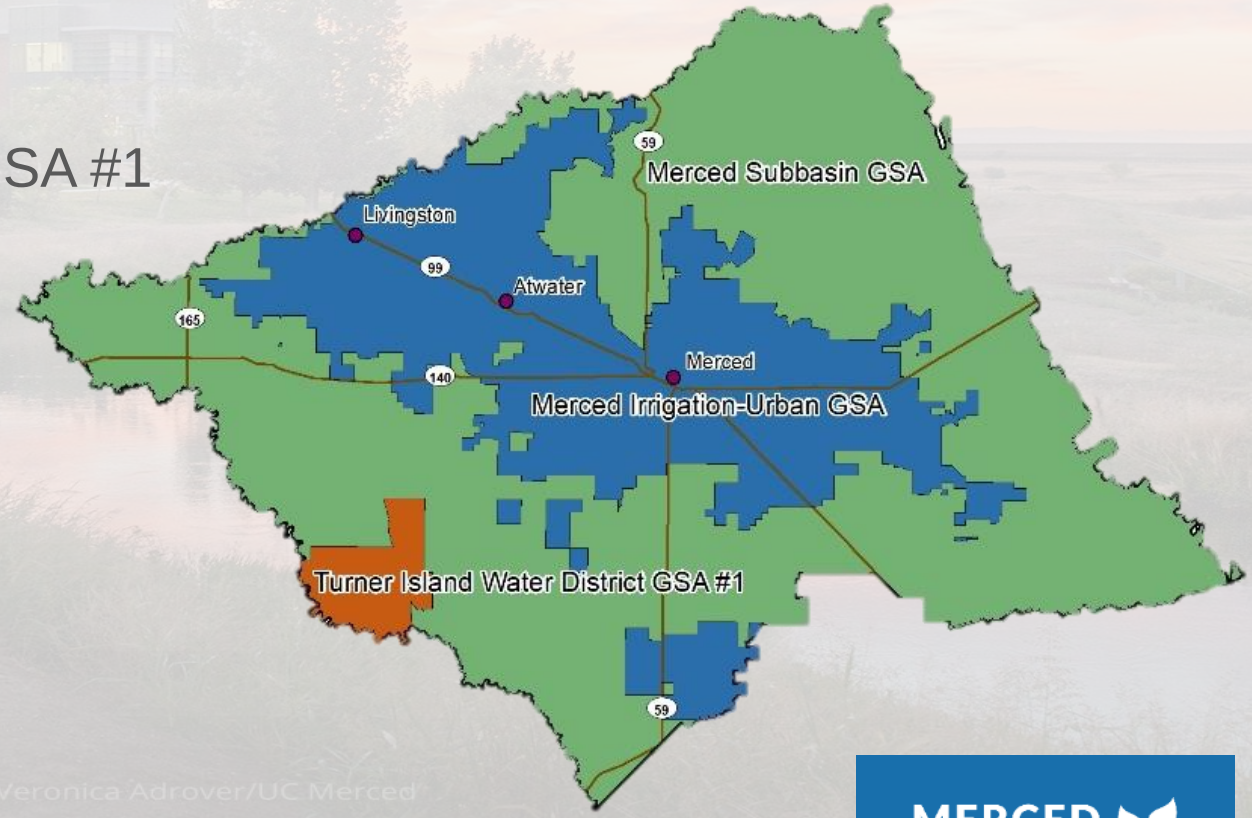

Image courtesy: Veronica Adrover/UC Merced

Current Basin Conditions

- Update to be provided at a future meeting

Report on plan(s) to address changes to the Merced County Groundwater Ordinance.

- Amended Groundwater Mining and Export Ordinance approved on February 8, 2022
- Changes will go into effect on May 1, 2022
- How it works:

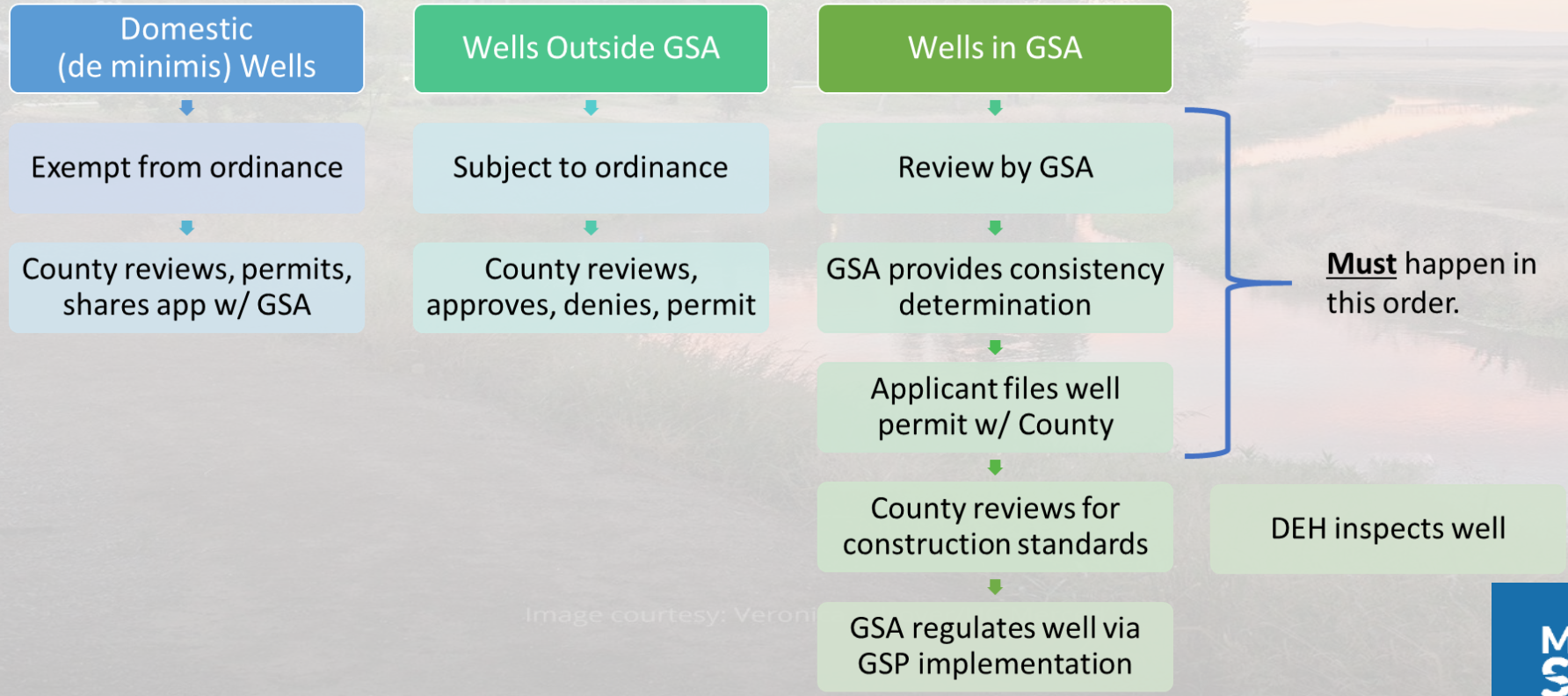

Image courtesy: Veron

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Grant Updates

Image courtesy: Veronica Adrover/UC Merced

Round 1 SGM Implementation Planning and Projects Grant Update

- DWR has shared with the GSAs that the full $7.6 million is likely to be awarded and the projects were considered eligible
- Next step: DWR is going to take a first cut at the scope, then it will be available for GSAs & project proponent edits

Project	Requested Grant Amount
Component 1: Grant Administration	$ 100,000
Component 2: LeGrand-Athlone Water District Intertie Canal - Phase 2	$ 1,000,000
Component 3: Merced Subbasin Integrated Managed Aquifer Recharge Evaluation Tool (MercedMAR)	$ 725,000
Component 4: Vander Dussen Subsidence Priority Area Flood-MAR Project	$ 798,735
Component 5: Vander Woude Storage Reservoir	$ 300,000
Component 6: Filling Data Gaps Identified in Data Gaps Plan	$ 400,000
Component 7: Amsterdam Water District Surface Water Conveyance and Recharge Project	$ 100,000
Component 8: GSP Project 31: Crocker Dam Modification	$ 1,500,000
Component 9: G Ranch Groundwater Recharge, Habitat Enhancement & Floodplain Expansion Project - Planning	$ 250,000
Component 10: Merquin County Water District (MCWD) Sustainable Yield Management Plan and Plan Implementation	$ 66,000
Component 11: Purdy Project (E. Purdy, W. Purdy, and Kevin Recharge Basins) (Project No. 38)	$ 110,400
Component 12: Purdy Project (East Pike Recharge Basin) (Project No. 37)	$ 73,750
Component 13: Buchanan Hollow Mutual Water Company Floodwater Recharge Project	$ 26,000
Component 14: G Ranch Groundwater Recharge, Habitat Enhancement & Floodplain Expansion Project - Implementation	$ 750,000
Component 15: Turner Island Water District (TIWD) Water Conservation	$ 1,000,000
Component 16: TIWD Shallow Well Drilling	$ 500,000
Grand Total	$ 7,699,885

Proposition 68 Round 3 Planning Grant

- Data Gaps Plan
  - First phase (Data Gaps Plan development) completed July 2021
  - GSA staff is coordinating on identifying locations in the Data Gaps Plan for well installation and existing wells to video log for second phase funding
  - Technical Support Services funding from DWR is also available for filling data gaps
- Remote Sensing Decision Support Tool
  - Ongoing development
  - Recently obtained preliminary copy of OpenET data
  - Working on processing and reviewing initial results

Image courtesy: Veronica Adrover/UC Merced

2020 SGM Implementation Grant

- LGAWD Intertie and Recharge Project
  - $4.2 million funded
  - Phase 1 – expected to begin construction in summer 2022
  - Project in entirety will create a new surface water supply by capturing and storing floodwaters that would otherwise be lost
  - Will construct ~2-mile canal to connect MID's Booster Lateral 3 to Dutchman Creek and 10-acre groundwater recharge basin in Le Grand
- El Nido Conveyance System Improvements
  - $764,000 funded
  - Conveyance improvements at four existing pipelines in MID's El Nido Conveyance System to allow more surface water to be diverted from Mariposa Creek to the El Nido Area (Underrepresented Community suffering from declining GW levels and subsidence)
  - Survey and design work began August 2021
  - Construction improvements began January 2022; expected to conclude March 2022

Image courtesy: Veronica Adrover/UC Merced

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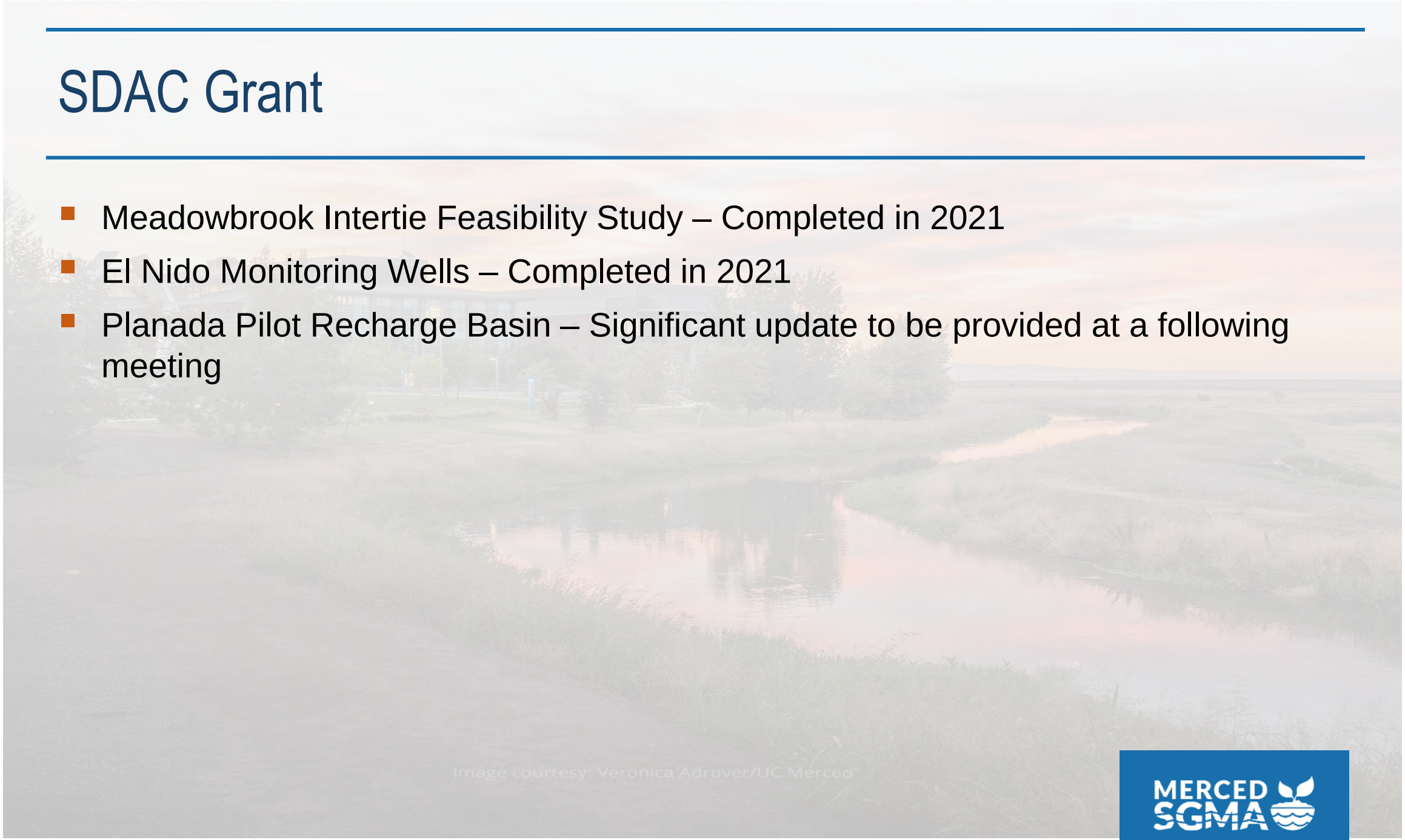
SDAC Grant

- Meadowbrook Intertie Feasibility Study – Completed in 2021
- El Nido Monitoring Wells – Completed in 2021
- Planada Pilot Recharge Basin – Significant update to be provided at a following meeting



Water Year 2021 Annual Report

Image courtesy: Veronica Adrover/UC Merced

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The WY2021 GSP Annual Report was recently drafted

- SGMA requires annual reports on basin conditions and the status of plan implementation every April 1
- Completed independent of DWR's "incomplete" determination
- Have to report both on:
  - **Basin Conditions**
    - Model update
    - Pumping and surface water diversions
    - Levels, storage, quality, subsidence
  - **Implementation Status**
    - Projects & Management Actions
    - Grant funding
    - Other support activities

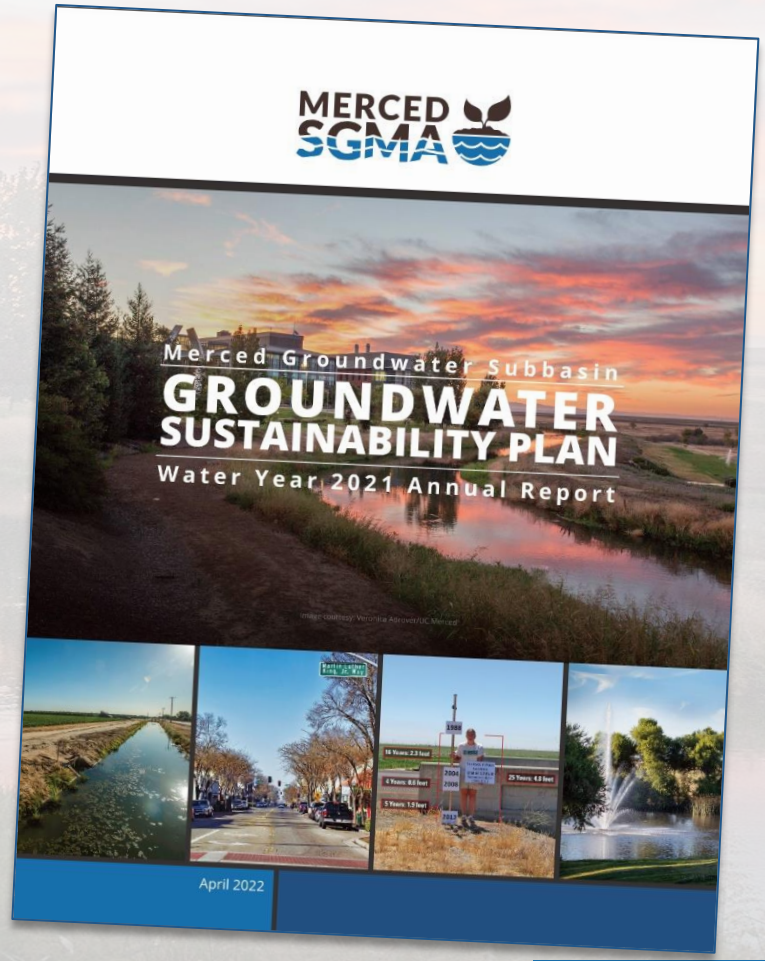

Image courtesy: Veronica Adrover/UC Merced

Sustainable Management Criteria Status

Sustainability Indicator	Minimum Threshold (MT)	Measurable Objective (MO)	Undesirable Result	WY 2021 Annual Report Status
Groundwater Levels	Depth of shallowest well in a 2-mile radius of each representative well or minimum pre-January 1, 2015, elevation	Projected average future groundwater level under sustainable yield modeling simulation	Greater than 25% of representative wells fall below MT in 2 consecutive wet, above normal, or below normal years[1]	No wells fell below MT. 11 of 21 wells fell below MO.
Groundwater Storage	Not applicable - not present and not likely to occur in the Subbasin due to the significant volumes of freshwater in storage			
Seawater Intrusion	Not applicable - not present and not likely to occur due to the distance between the Subbasin and the Pacific Ocean (and Sacramento-San Joaquin Delta)			
Degraded Water Quality	1,000 mg/L TDS	500 mg/L TDS	At least 25% of representative wells exceed MT for 2 consecutive years	Insufficient data to evaluate thresholds.
Land Subsidence	-0.75 ft/year	-0.25 ft/year	Exceedance of MT at 3 or more representative sites for 2 consecutive years	No sites exceeded MT. 2 of 4 sites exceeded MO.
Depletions of Interconnected Surface Waters	Groundwater levels used as a proxy for this sustainability indicator			

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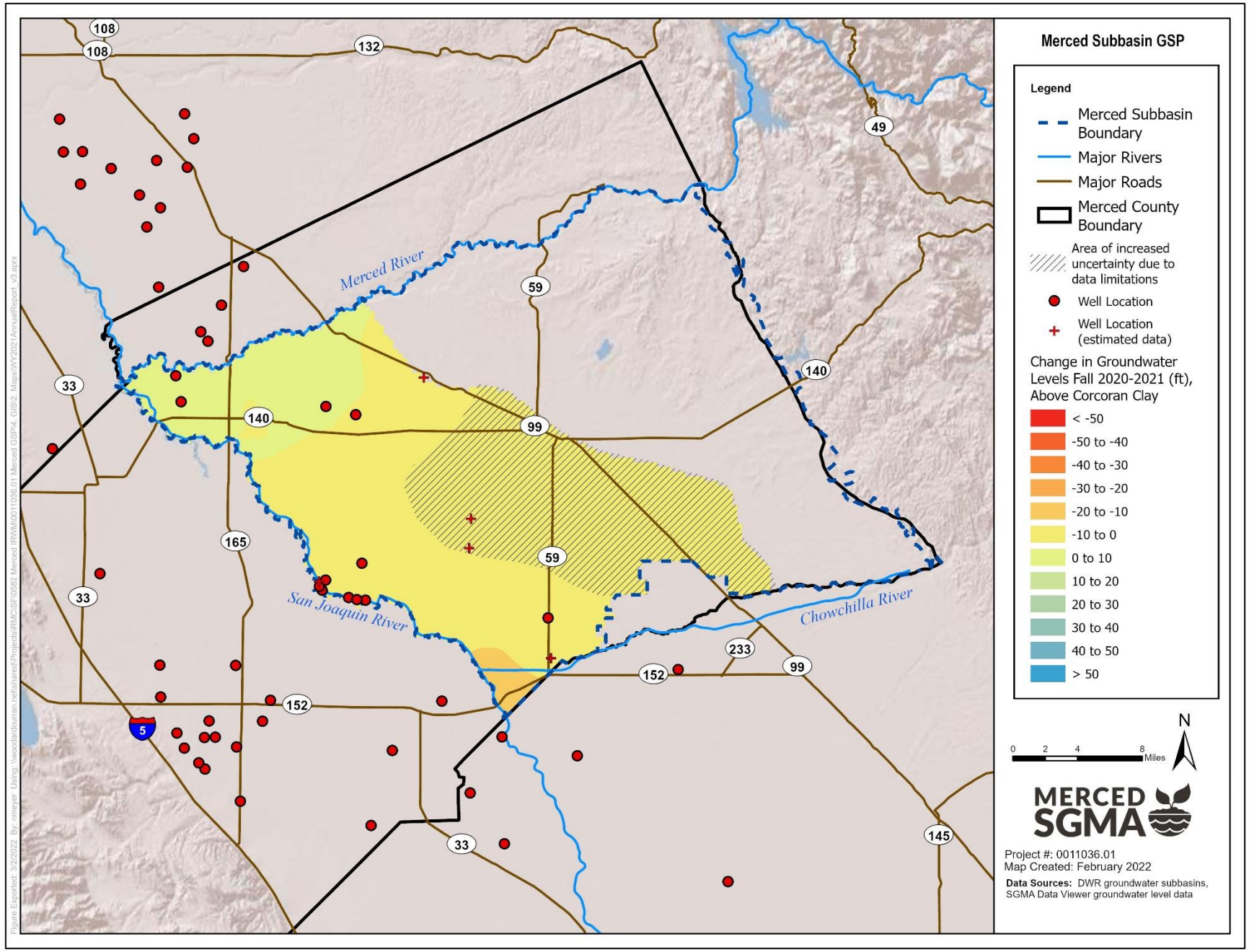
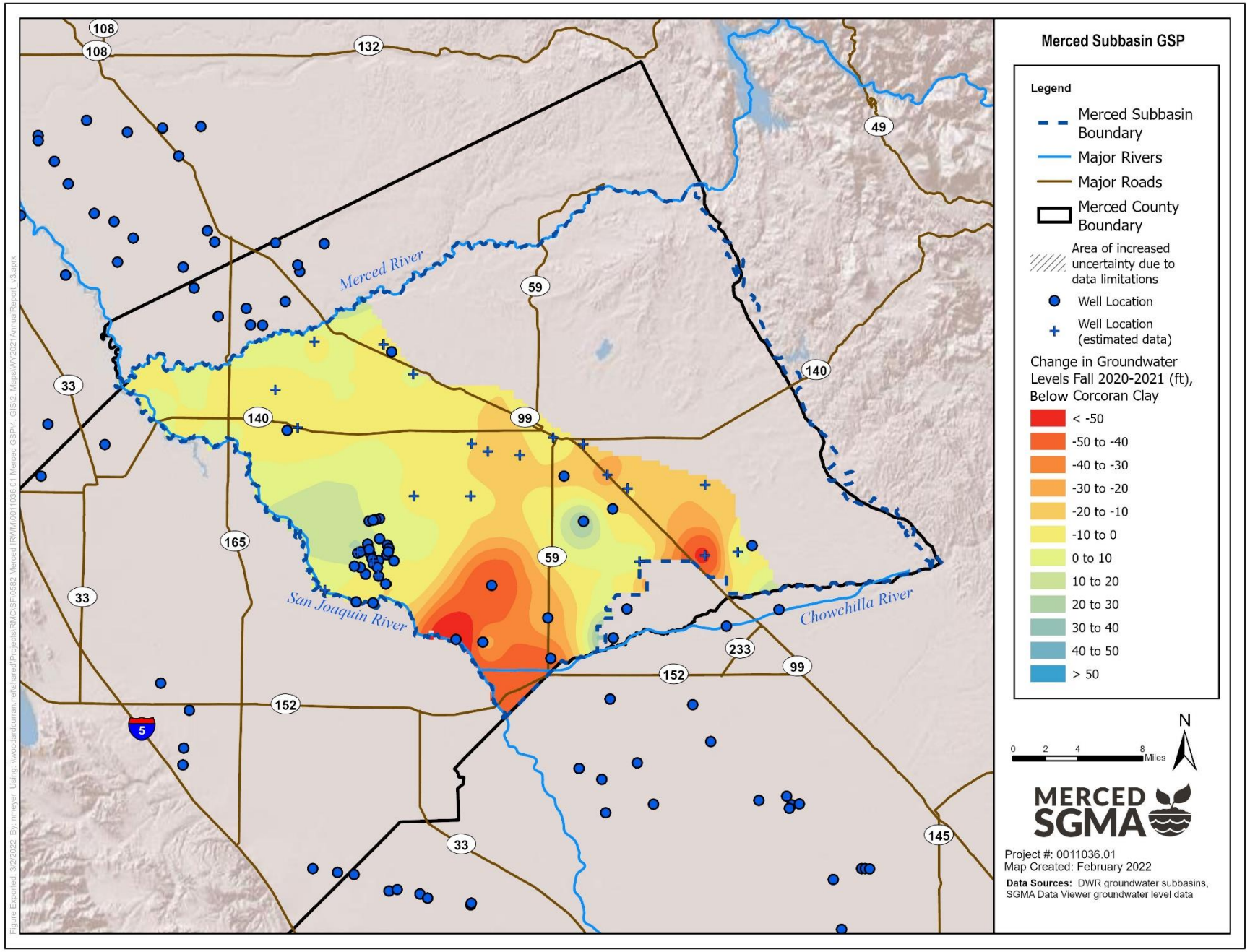
Change in Groundwater Levels

Above Corcoran Clay



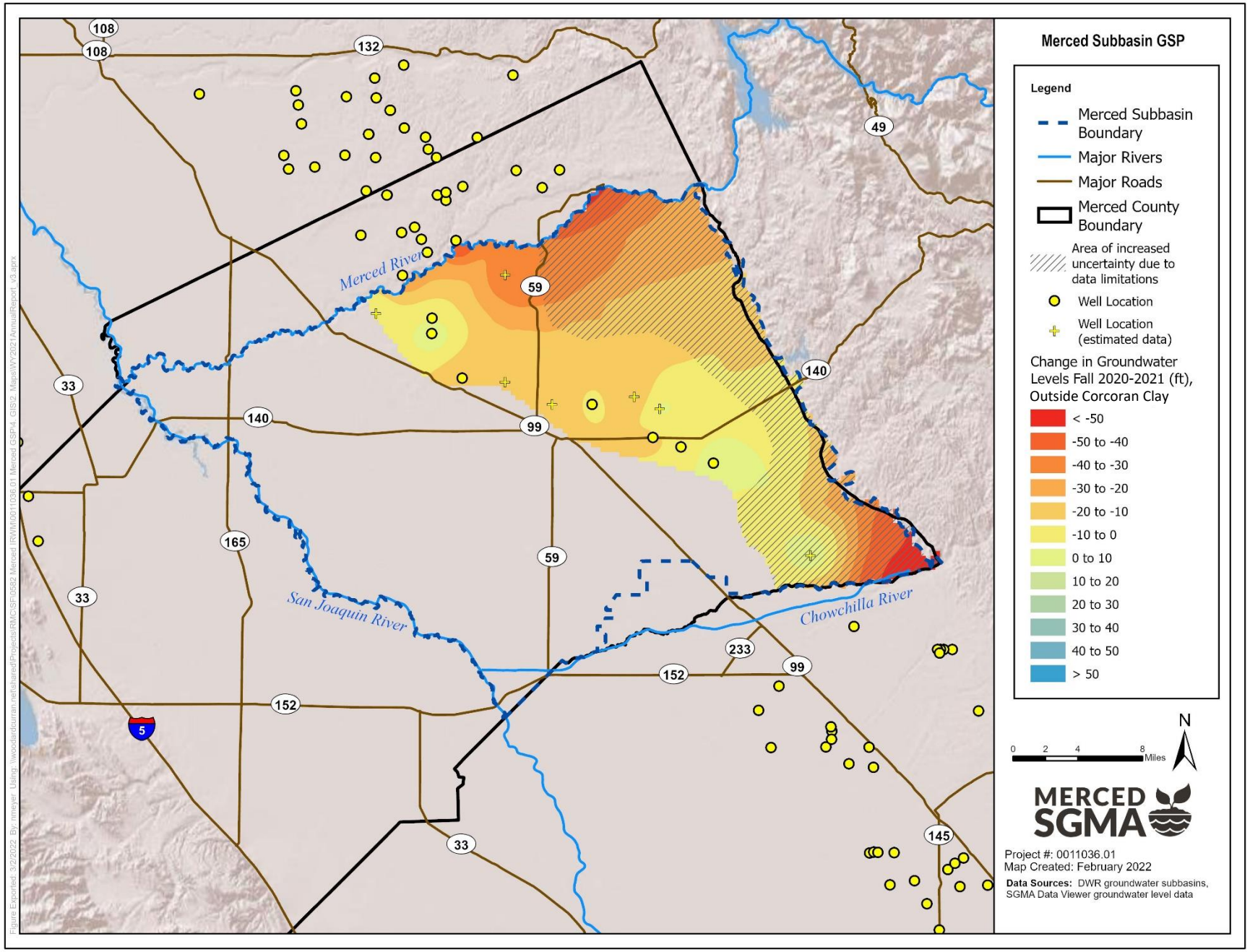
Change in Groundwater Levels

Below Corcoran Clay

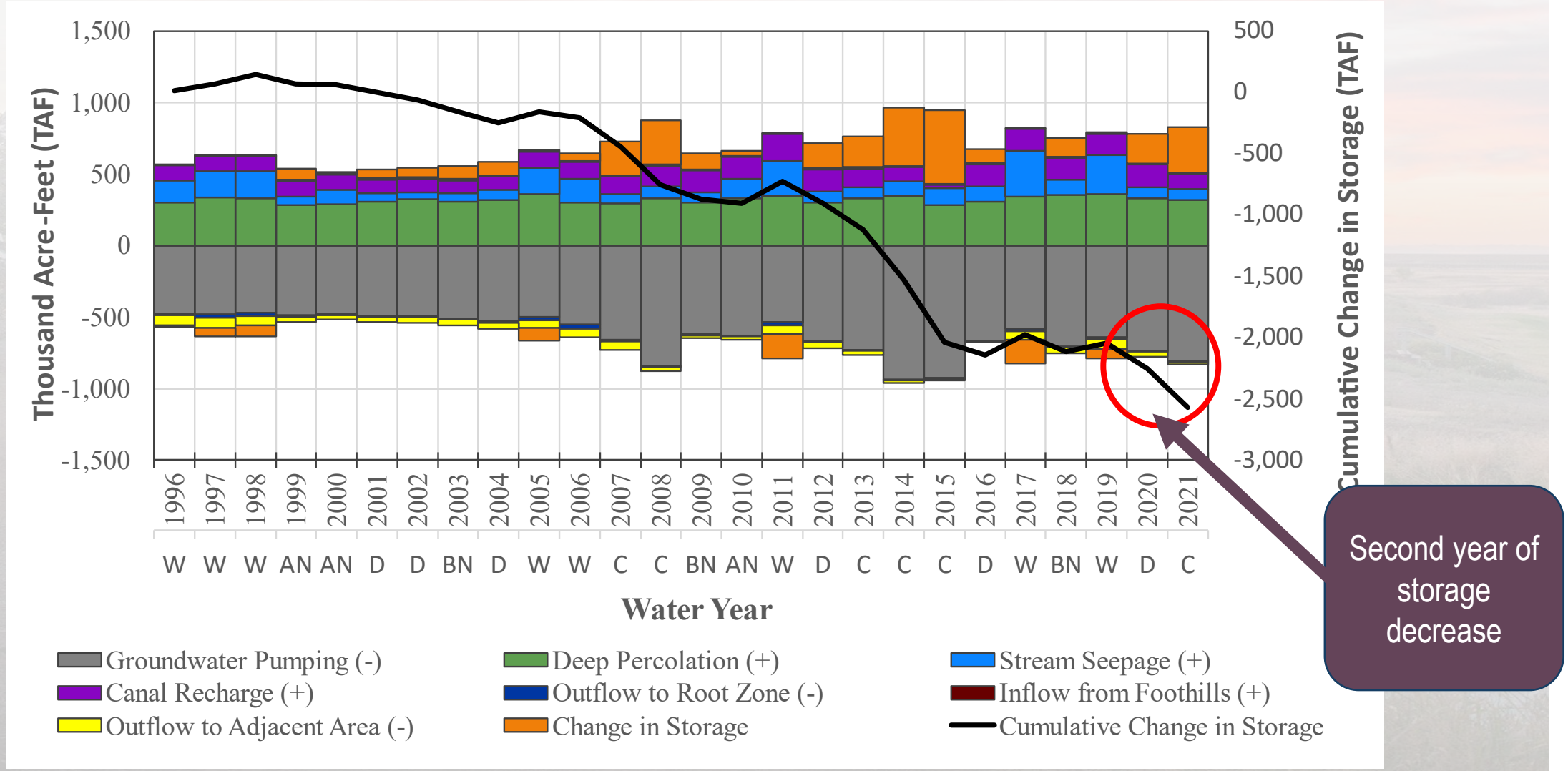


Change in Groundwater Levels

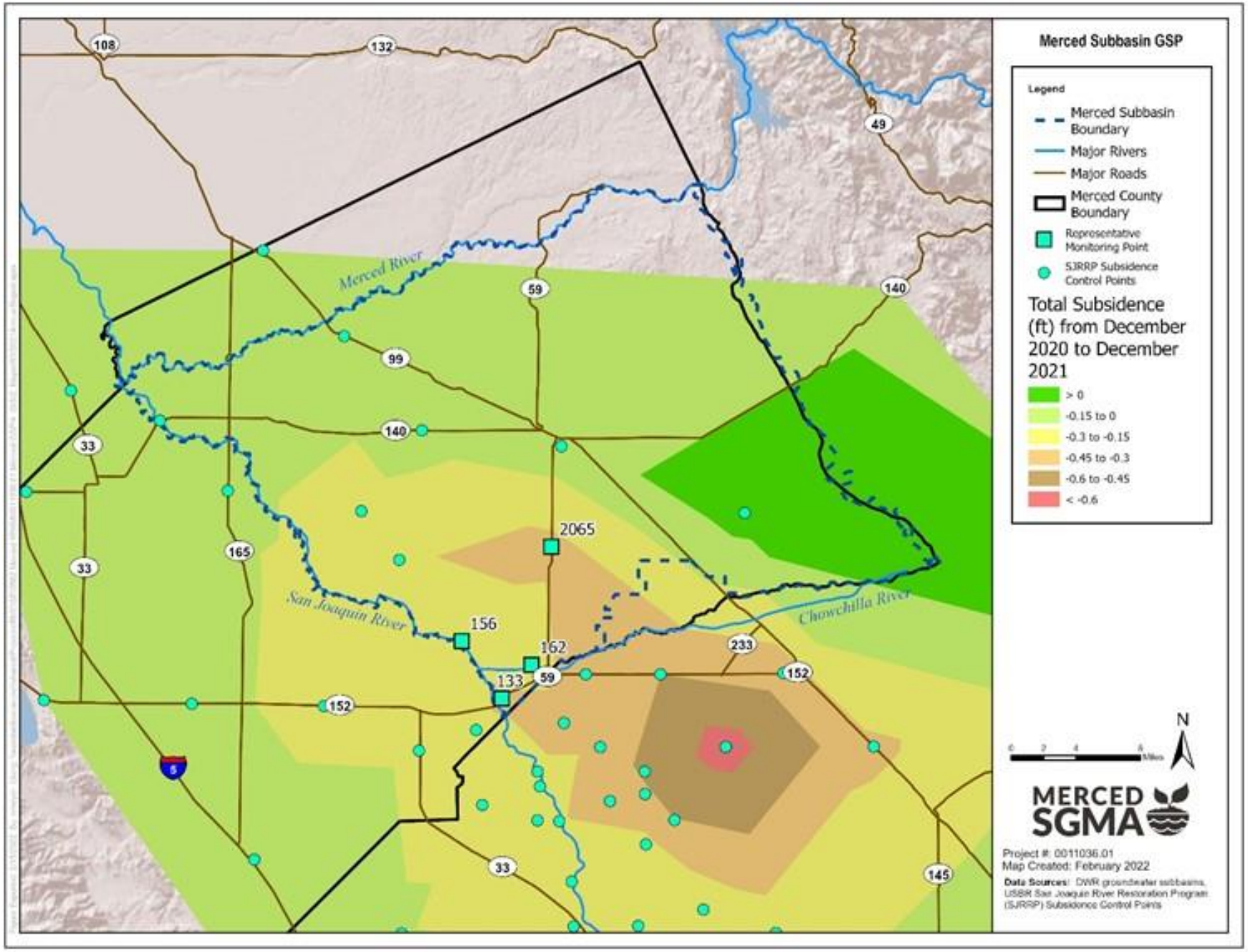
Outside Corcoran Clay



Change in Storage



Subsidence Dec 2020 – Dec 2021



Comments on Groundwater Sustainability Plan by the Department of Water Resources

Image courtesy: Veronica Adrover/UC Merced

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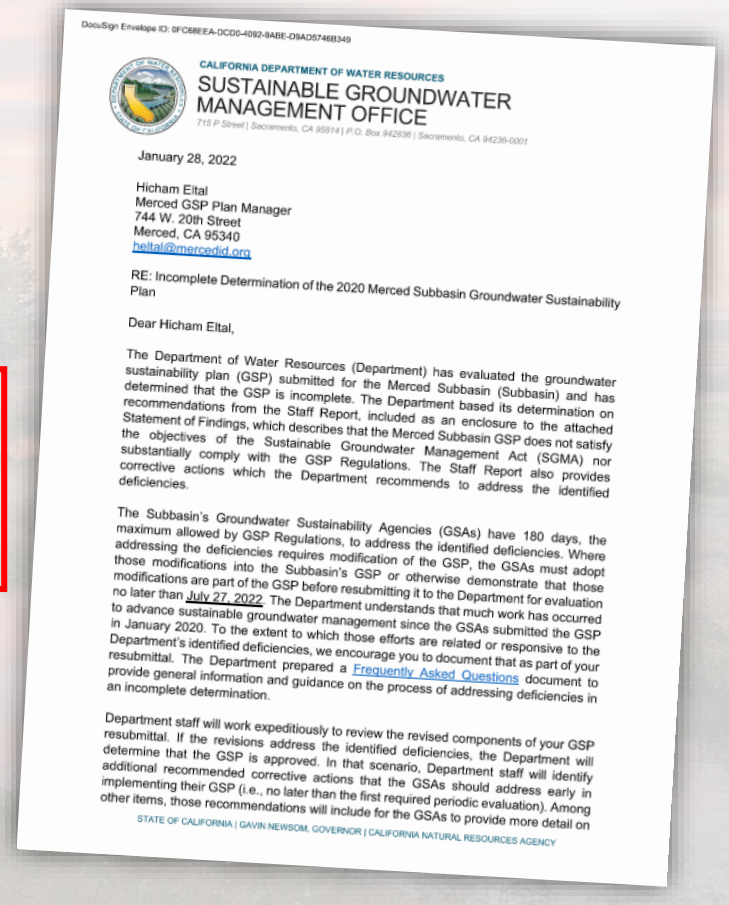
GSP Update Schedule

Week Starting	3/20	3/27	4/3	4/10	4/17	4/24	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26	7/3	7/10	7/17	7/24
GWL SMC updates																			
Subsidence SMC updates																			
Prepare updated GSP redline																			
GSA staff & CC review																			
Comments incorporation																			
Board review and adoption																			
CC/SAC Meetings																			
DWR Meetings																			
Submit updated GSP to DWR																			
Project Management																			

Image courtesy: Veronica Adrover/UC Merced

DWR GSP Comments Overview

1. The GSP lacks sufficient justification for identifying that undesirable results for chronic lowering of groundwater levels, subsidence, and depletion of interconnected surface waters can only occur in **consecutive non-dry water year types**
2. The GSP does not provide sufficient information to support the selection of **chronic lowering of groundwater levels** sustainable management criteria
3. The GSP does not provide sufficient information to support the selection of **land subsidence** sustainable management criteria



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CALIFORNIA DEPARTMENT OF WATER RESOURCES
SUSTAINABLE GROUNDWATER MANAGEMENT OFFICE
715 P Street | Sacramento, CA 95814 | P.O. Box 942836 | Sacramento, CA 94236-0001

January 28, 2022

Hicham Eltal
Merced GSP Plan Manager
744 W. 20th Street
Merced, CA 95340
heltal@mercedid.org

RE: Incomplete Determination of the 2020 Merced Subbasin Groundwater Sustainability Plan

Dear Hicham Eltal,

The Department of Water Resources (Department) has evaluated the groundwater sustainability plan (GSP) submitted for the Merced Subbasin (Subbasin) and has determined that the GSP is incomplete. The Department based its determination on recommendations from the Staff Report, included as an enclosure to the attached Statement of Findings, which describes that the Merced Subbasin GSP does not satisfy the objectives of the Sustainable Groundwater Management Act (SGMA) nor substantially comply with the GSP Regulations. The Staff Report also provides corrective actions which the Department recommends to address the identified deficiencies.

The Subbasin's Groundwater Sustainability Agencies (GSAs) have 180 days, the maximum allowed by GSP Regulations, to address the identified deficiencies. Where addressing the deficiencies requires modification of the GSP, the GSAs must adopt those modifications into the Subbasin's GSP or otherwise demonstrate that those modifications are part of the GSP before resubmitting it to the Department for evaluation no later than July 27, 2022. The Department understands that much work has occurred to advance sustainable groundwater management since the GSAs submitted the GSP in January 2020. To the extent to which those efforts are related or responsive to the Department's identified deficiencies, we encourage you to document that as part of your resubmittal. The Department prepared a Frequently Asked Questions document to provide general information and guidance on the process of addressing deficiencies in an incomplete determination.

Department staff will work expeditiously to review the revised components of your GSP resubmittal. If the revisions address the identified deficiencies, the Department will determine that the GSP is approved. In that scenario, Department staff will identify additional recommended corrective actions that the GSAs should address early in implementing their GSP (i.e., no later than the first required periodic evaluation). Among other items, those recommendations will include for the GSAs to provide more detail on

STATE OF CALIFORNIA | GAVIN NEWSOM, GOVERNOR | CALIFORNIA NATURAL RESOURCES AGENCY

Image courtesy: Veronica Adrover/UC Merced

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Sustainable Management Criteria in the GSP

- Minimum Threshold based on: “construction depth of the shallowest domestic well within a 2-mile radius.”
  - “In the case of one representative monitoring well (CASGEM ID 28392), recent elevation data indicate the shallowest domestic well may already have been dewatered. In this case, the minimum threshold was moved to match the minimum groundwater elevation recorded at that location prior to January 1, 2015.”
- Definition of Undesirable Results: “…when November groundwater levels at greater than 25% of representative monitoring wells fall below their minimum thresholds for two consecutive years ~~where both years are categorized hydrologically as below normal, above normal, or wet~~”

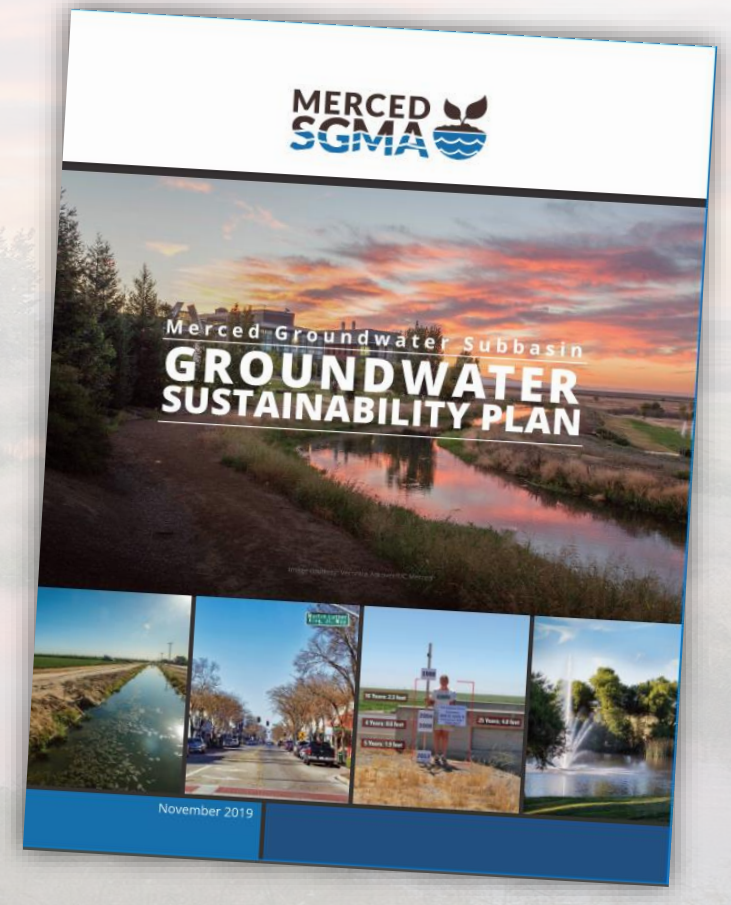

Image courtesy: Veronica Adrover/UC Merced

Options Being Evaluated

	Option 1: Fall 2015 groundwater levels	Option 2: Historical low	Option 3: Deepest of (a) shallowest domestic well + 10 feet or (b) historical low
Overall Assessment	Most protective (shallowest) Harder to implement Lowest risk of DWR disapproval	⟷	Least protective (deepest) More feasible to achieve Highest risk of DWR disapproval
Undesirable Results	Already experiencing undesirable results (GWLs currently below 2015)	On the verge of experiencing undesirable results (many historical lows are based on current GWLs)	Not currently experiencing undesirable results
Impact on Sustainable Yield	Lowers Sustainable Yield, likely increasing cutbacks	⟷	Closer to Sustainable Yield projected in GSP
Relation to Other Sustainability Indicators	Likely to be more in line with subsidence & water quality indicators	Likely to be more in line with subsidence & water quality indicators	Potentially inconsistent with subsidence management; additional effort required for water quality management.

Image courtesy: Veronica Adrover/UC Merced

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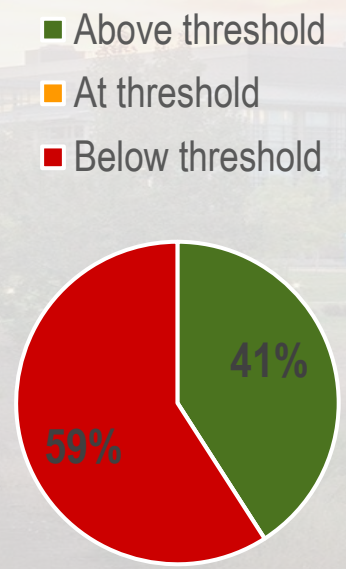
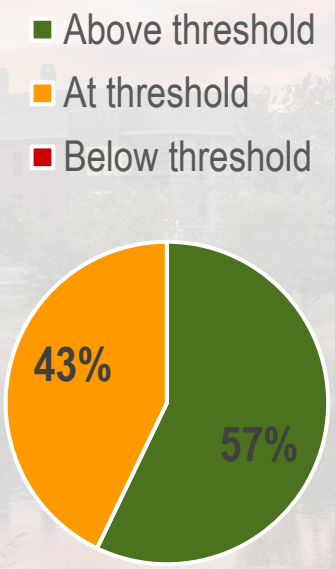
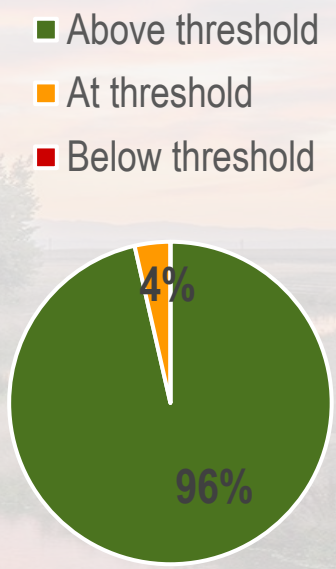
Where do we stand with Fall 2021 Groundwater Levels?



Minimum Threshold
Option 1
Fall 2015



Minimum Threshold
Option 2
Historical Low

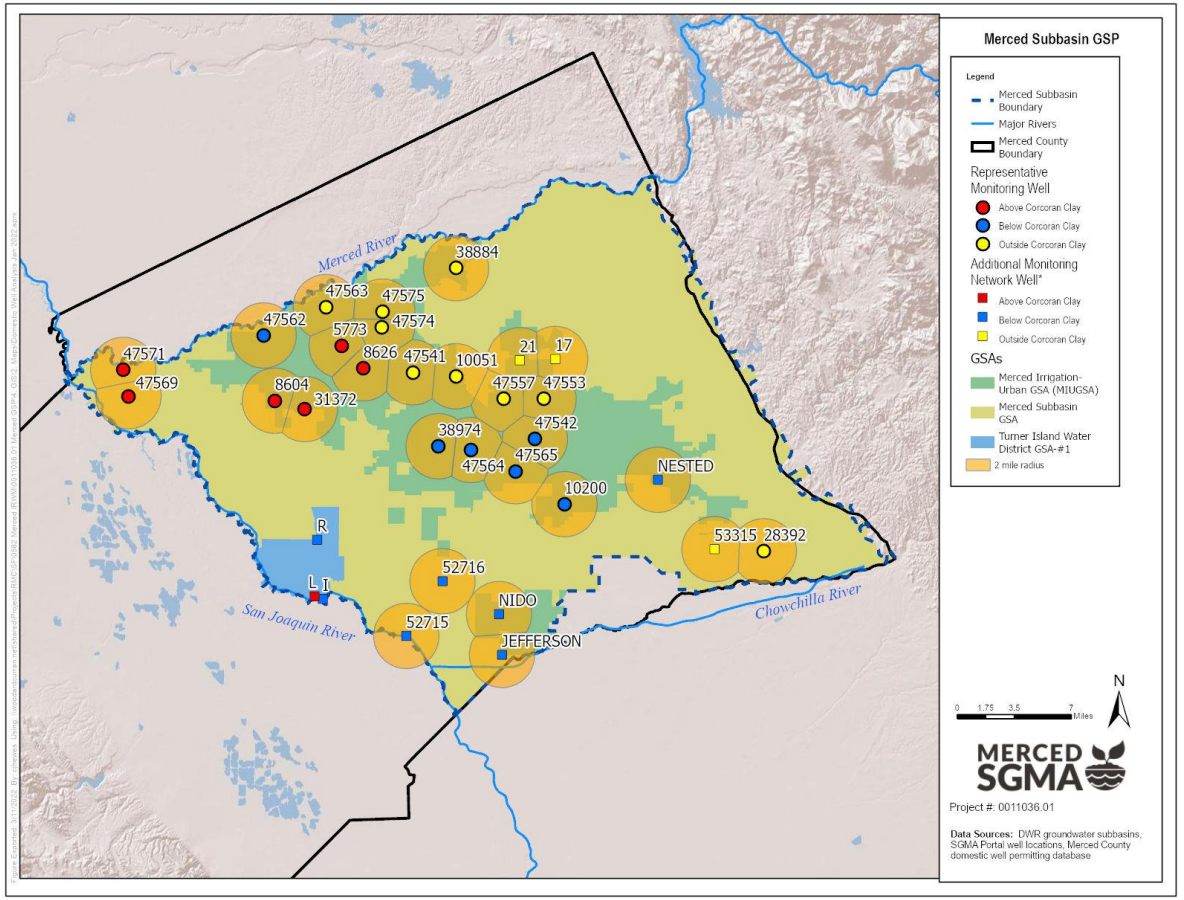


Minimum Threshold
Option 3
Historical Low /
Shallowest Domestic + 10 ft

Image courtesy: Veronica Adrover/UC Merced

Analysis Updates – shallowest domestic well

- Includes new domestic wells permitted through December 2021
- New 2-mile radius selection to avoid overlap
  - Monitoring network has been updated as well – some wells removed, others added
- Reviewed domestic well permit database and removed or updated a handful of records that were actually well destructions, locations replaced by another well, or updated with different well depth.
- Model results vertical adjustment (see next slide)



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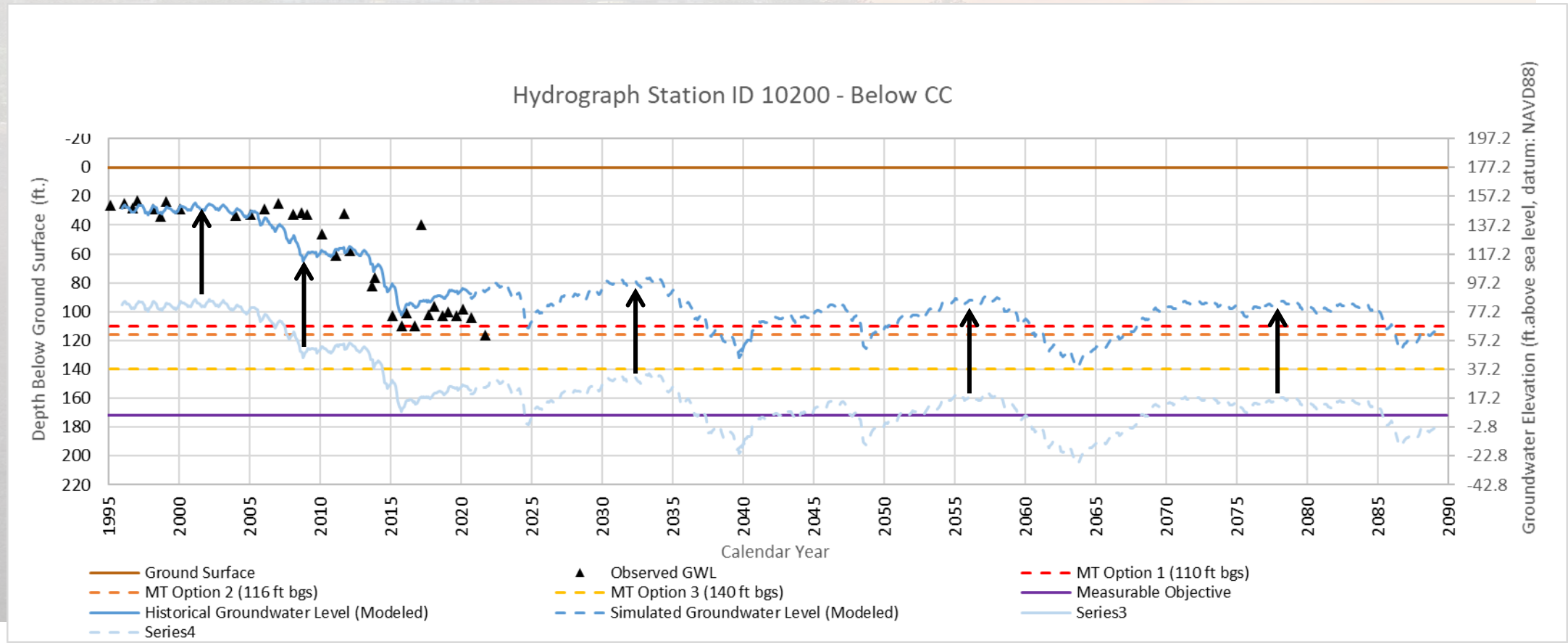
Model Results Vertical Adjustment

- Calculated average distance between observed levels and historical simulation model results
- Shifted future simulation up by same amount



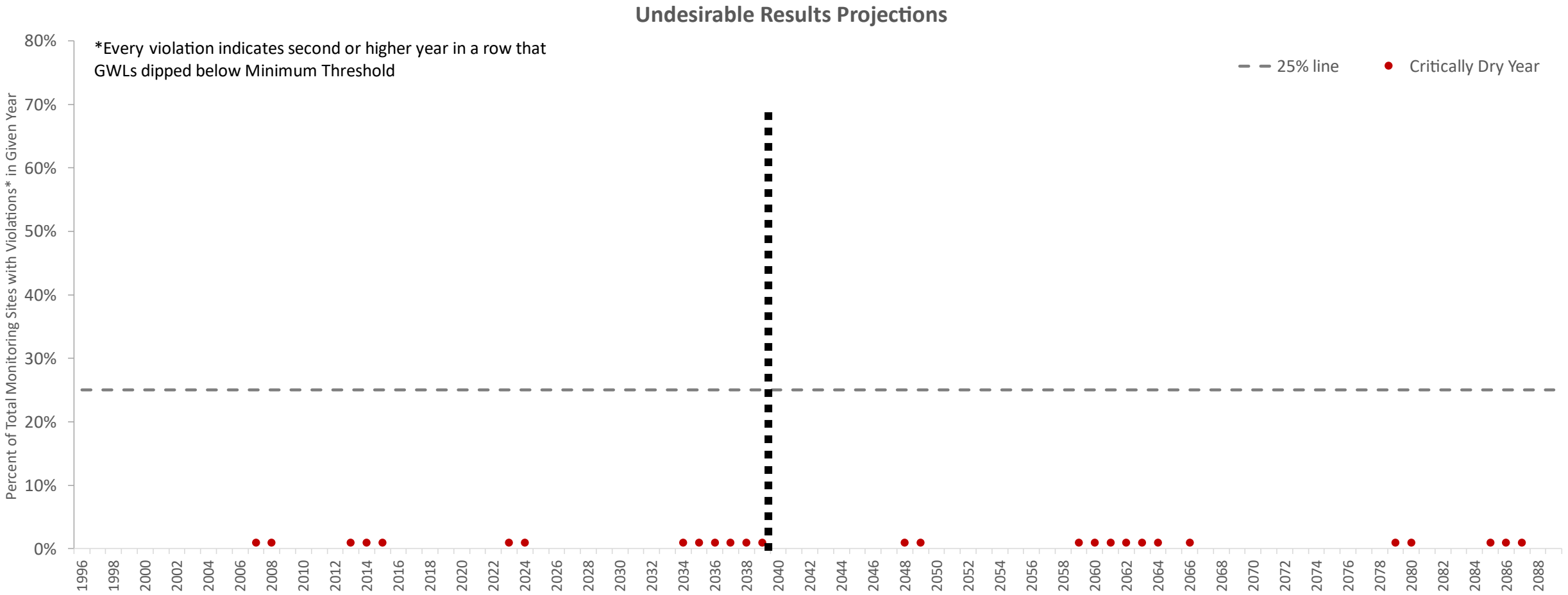
Undesirable Results Projections

- Management approach is based on pumping levels (or recharge volumes) that can avoid undesirable results
- Pumping levels developed based on modeling with the Merced WRM
- Modeling incorporates ramping down pumping to lower rates
  - Faster implementation and lower rates contribute to less likely Undesirable Results
- Iterative process – requiring appropriate input and assumptions

Image courtesy: Veronica Adrover/UC Merced

Undesirable Results Projections

"…when November groundwater levels at greater than 25% of representative monitoring wells fall below their minimum thresholds for two consecutive years ~~where both years are categorized hydrologically as below normal, above normal, or wet~~"



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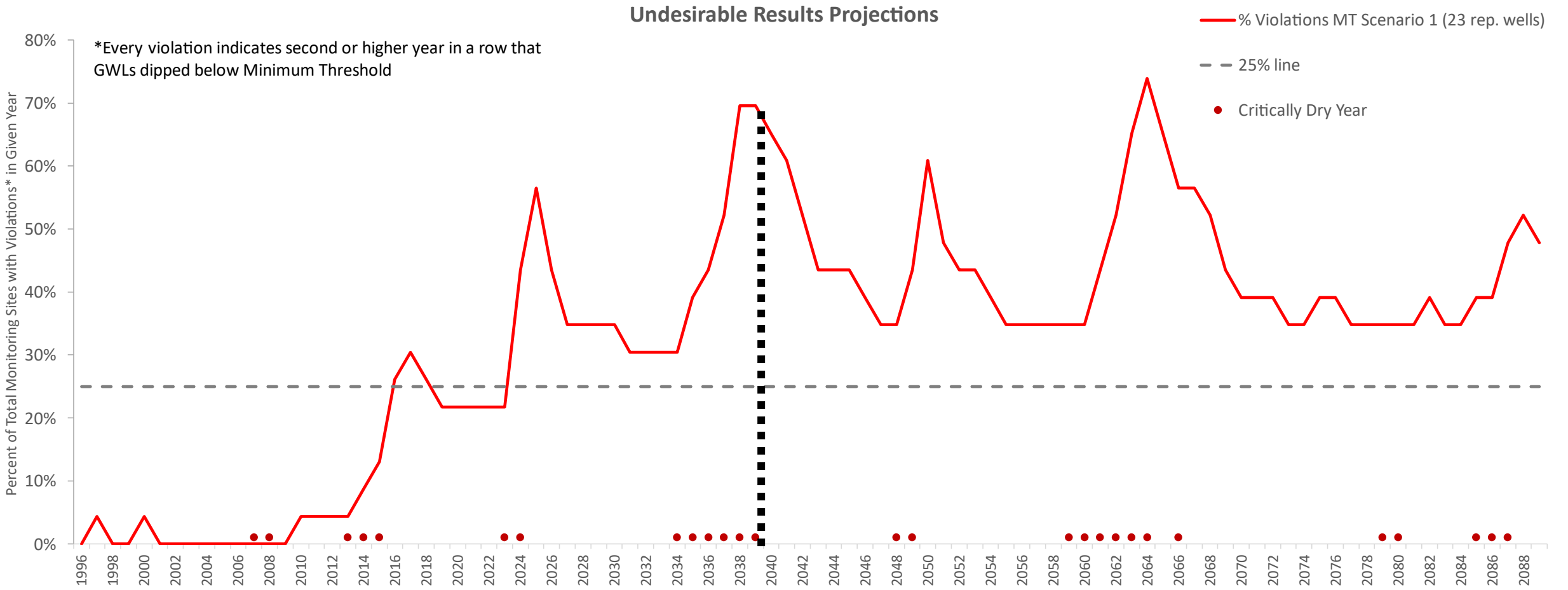

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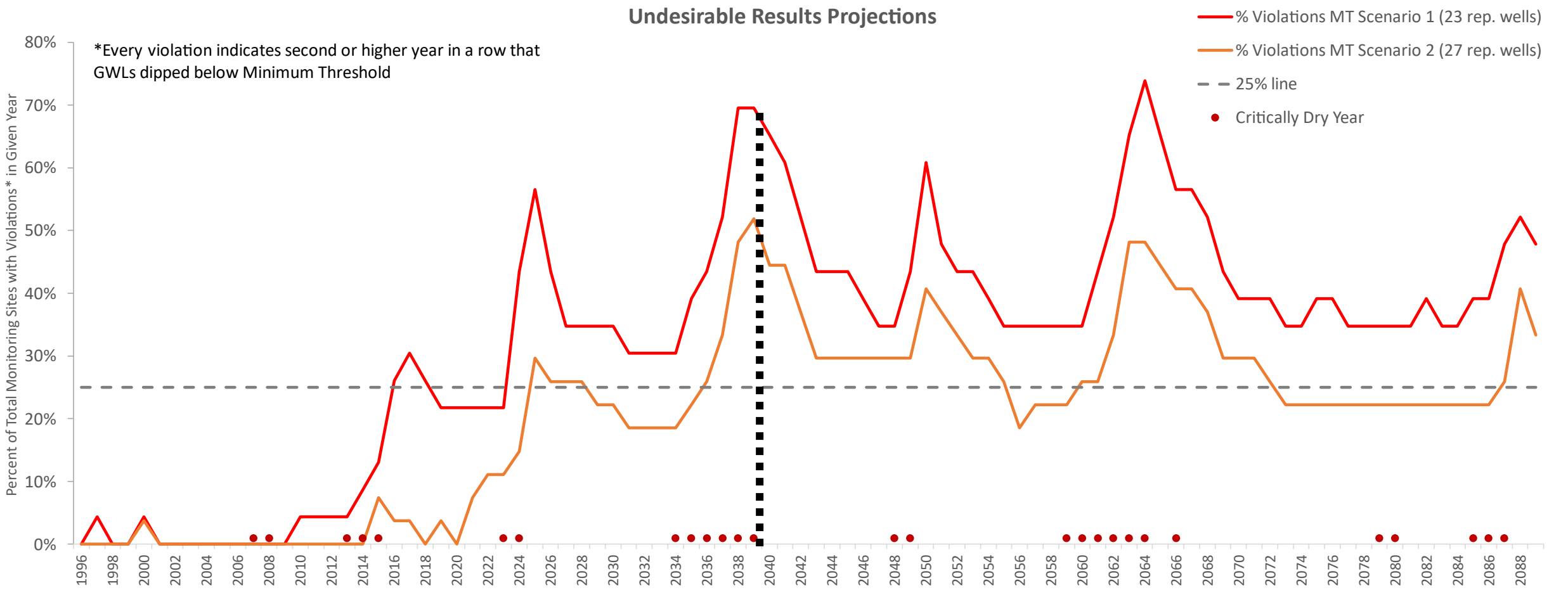

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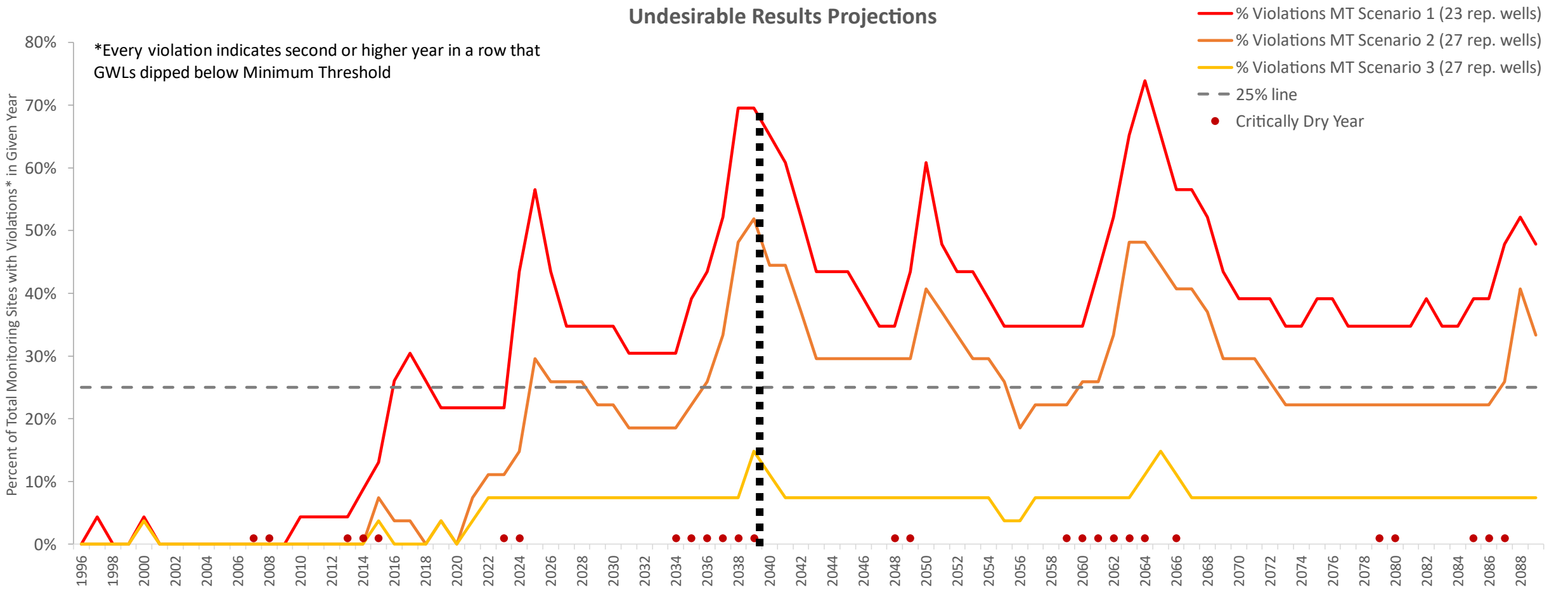

Image courtesy: Veronica Adrover/UC Merced

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Issues Being Considered

- Geographic distribution of pumping
  - Currently considering relatively uniform reductions in groundwater pumping
  - Investigating pumping reduction with some geographic variability
- Timing
  - Some wells exceed Minimum Thresholds only during severe multi-year droughts
  - Investigating if a secondary trigger-based reduction in pumping is beneficial to reduce impacts
- Above Corcoran thresholds
  - Subsidence management depends partially on moving pumping above the Corcoran Clay
  - Minimum Thresholds based on historical conditions will require recharge activities to offset increased pumping, maintaining historical shallow groundwater levels and depletions

Image courtesy: Veronica Adrover/UC Merced

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Next Steps

Image courtesy: Veronica Adrover/UC Merced

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What's coming up next?

- Stakeholder Advisory Committee meeting today at 1PM
- Adjourn to next meeting: April 25, 2022

Merced GSP Coordination Committee

Coordination Committee Meeting – March 21, 2022

Merced Irrigation-Urban GSA
Merced Subbasin GSA
Turner Island Water District GSA-1

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