
Merced GSP Stakeholder Advisory Committee

Stakeholder Advisory Committee Meeting – March 21, 2022

Image courtesy: Veronica Adrover/UC Merced

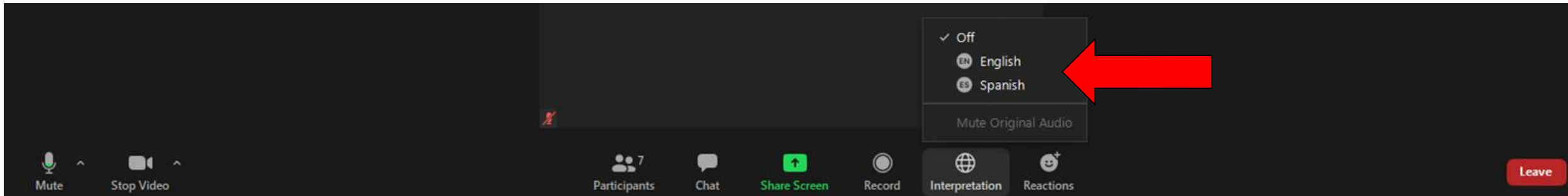
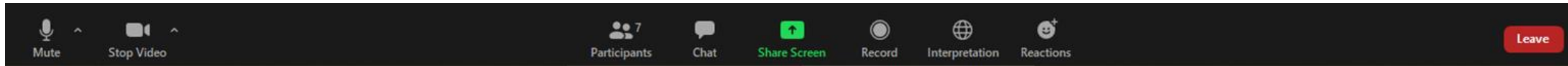


Welcome, Instructions for Zoom

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



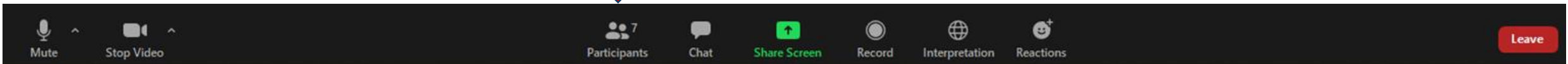
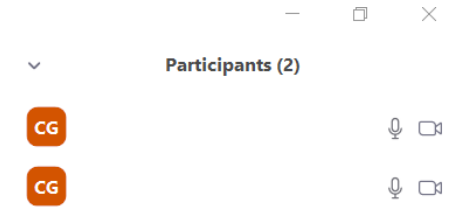
The meeting will have simultaneous interpreting, so you are welcome to comment in your native language.
La junta será interpretada simultáneamente, así que le invitamos a que haga comentarios en su lenguaje nativo.

Welcome, Instructions for Zoom

- We are beginning the meeting with everyone on mute.
- Please keep yourself muted until called upon and asked to unmute.
- We recommend that you view in “Gallery View” to see the project team and Stakeholder Committee members.
- If you have comments, please use the “**Raise Hand**” feature:
 - Stakeholder Committee: during discussion time
 - Members of the Public: during Public Comment or when the moderator asks for public comments.
- The moderator will call on you to unmute.
- If you cannot hear the host or have technical issues, use the **Chat** to Host and we will try to address the issue.

Stakeholder Advisory Committee Members

- Please keep your video on whenever possible.



Stakeholder Advisory Committee March 21 Agenda

1. Call to Order and Welcome
2. Introductions and Roll Call
 - a) Review of Agenda and Meeting Guidelines, Charles Gardiner
3. Grant Updates
 - a) SGM Implementation Planning and Projects Grant Update
 - b) Prop 68 Round 3 Planning
 - c) 2020 SGM Implementation Grant
 - d) SDAC Grant
4. Water Year 2021 Annual Report
5. Sustainable Management Criteria Refresher
6. Comments on Groundwater Sustainability Plan by the Department of Water Resources
 - a) DWR comments overview
 - b) Groundwater levels
 - c) Subsidence
 - d) Schedule
7. GSA Reports
 - a) Coordination Committee, Jim Blanke
 - b) Merced Subbasin GSA, Lacey McBride
 - c) Merced Irrigation-Urban GSA, Hicham EITal
 - d) Turner Island Water District GSA #1, Kel Mitchel
 - e) SAC questions and discussion
8. Public Comment
9. Next Steps and Adjourn

Image courtesy: Veronica Adrover/UC Merced

Stakeholder Advisory Committee Members

Present	Committee Member	Interest/Affiliation	Present	Alternate	Interest/Affiliation
	Arlan Thomas	MIDAC member		Ben Migliazzo	Live Oak Farms
	Bob Kelley	Stevinson Representative		Blake Nervino	Stevinson/Merquin
	Breanne Ramos	MCFB			
	Craig Arnold	Arnold Farms			
	Darren Olguin	Resident of Merced County			
	Dave Serrano	Serrano Farms - Le Grand			
	David Belt	Foster Farms			
	Emma Reyes	Martin Reyes Farm/Land Leveling			
	Greg Olzack	Atwater Resident			
	Jean Okuye	E Merced RCD			
	Joe Sansoni	Sansoni Farms/MCFB			
	Joe Scoto	Scoto Brothers/McSwain School Dist.			
	Jose Moran	Livingston City Council			
	Lacy Carothers	Cal Am Water			
	Lisa Baker	Clayton Water District			
	Lisa Kayser-Grant	Sierra Club			
	Mark Maxwell	UC Merced			
	Maxwell Norton	Unincorporated area			
	Nav Athwal	TriNut Farms			
	Olivia Gomez	Community of Planada		Nataly Escobedo Garcia	Leadership Counsel
	Parry Klassen	ESJWQC			
	Darcy Brown	River Partners			
	Rick Drayer	Merced/Mariposa Cattlemen			
	Robert Weimer	Weimer Farms			
	Simon Vander Woude	Sandy Mush MWC			
	Susan Walsh	City of Merced		Bill Spriggs	Resident City of Merced
	Thomas Dinwoodie	Master Gardener/McSwain			
	Trevor Hutton	Valley Land Alliance			
	Wes Myers	Merced Grassland Coalition		Lou Myers	Benjamin Land LP

Stakeholder Advisory Committee Meeting Agreements

Guidelines for successful meetings

- Civility is required.
 - Treat one another with courtesy and respect.
 - Be honest, fair, and as candid as possible.
 - Personal attacks and stereotyping are not acceptable.
- Creativity is encouraged.
 - Think outside the box and welcome new ideas.
 - Build on the ideas of others to improve results.
 - Disagreements are problems to be solved rather than battles to be won.
- Efficiency is important.
 - Participate fully, without distractions.
 - Respect time constraints and be succinct.
 - Let one person speak at a time.
- Constructiveness is essential.
 - Take responsibility for the group as a whole and ask for what you need.
 - Enter commitments honestly and keep them.

Image courtesy: Veronica Adrover/UC Merced

Topics Covered at January Stakeholder Advisory Committee

- 1) SGMA Implementation Grant Application (projects, scoring, ranking)
- 2) DWR GSP Comments (overview and high level next steps)
- 3) Drought Update (status and resources)

Reminder: Slides, notes, and all GSP documents are publicly available at www.mercedsgma.org

Upcoming Meetings

- Planning to hold monthly meetings in **April, May, and June**
- Topics will include status updates on technical analyses related to GSP comments from DWR and collection of feedback/input on proposed GSP edits
- Can include presentation and other discussion requested by SAC – please let us know.

Image courtesy: Veronica Adrover/UC Merced



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

Image courtesy:

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

2020 SGM Implementation Grant

- Le Grand-Athlone Water District 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

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

Image courtesy: Veronica Adrover/UC Merced



Water Year 2021 Annual Report

Image courtesy: Veronica Adrover/UC Merced



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
 - e.g.. MSGSA demand reduction objective
 - Grant funding
 - Other support activities

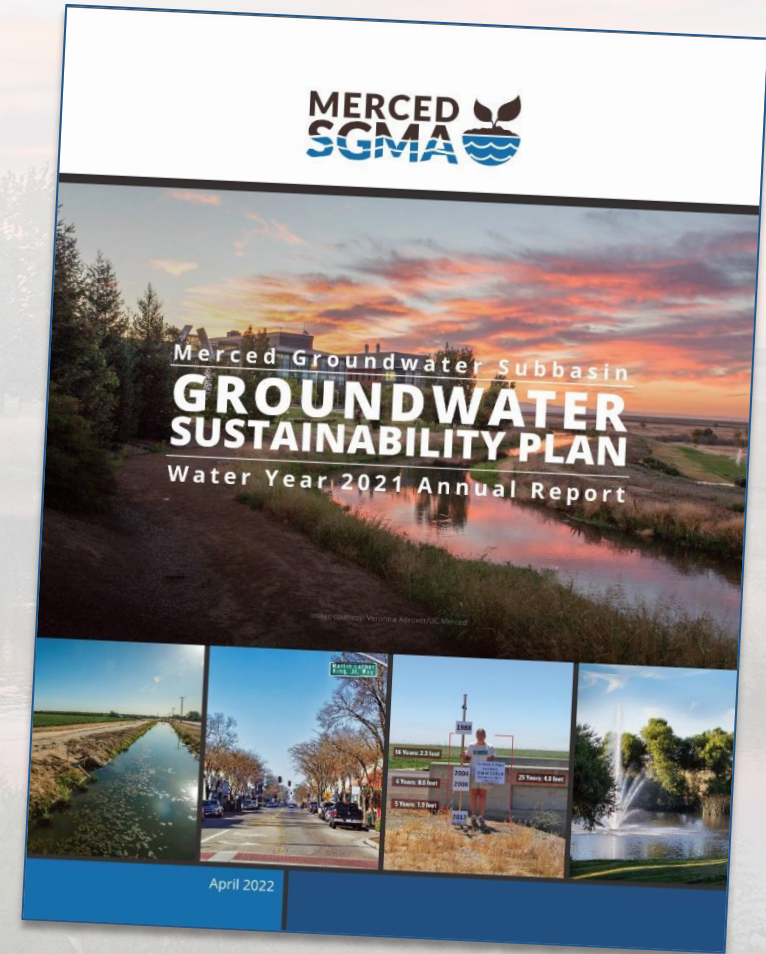








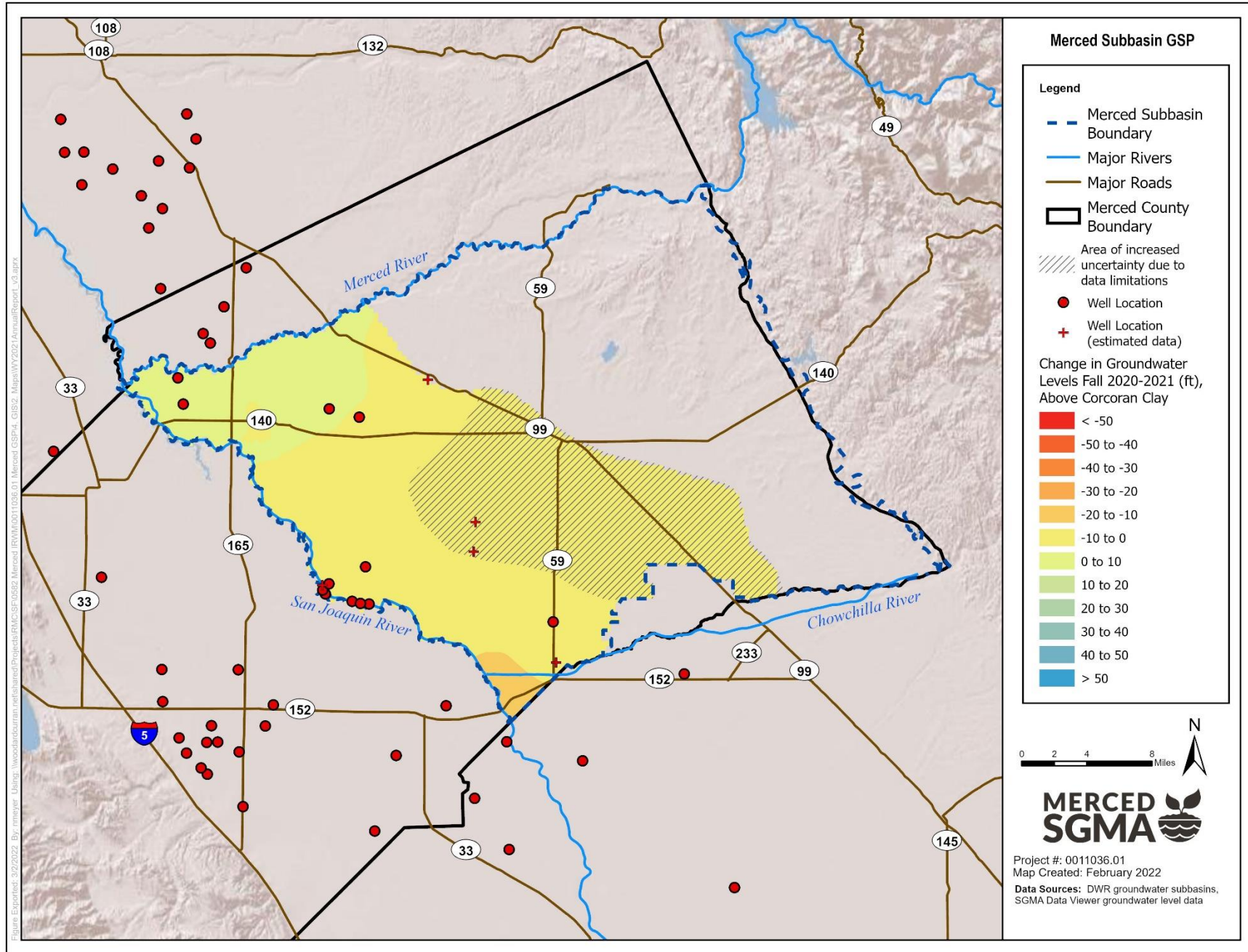
Image courtesy: Veronica Adrover/UC Merced

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			

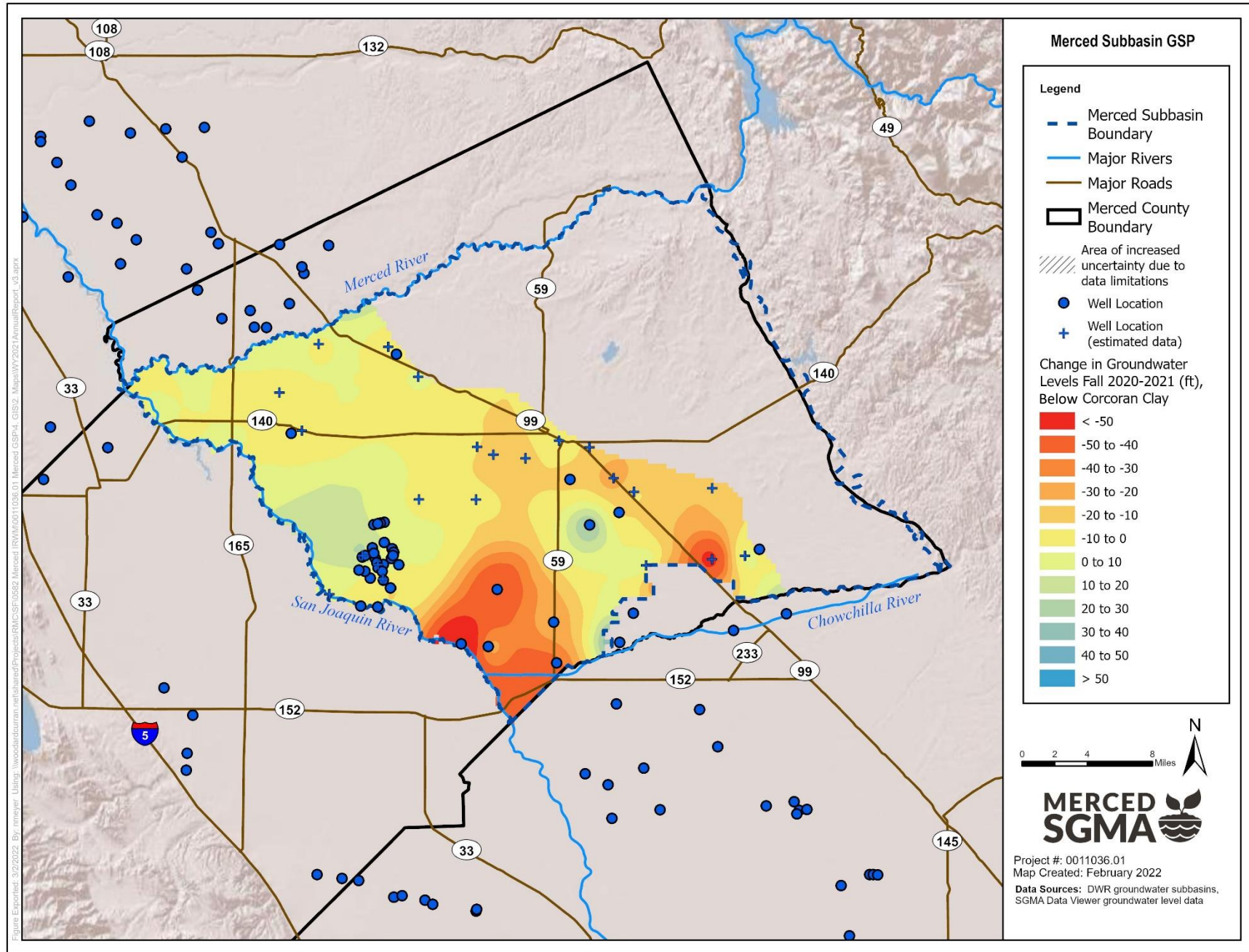
Change in Groundwater Levels

Above Corcoran Clay



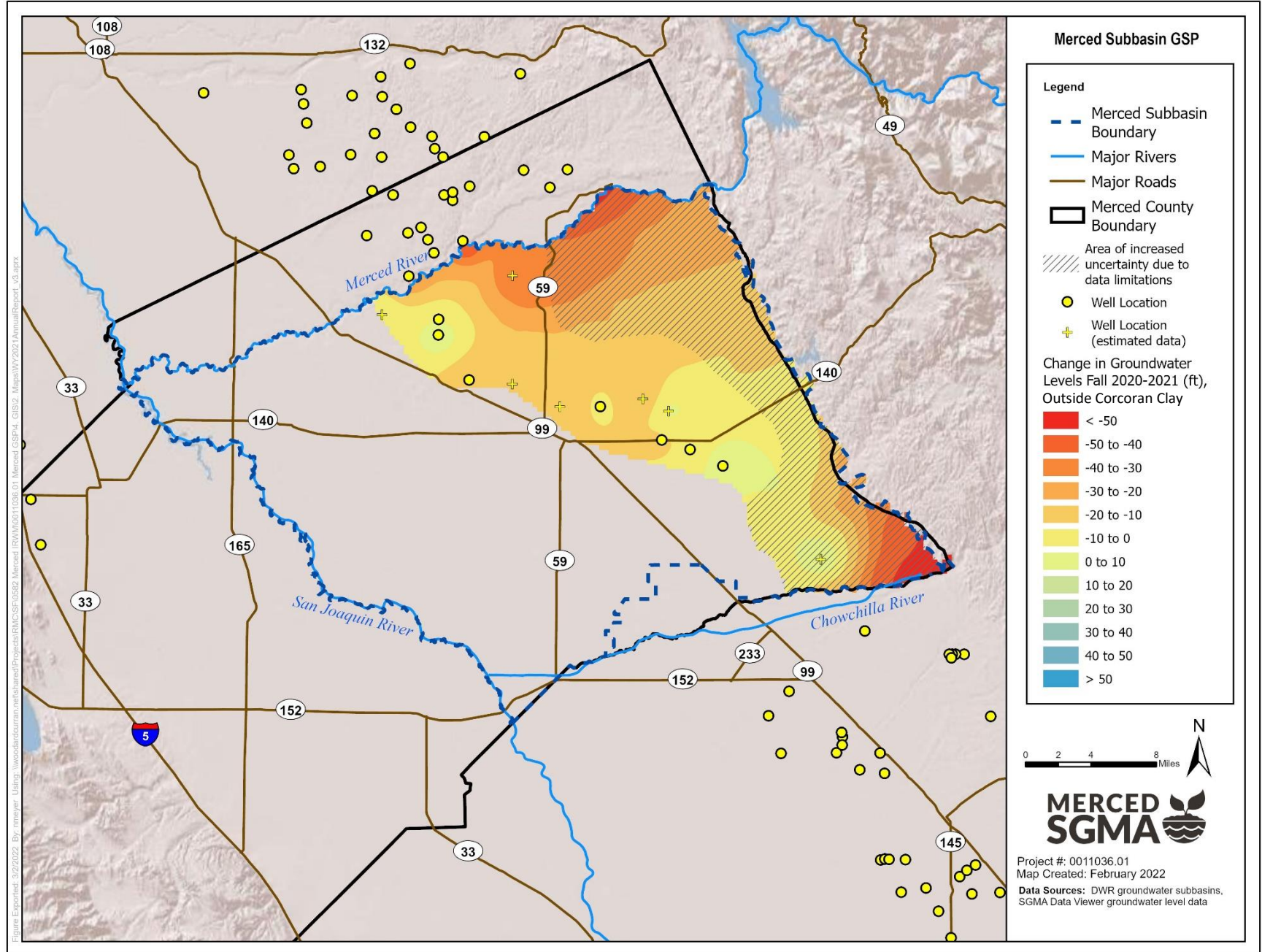
Change in Groundwater Levels

Below Corcoran Clay



Change in Groundwater Levels

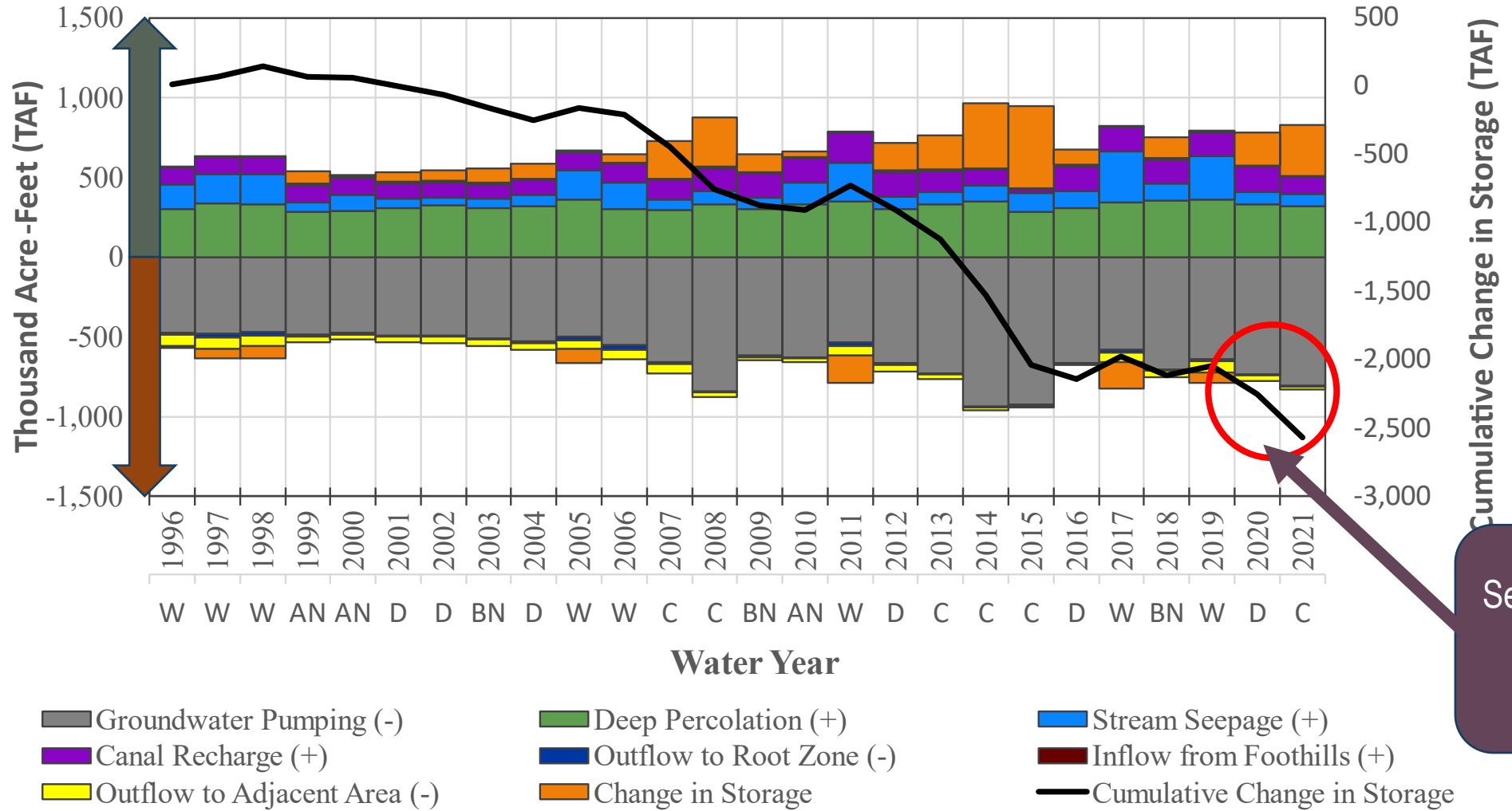
Outside Corcoran Clay



Change in Storage

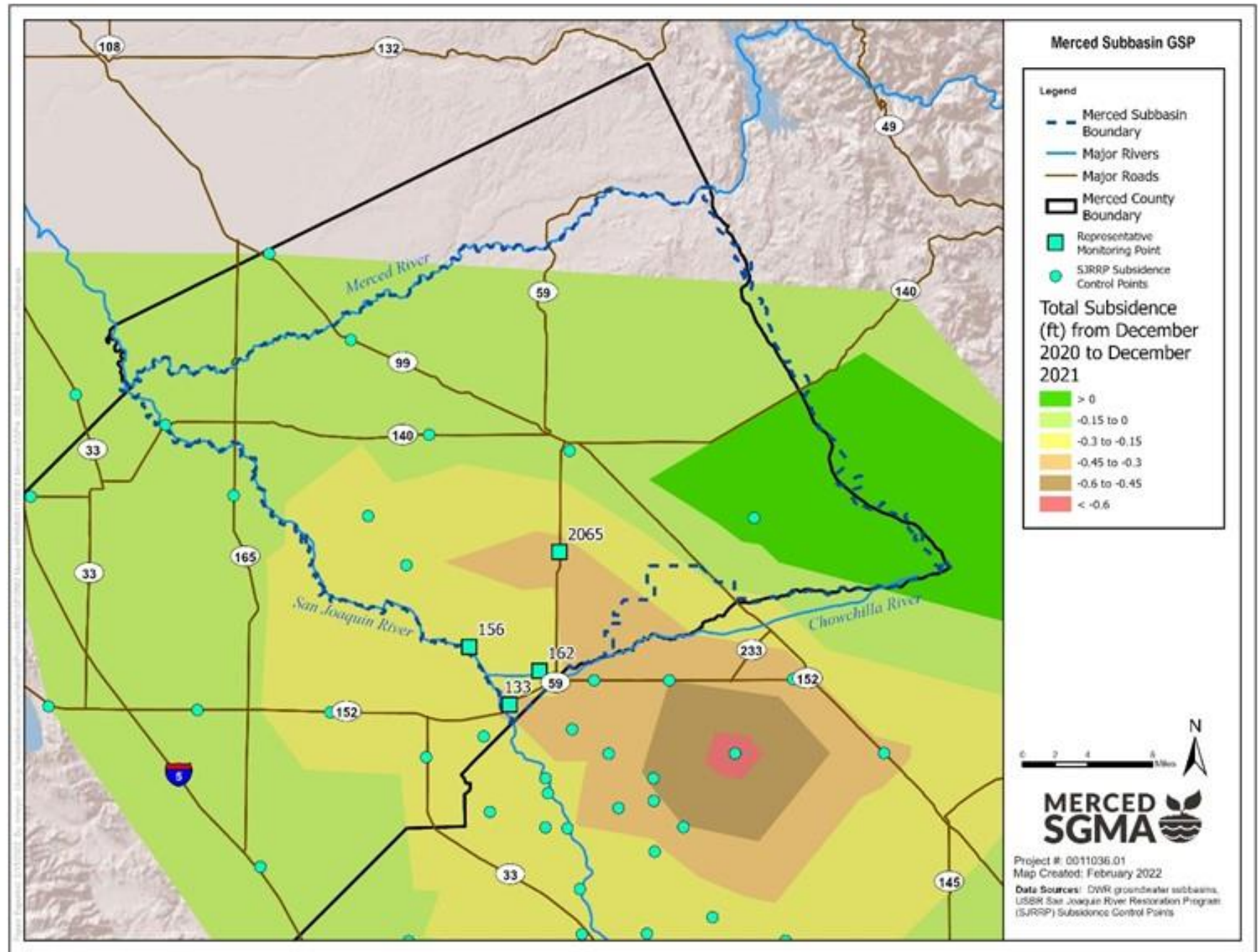
Water Entering Subbasin

Water Leaving Subbasin



Second year of storage decrease

Subsidence Dec 2020 – Dec 2021





Sustainable Management Criteria Refresher

Image courtesy: Veronica Adrover/UC Merced

SGMA Requires Sustainable Management Criteria to be Developed for Six Sustainability Indicators



Chronic Lowering of Groundwater Levels

*Storage
addressed by
bringing budget
into balance*



~~Reduction in Groundwater Storage~~



~~Seawater Intrusion~~

*Salinity
Addressed
Under Water
Quality*



Degraded Water Quality



Land Subsidence



Depletion of Interconnected Surface Water

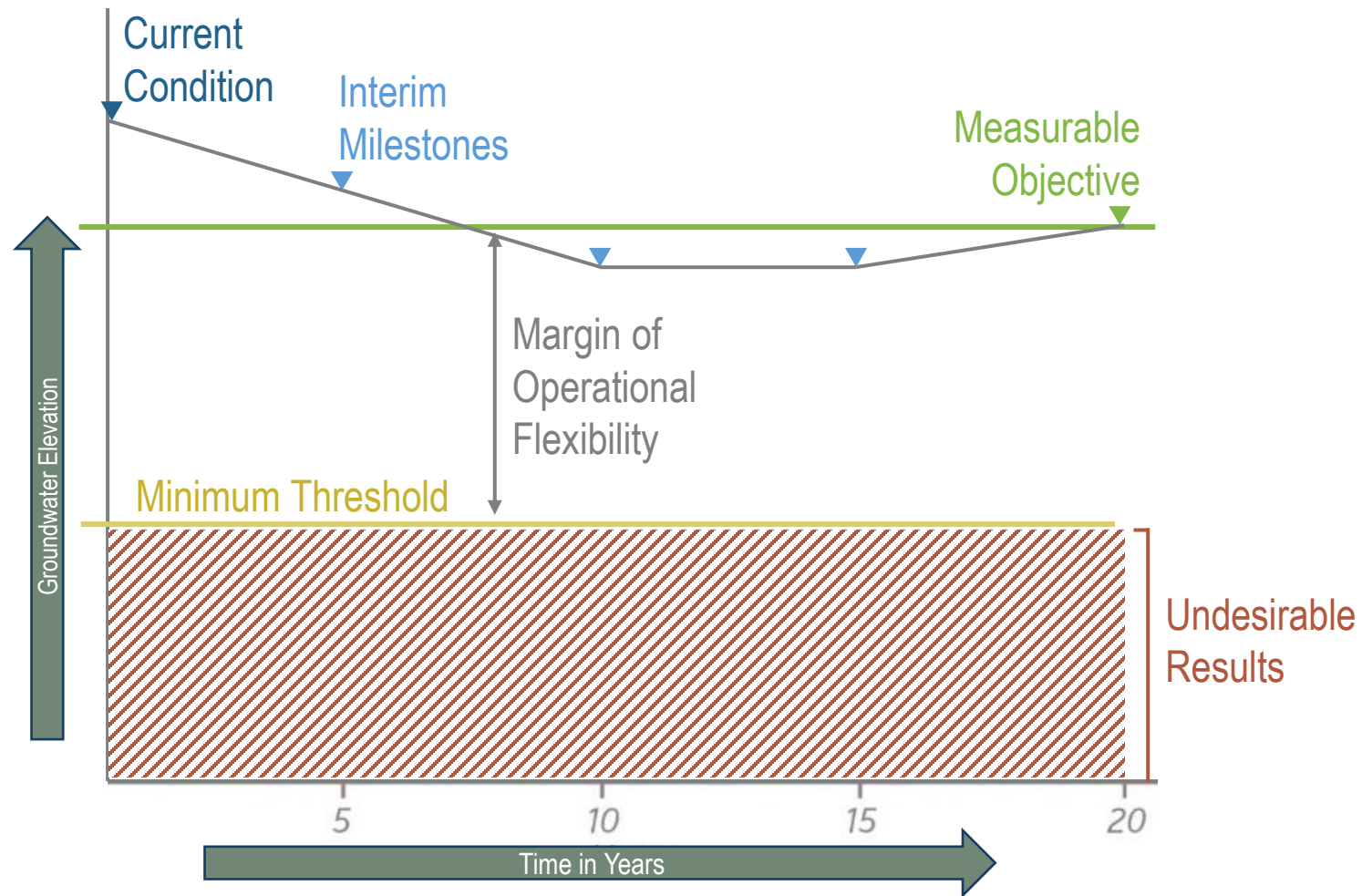
Image courtesy: Veronica Adrover/UC Merced

Undesirable Results

- “Significant and Unreasonable” negative impacts that can occur for each Sustainability Indicator
- Conditions that we do not want to occur
- The GSP was required to establish sustainable management criteria that are intended to prevent undesirable results from occurring
- Used to guide and justify GSP components
 - Monitoring Network
 - Minimum Threshold
 - Projects and Management Actions

Image courtesy: Veronica Adrover/UC Merced

Example of Sustainable Management Criteria for Groundwater Levels





Comments on Groundwater Sustainability Plan by the Department of Water Resources

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

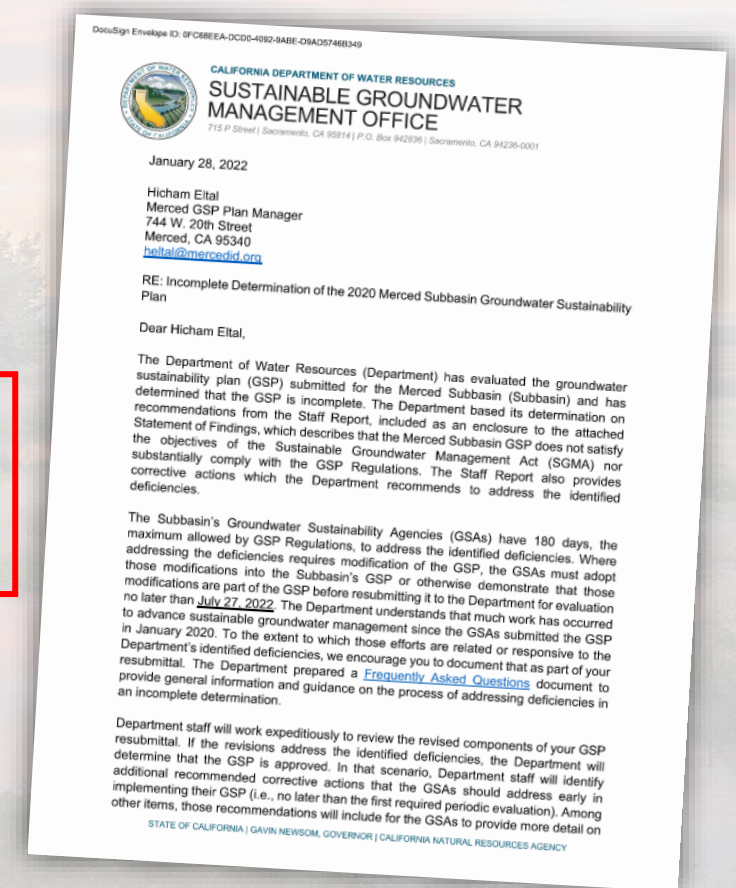
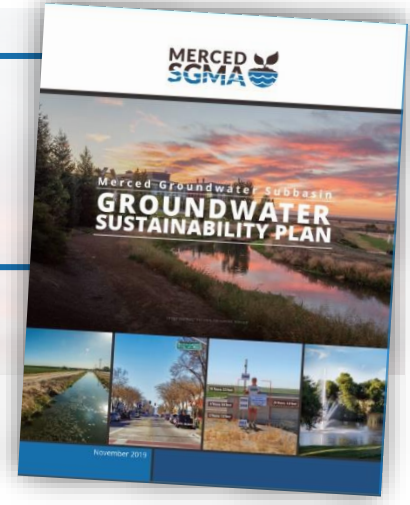
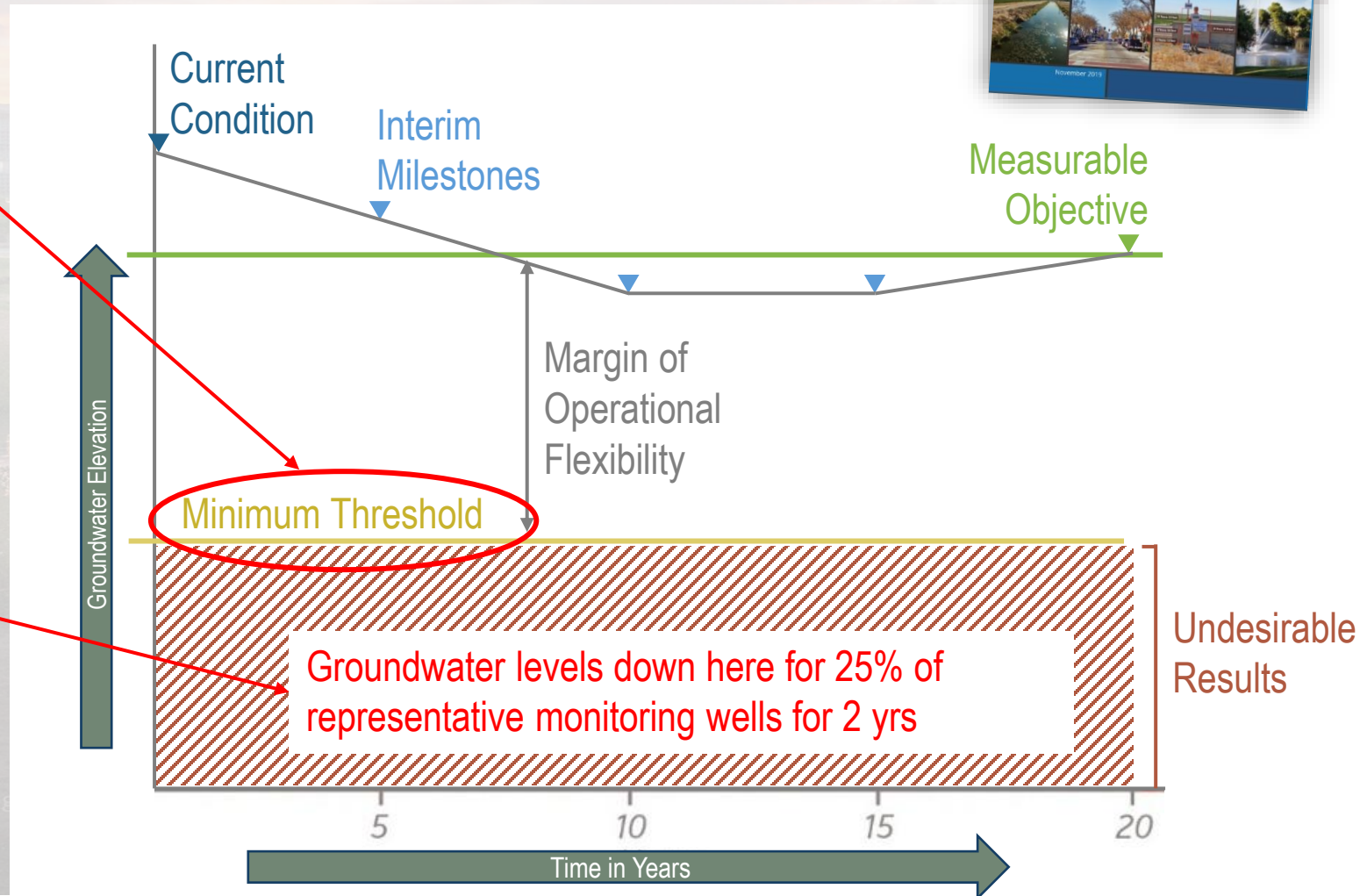


Image courtesy: Veronica Adrover/UC Merced

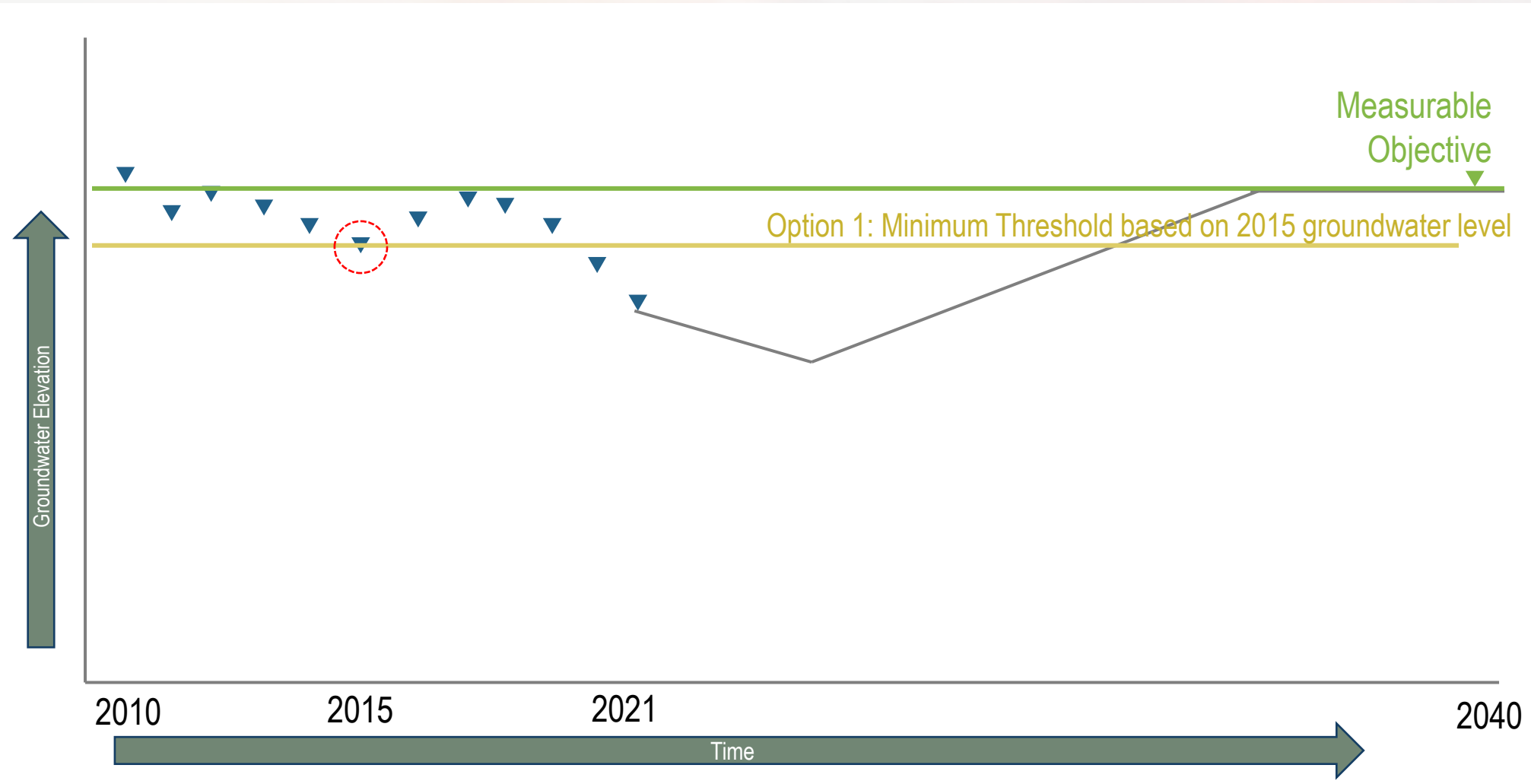
Groundwater Level Sustainable Management Criteria in the GSP



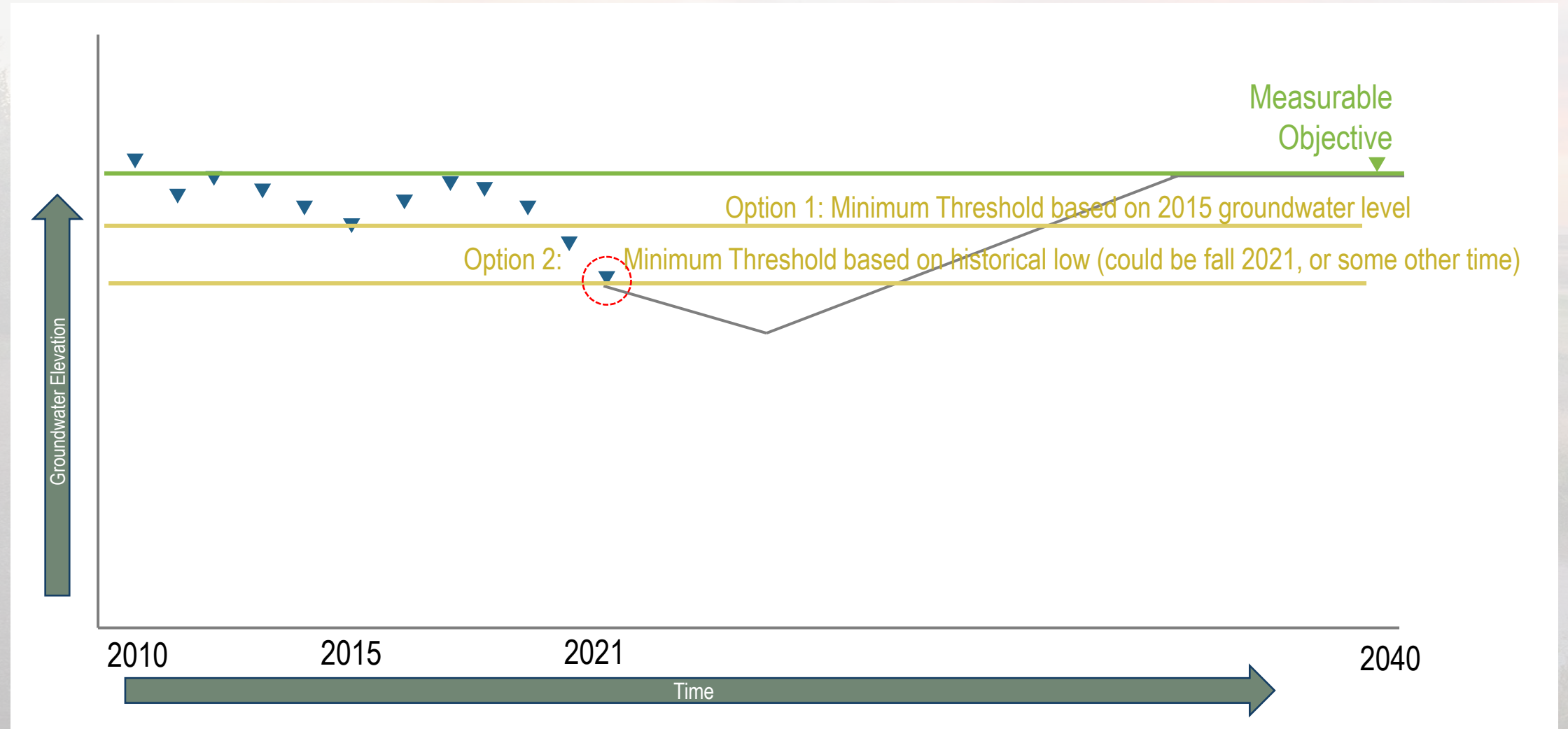
- Minimum Threshold based on: “construction depth of the shallowest domestic well within a 2-mile radius.”
- Definition of Undesirable Results: “...when November groundwater levels at greater than 25% of representative monitoring wells fall below their minimum thresholds for two consecutive years where both years are categorized hydrologically as below normal, above normal, or wet”



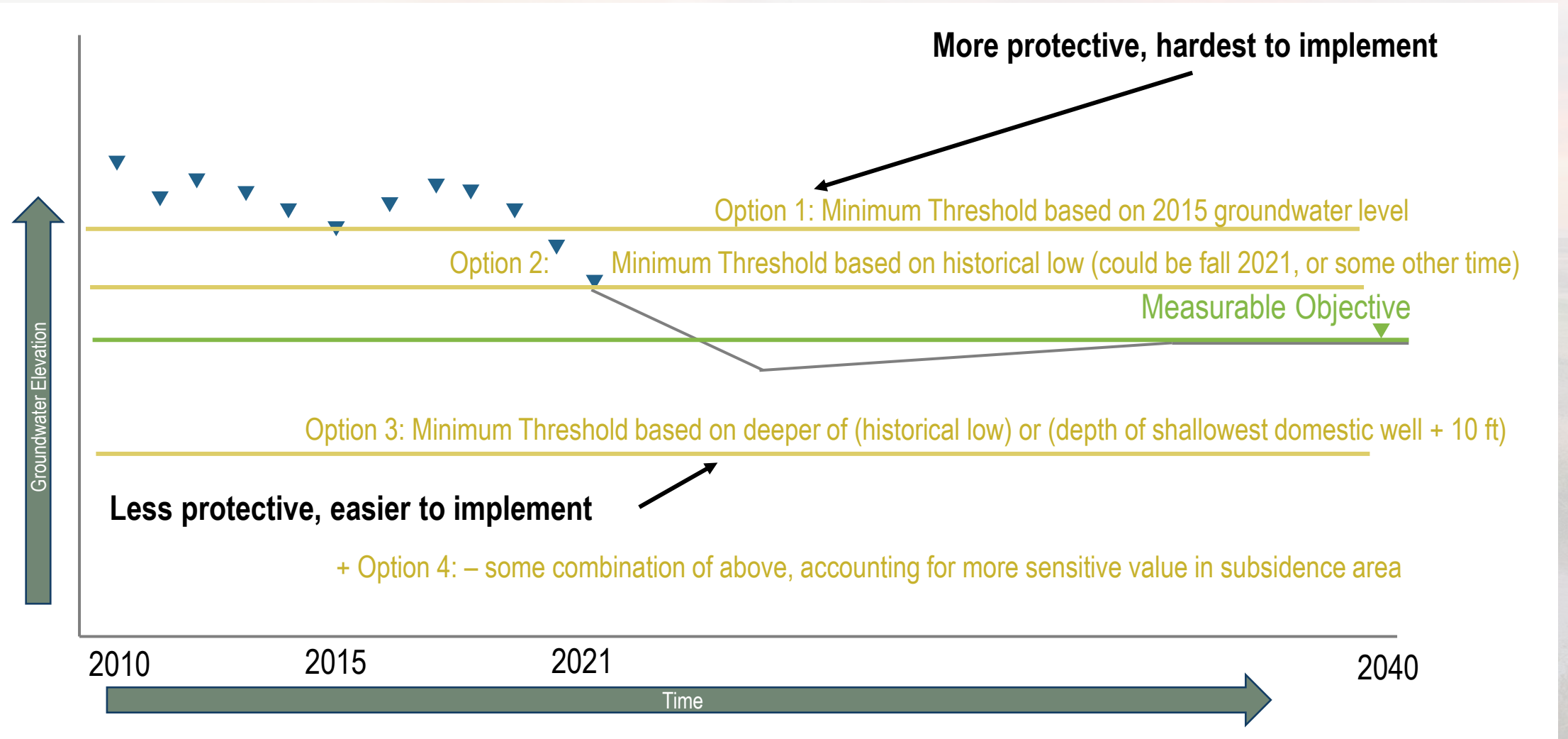
New Minimum Threshold Options Being Evaluated



New Minimum Threshold Options Being Evaluated



New Minimum Threshold Options Being Evaluated



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.
- Adjusted model results to match historical observations

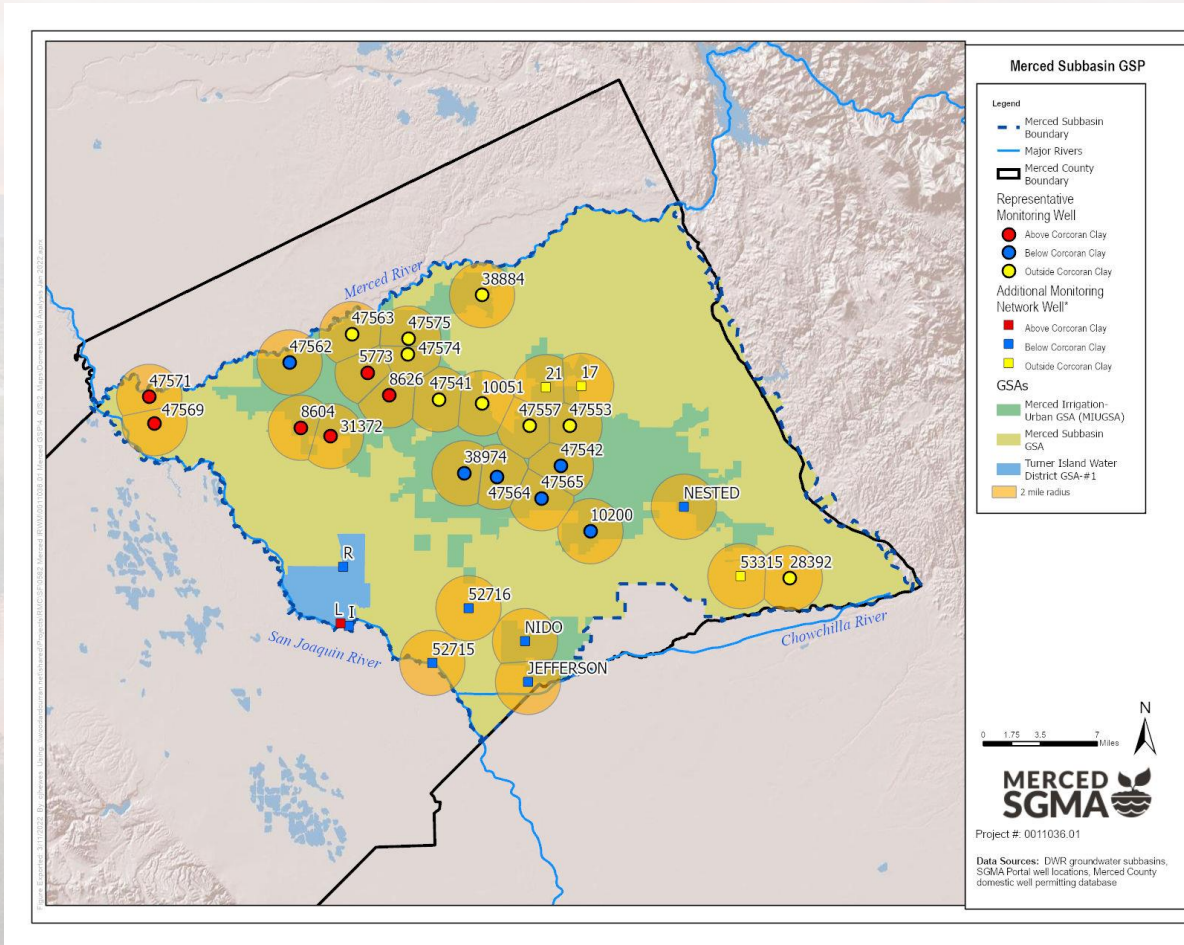


Image courtesy: Veronica Adrover/UC Merced

How can we manage Undesirable Results?

- Change pumping levels (or recharge volumes) to avoid undesirable results
 - Pumping levels developed based on modeling
- Reduce pumping faster (faster implementation contributes to less likely Undesirable Results)
- Other considerations:
 - Geographic distribution
 - Timing (e.g. higher pumping restrictions during certain hydrologic year types)
- Iterative process – requiring appropriate input and assumptions

SAC question: Are these the right considerations? Are there other considerations that should be included?

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
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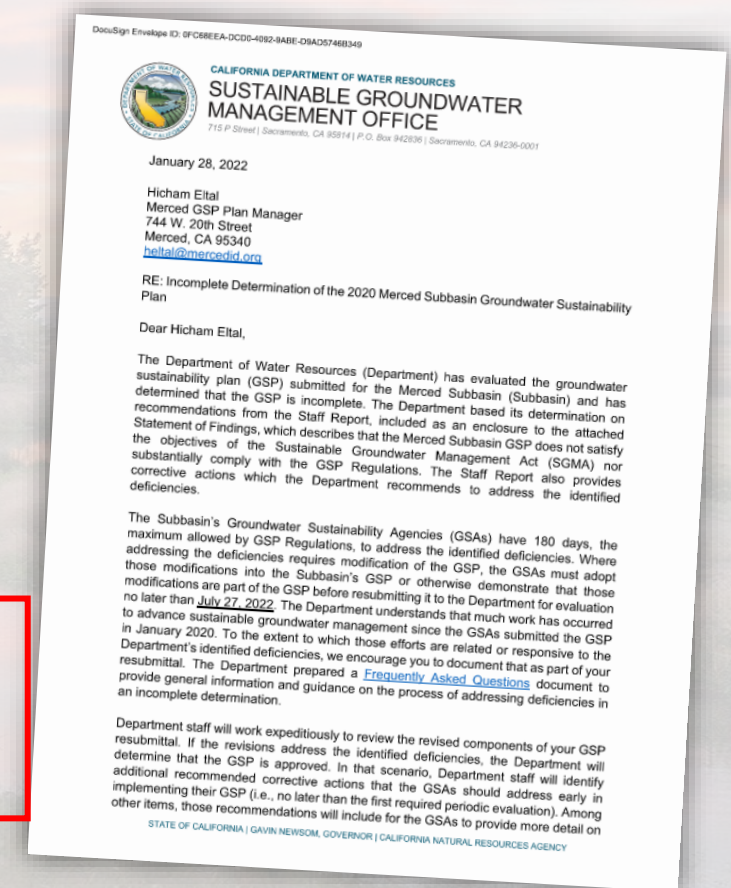
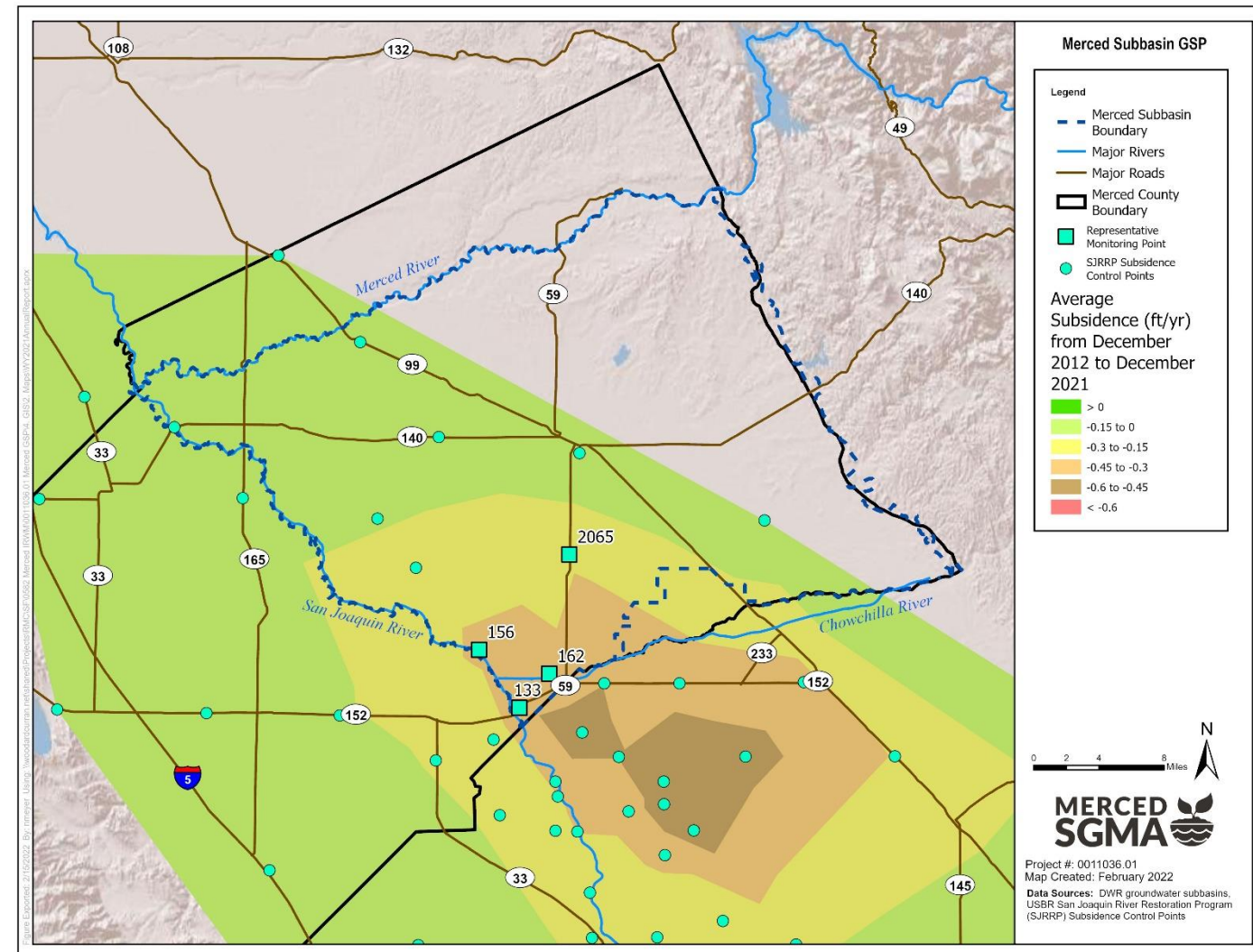


Image courtesy: Veronica Adrover/UC Merced

The GSP does not provide sufficient information to support the selection of **land subsidence** sustainable management criteria

- DWR notes that additional work is needed to identify significant and unreasonable levels of subsidence
- DWR notes the intent of legislature was to avoid or minimize subsidence
 - GSP includes minimum thresholds that allow continued subsidence
- GSAs intend to revisit the Sustainable Management Criteria

SAC question: To respond to DWR we need to provide more evidence of subsidence history and trends. Are you aware of any studies that we may not have about specific subsidence in our basin?



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



GSA Reports

Image courtesy: Veronica Adrover/UC Merced



GSA Reports

- Coordination Committee
- 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
- SAC questions & discussion

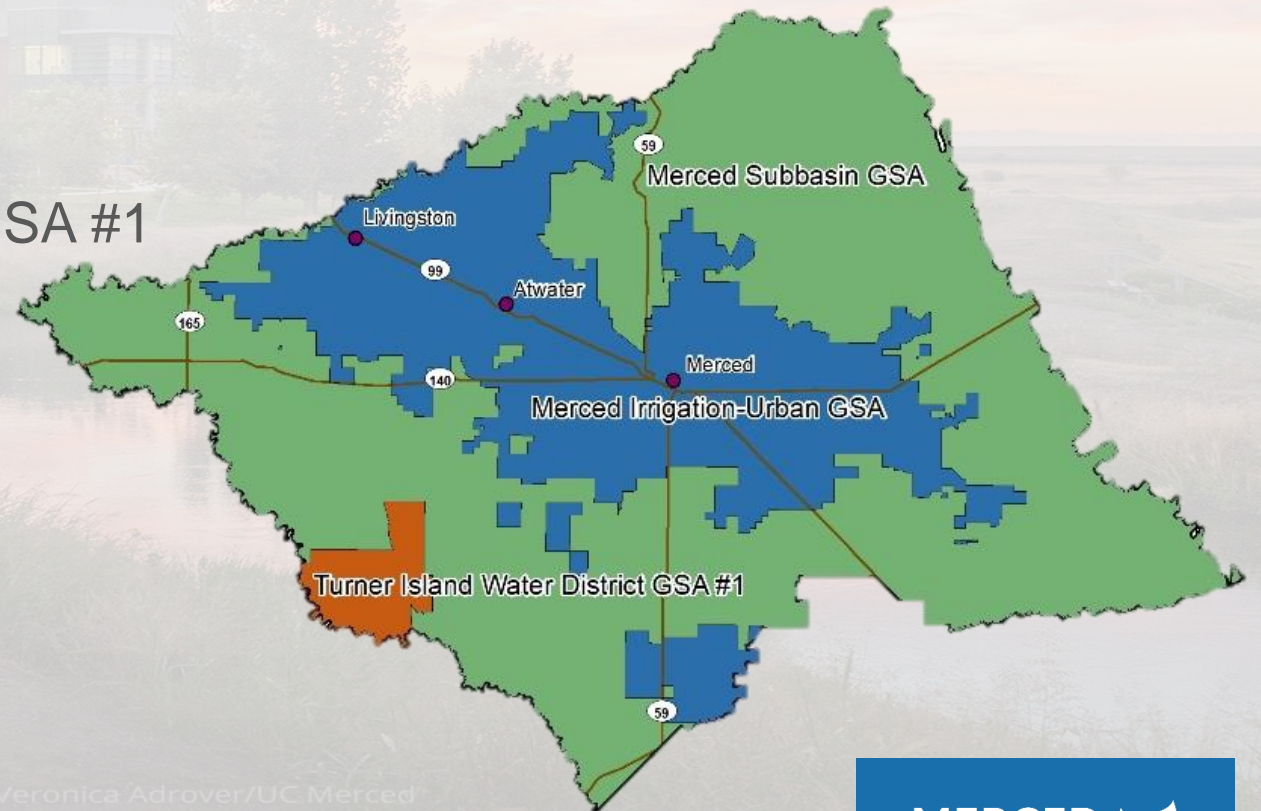


Image courtesy: Veronica Adrover/UC Merced



Public Comment

Image courtesy: Veronica Adrover/UC Merced





Next Steps

Image courtesy: Veronica Adrover/UC Merced

What's coming up next?

- Adjourn to next Stakeholder Advisory Committee meeting: late April 2022

Image courtesy: Veronica Adrover/UC Merced

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