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# Merced GSP Stakeholder Advisory Committee

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**Stakeholder Advisory Committee Meeting – July 12, 2021**

Image courtesy: Veronica Adrover/UC Merced



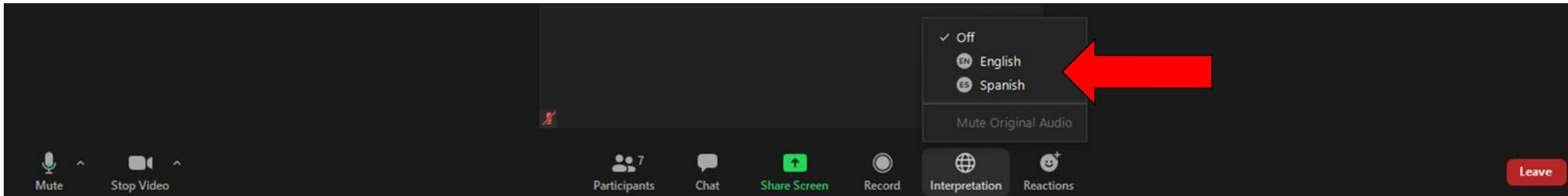
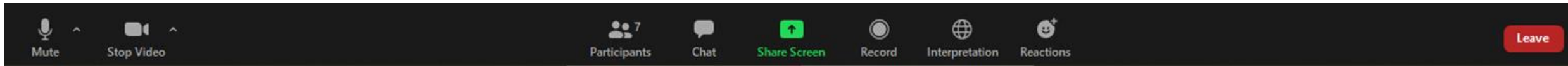


# Welcome, Instructions for Zoom

## 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



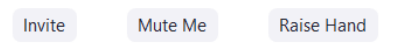
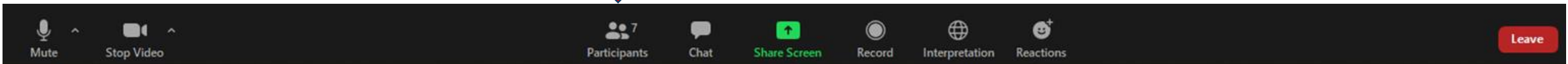
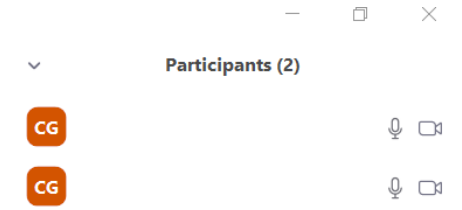
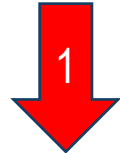
The meeting will have simultaneous interpreting, so you are welcome to comment in your native language.  
La junta será interpretada simultáneamente, así que le invitamos a que haga comentarios en su lenguaje nativo.

# 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.



# SAC July 12 Agenda

1. Call to Order and Welcome
2. Roll Call
  - a) Review of Meeting Guidelines
  - b) Discussion on moving to in-person meetings
3. SGMA Overview
  - a) SGMA purpose and water rights
  - b) GSA Authority
  - c) County info item: potential transfer of well permitting to GSAs
4. Merced GSP Overview
  - a) Estimated Sustainable Yield
  - b) Allocation Framework as described in GSP and what is under development
5. Summary of April Coordination Committee Meeting
  - a) Current Basin Conditions
  - b) Meadowbrook Intertie
  - c) Data Gaps Plan
6. Drought Preparedness
7. Public Comment
8. Next Steps and Adjourn



# Stakeholder Advisory Committee Members

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

# Stakeholder Advisory Committee Meeting Agreements

## Guidelines for successful meetings

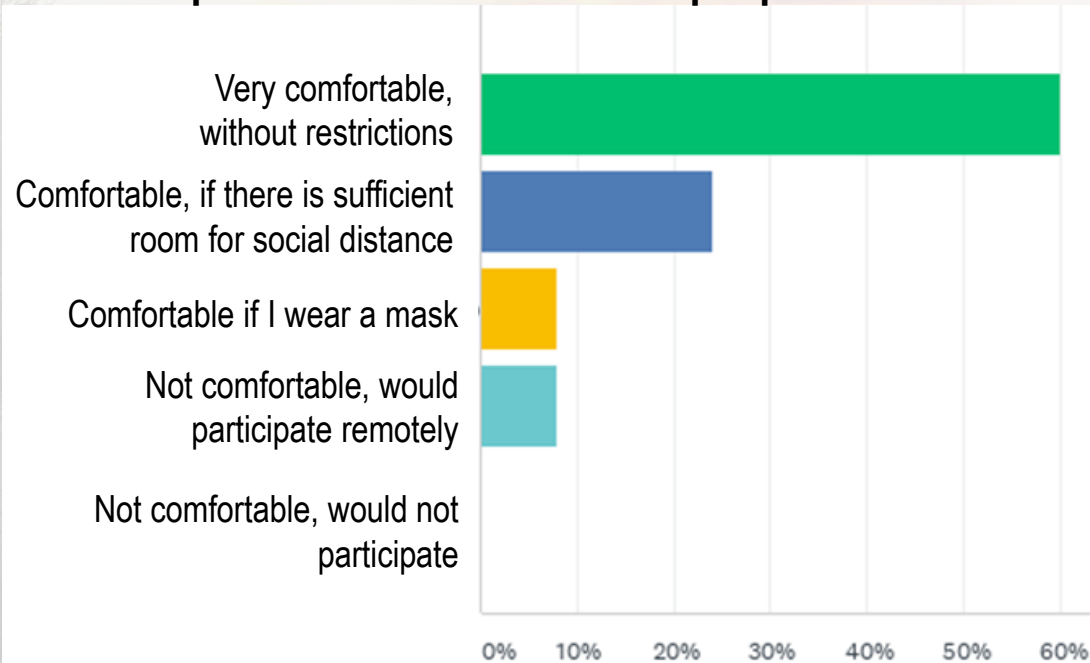
- Civility is required.
  - Treat one another with courtesy and respect.
  - Be honest, fair, and as candid as possible.
  - Personal attacks and stereotyping are not acceptable.
- Creativity is encouraged.
  - Think outside the box and welcome new ideas.
  - Build on the ideas of others to improve results.
  - 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

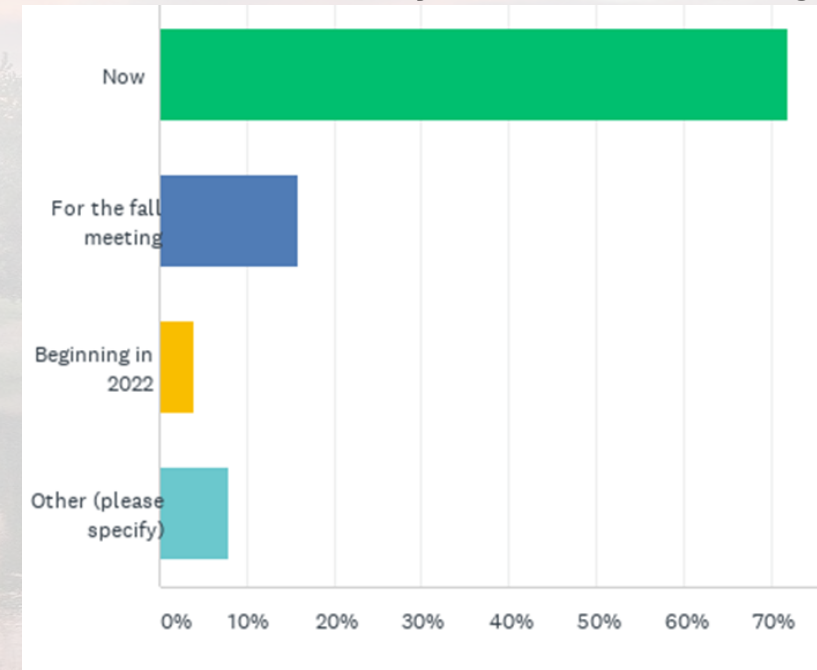


# In-Person Stakeholder Meetings: Poll Results (25 responses)

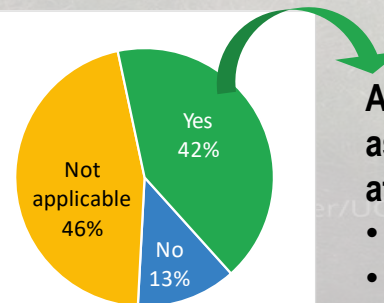
How comfortable are you meeting indoors, in-person with 20 to 30 other people?



When do you believe it will be safe to meet in person for Stakeholder Advisory Committee meetings?



If you are attending as a representative of an agency or organization, does your agency/organization's current policy allow in-person meetings?



Are there any restrictions associated with your attending a meeting?

- *Masks inside for everyone*
- *No in-person in office*

# Topics Covered at April Stakeholder Advisory Committee

- 1) Overview of Merced GSP (sustainable management criteria, sustainability goal, etc.)
- 2) GSP Implementation Progress (grants, monitoring, projects)
- 3) Annual Report Summary (changes in gw levels in WY 2020)
- 4) Data Gaps Plan Development (gaps identified in GSP and grant funded work to prepare a plan to prioritize and address)

*Reminder: Slides, notes, and all GSP documents are publicly available at [www.mercedsgma.org](http://www.mercedsgma.org)*





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# SGMA Overview

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Image courtesy: Veronica Adrover/UC Merced





# Sustainable Groundwater Management Act Overview

- Merced Groundwater Subbasin is in a state of critical overdraft
- SGMA required a Groundwater Sustainability Plan (GSP) by **Jan 1, 2020** for sustainable groundwater management of the basin within a **20-year timeframe**

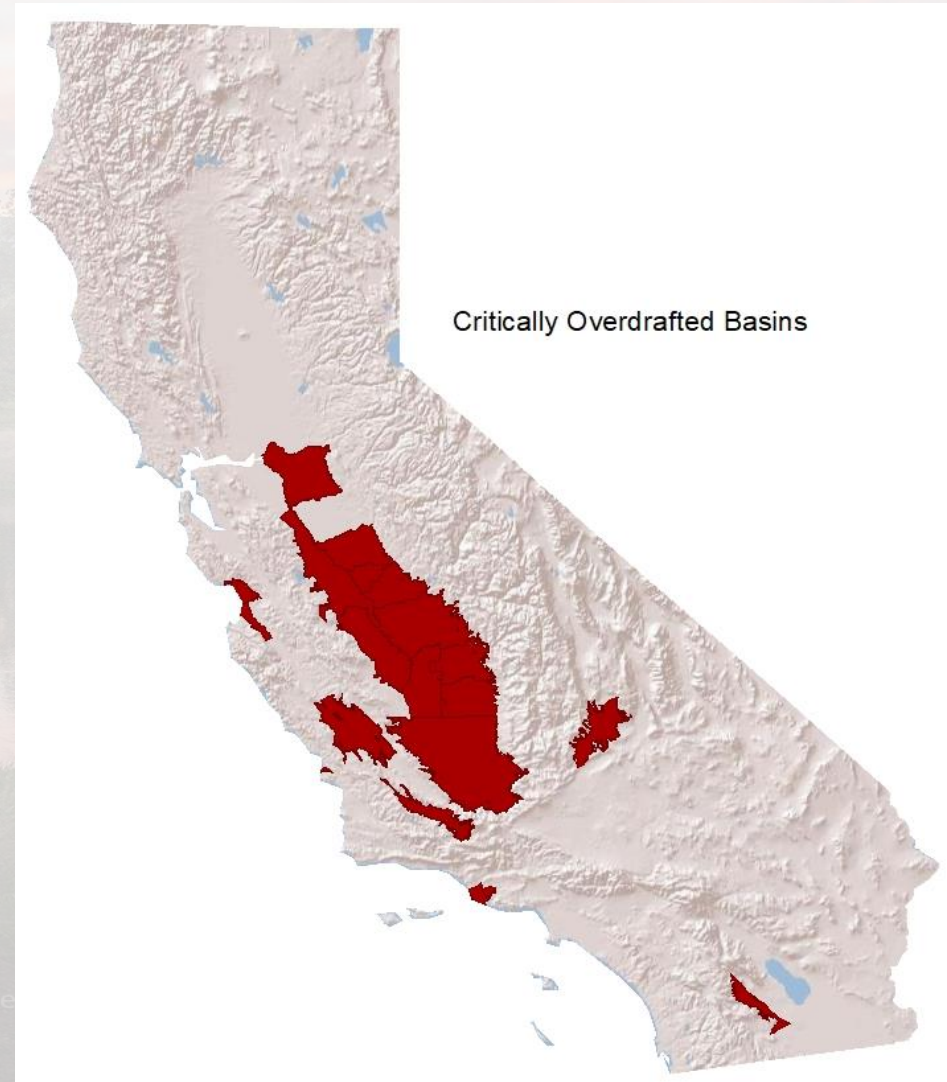


Image courtesy: Veronica Adrover



# SGMA gives GSAs authority to manage groundwater at the local level

- GSPs are roadmaps for how local agencies will ensure that groundwater resources are reliable for their communities over the long term
- Under SGMA, GSAs have authority to establish groundwater extraction allocations and collect fees
- SGMA and GSPs adopted under SGMA cannot alter water rights

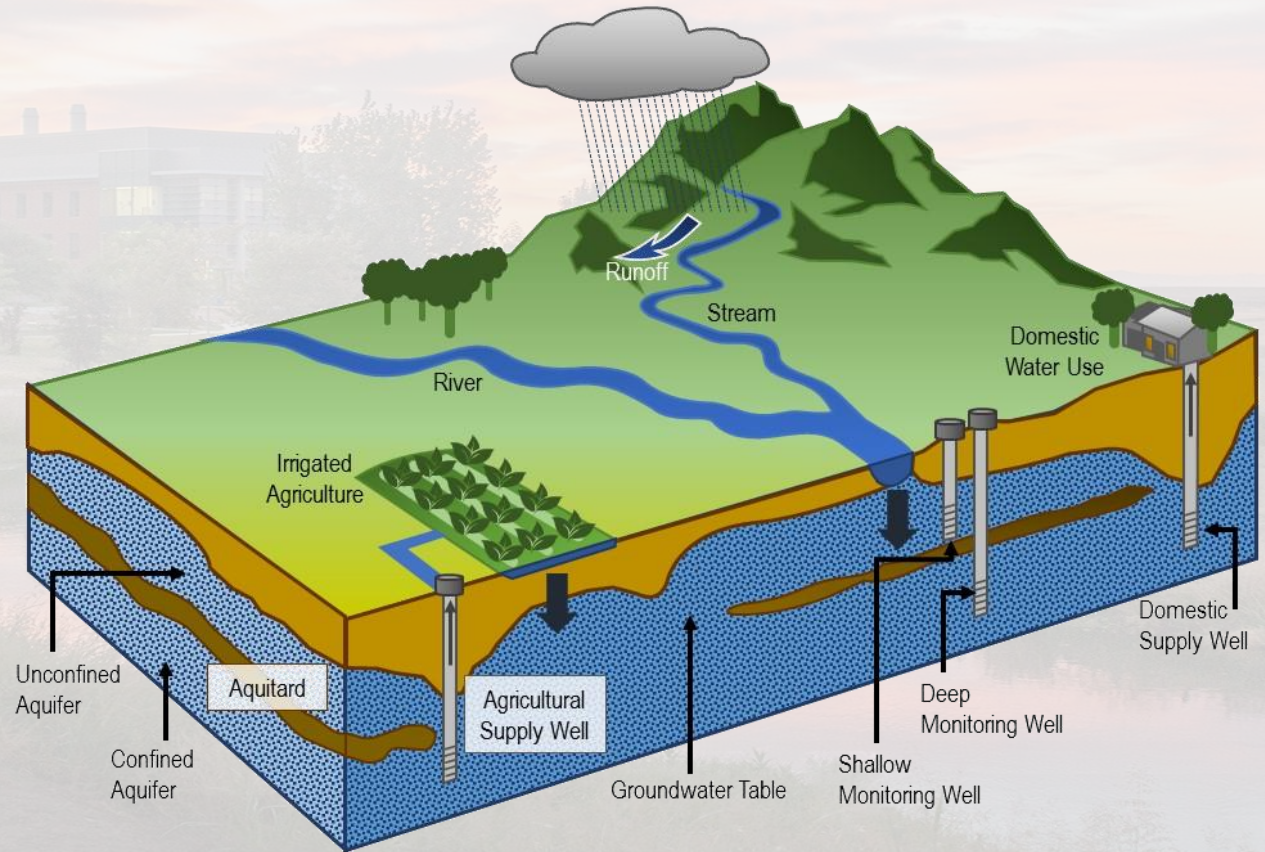


Image courtesy: Veronica Adrover/UC Merced

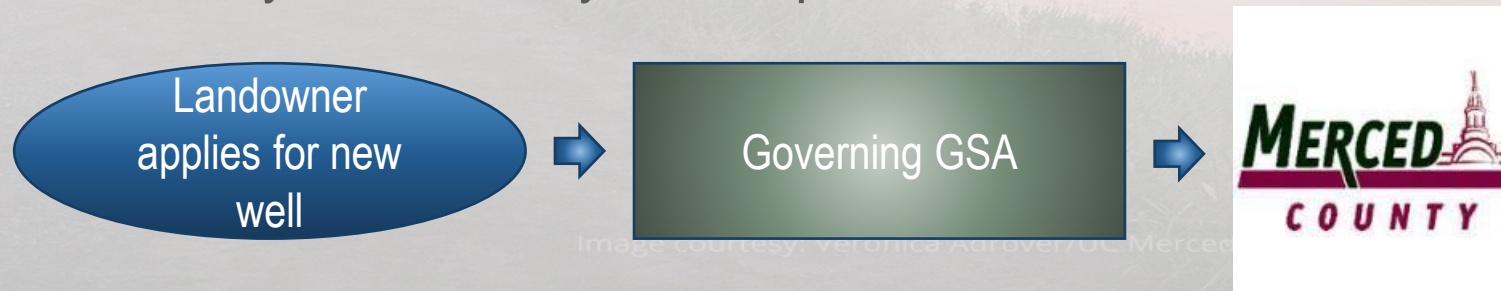


# Info Item: County is Considering Updates to the Groundwater Ordinance for Well Permitting

- Current process: County administers well permitting, including deciding which wells need CEQA and whether wells are consistent with adopted GSPs



- Staff proposal being developed: Well applicants would apply to the appropriate GSA first, **GSA would determine consistency with GSP**, once GSA determines consistency then County issues permit.







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# Merced GSP

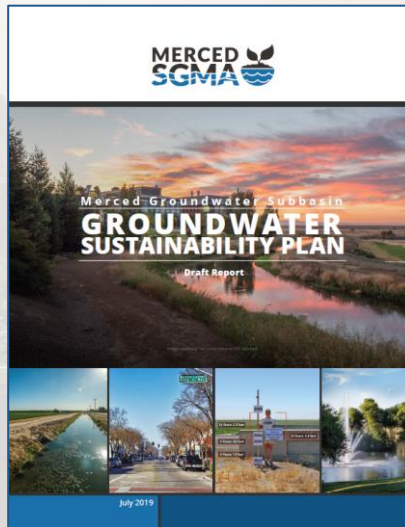
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Image courtesy: Veronica Adrover/UC Merced





# Three GSAs Prepared One Groundwater Sustainability Plan for the Merced Subbasin



## Merced Subbasin GSP

- Submitted to DWR on January 28, 2020
- DWR now in 2-yr review of plans and expects GSAs to start implementation in interim

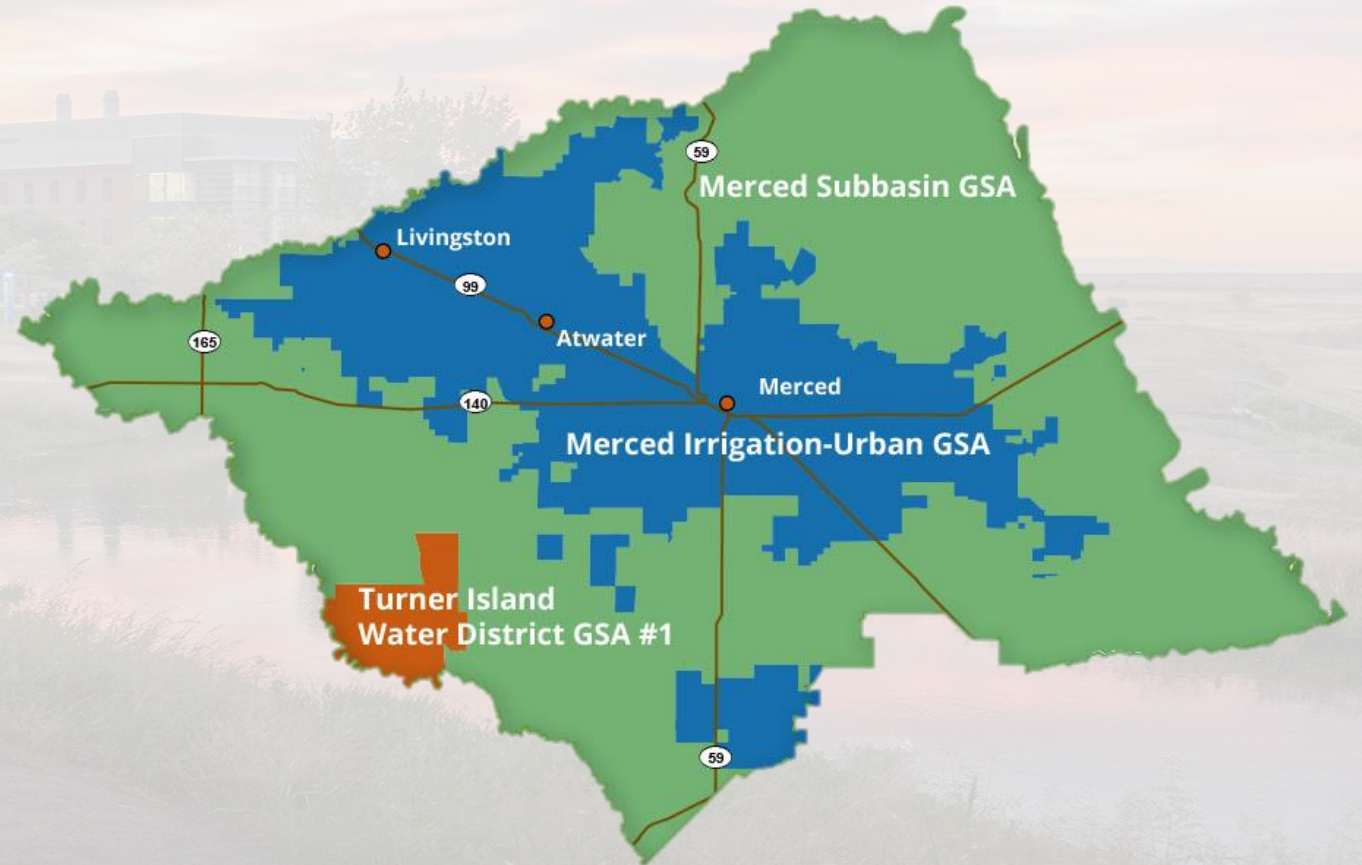
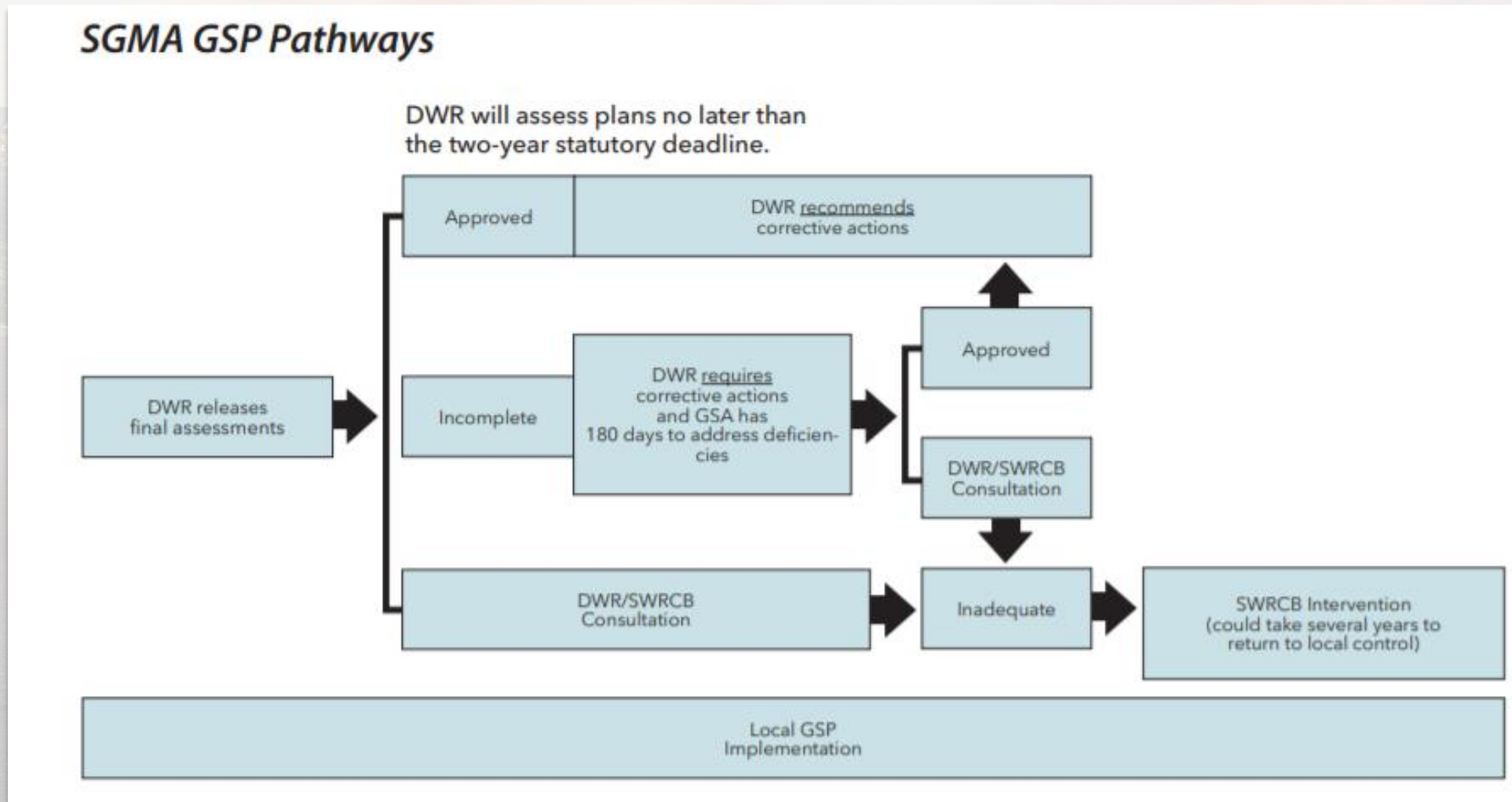


Image courtesy: Veronica Adrover/UC Merced



# DWR's review pathways for GSPs





# Historical and Projected Water Budgets

## Summarize Basin Conditions

- Inputs and outputs – surface and groundwater supplies and demands
- Estimate the extent of overdraft now and in the future
- Historical conditions water budget shows an annual average rate of overdraft of 192,000 acre-feet per year (AFY) over Water Years 1996 through 2015.
- Annual reports estimated change in storage:
  - +145,000 AF in WY2019
  - -157,000 AF in WY2020.

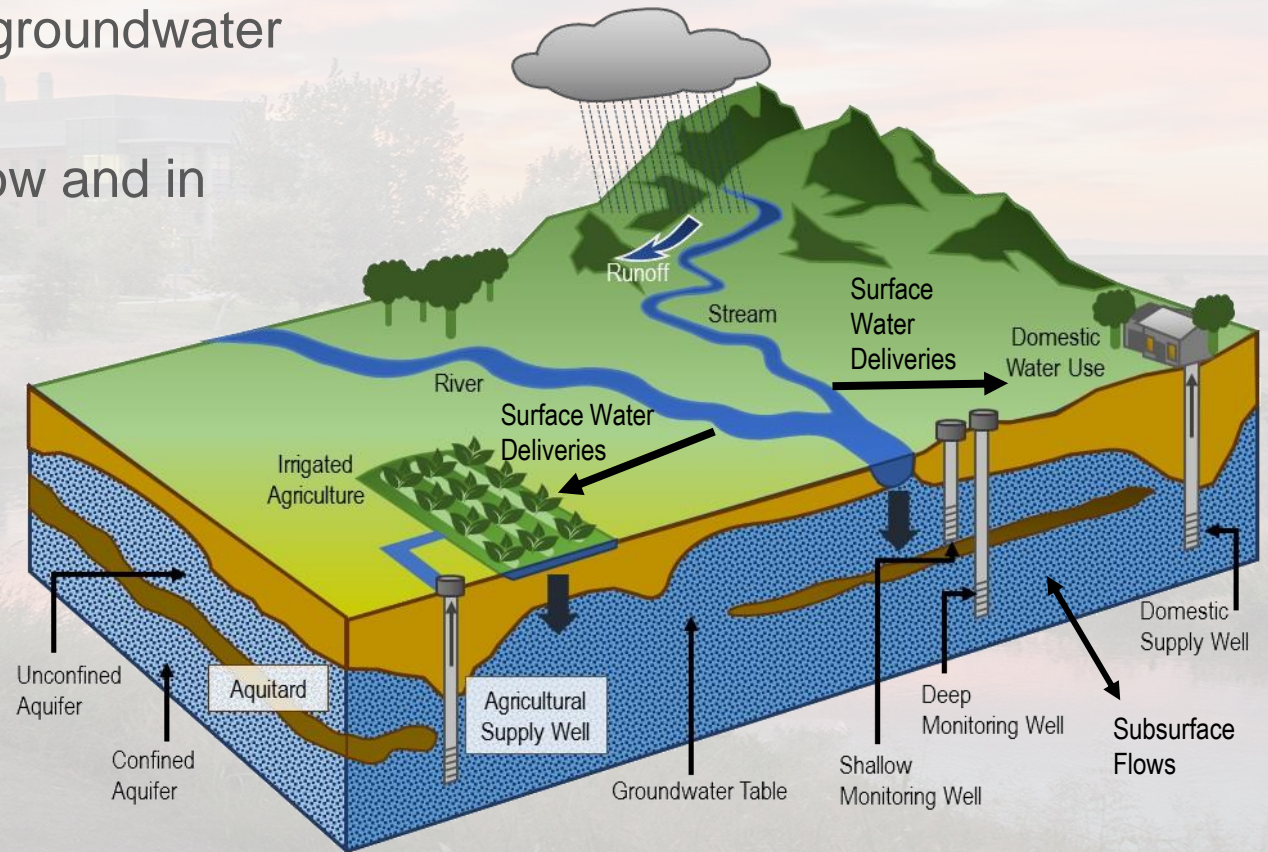


Image courtesy: Veronica Adrover/UC Merced



# Sustainable Yield = How much can be sustainably pumped

- **What is sustainable yield?**

- Per SGMA, sustainable yield is “the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result.”

- **How do we develop this?**

- We have estimated this using a groundwater model, modifying conditions to balance out the change in stored groundwater over time

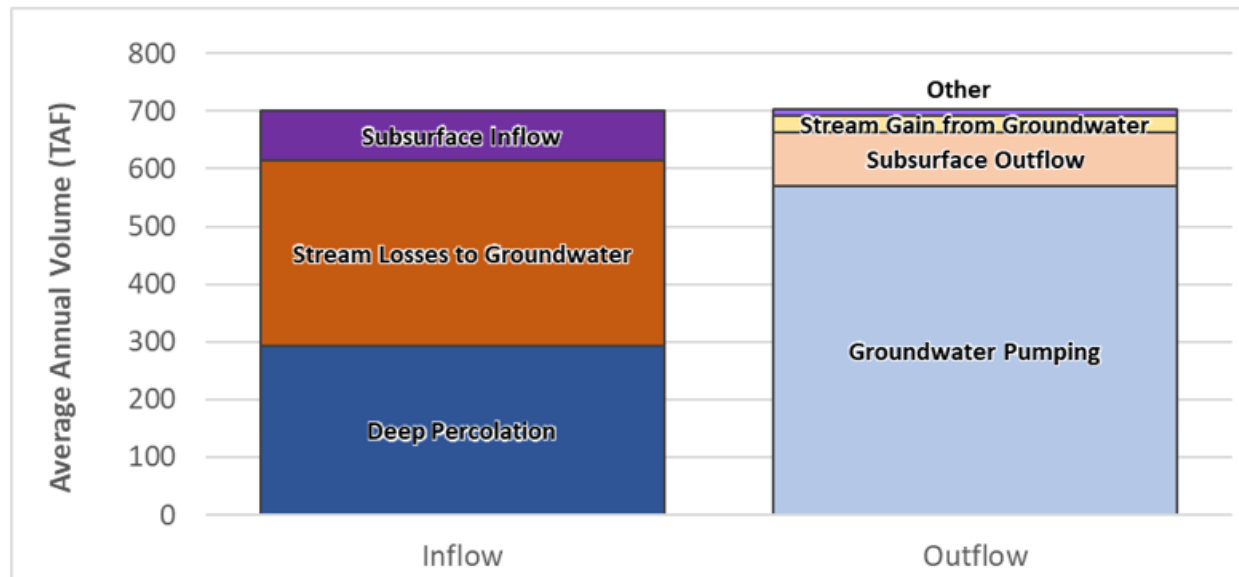
Image courtesy: Veronica Adrover/UC Merced



# GSP Estimates Sustainable Yield

- Net change in storage over long term = zero
- Sustainable yield estimate: 570,000 AFY
- Assumes projected conditions for land use and population growth with reductions in basin pumping to result in no net change in storage over the long term

Figure ES-6: Groundwater Water Budget under Sustainable Groundwater Management Conditions  
Long-Term (50-Year) Average Annual





# An “Allocation Framework” is a way to Share the Basin’s Sustainable Yield

- Merced GSP contains an explanation that GSAs intend to allocate water to each GSA but have not yet reached agreement on allocations or how they will be implemented
- Merced GSP estimates of basin-wide sustainable yield and developed supply for illustrative purposes

Image courtesy: Veronica Adrover/UC Merced



# Within each GSA, major groundwater users will have an allocation



## Cities

Will be allocated a % of their historical use and will work with customers to reduce water use as needed



## Agricultural Users

### Agricultural Districts

Ag users will likely get a pumping allocation based on acreage (e.g. AF/irrigated acre)



## De Minimis Users

(Well owners that pump 2 AF/yr or less for domestic use)  
Cannot require metering.



# Merced Basin Sustainable Yield Allocation Framework



## Allocation Buckets

- Developed Supply
- Overlying Use
  - Agricultural Users
  - De Minimis Users (less than 2AF/yr for domestic use)
  - Exempt Users (e.g. federal lands)
- Appropriative Use
  - Municipal Agencies

*Numbers above are estimates from adopted GSP and may be updated and refined as allocation framework is further developed*



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## Next Steps for Allocation Framework as Outlined in GSP (pg 6-4)

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- Agreeing upon details of how allocations to each GSA will be established
- Developing, refining, and documenting estimates of developed supply and determining rights to confirmed estimates of developed supply
- Determining how pumping will be measured through metering program or equivalent
- Establishing sustainable allocation trading and crediting rules
- Implementation schedule and timing
- Conducting outreach and communications

Image courtesy: Veronica Adrover/UC Merced



# 5 yr targets are being considered by GSAs currently

- GSAs are evaluating GSA-specific 5 yr targets to make immediate progress while the allocation framework discussions are ongoing
- Draft Targets under consideration by GSAs:

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## MIUGSA

Goal is to reduce pumping of native groundwater to 1.5 AF/AC.

Public process underway for development of principle guidelines for GSP implementation within MIUGSA.

## MSGSA

By five years from now, reduction in consumptive use of 10,000 to 15,000 AF and reduce additional 6,000 to 8,000 AFY each year after that.

## TIWD GSA #1

Have meters on all active wells.  
5 yr objective – stay within 1.5 AF/AC and evaluate building additional storage

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Image courtesy: Veronica Adrover/UC Merced





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# Coordination Committee April Meeting Summary

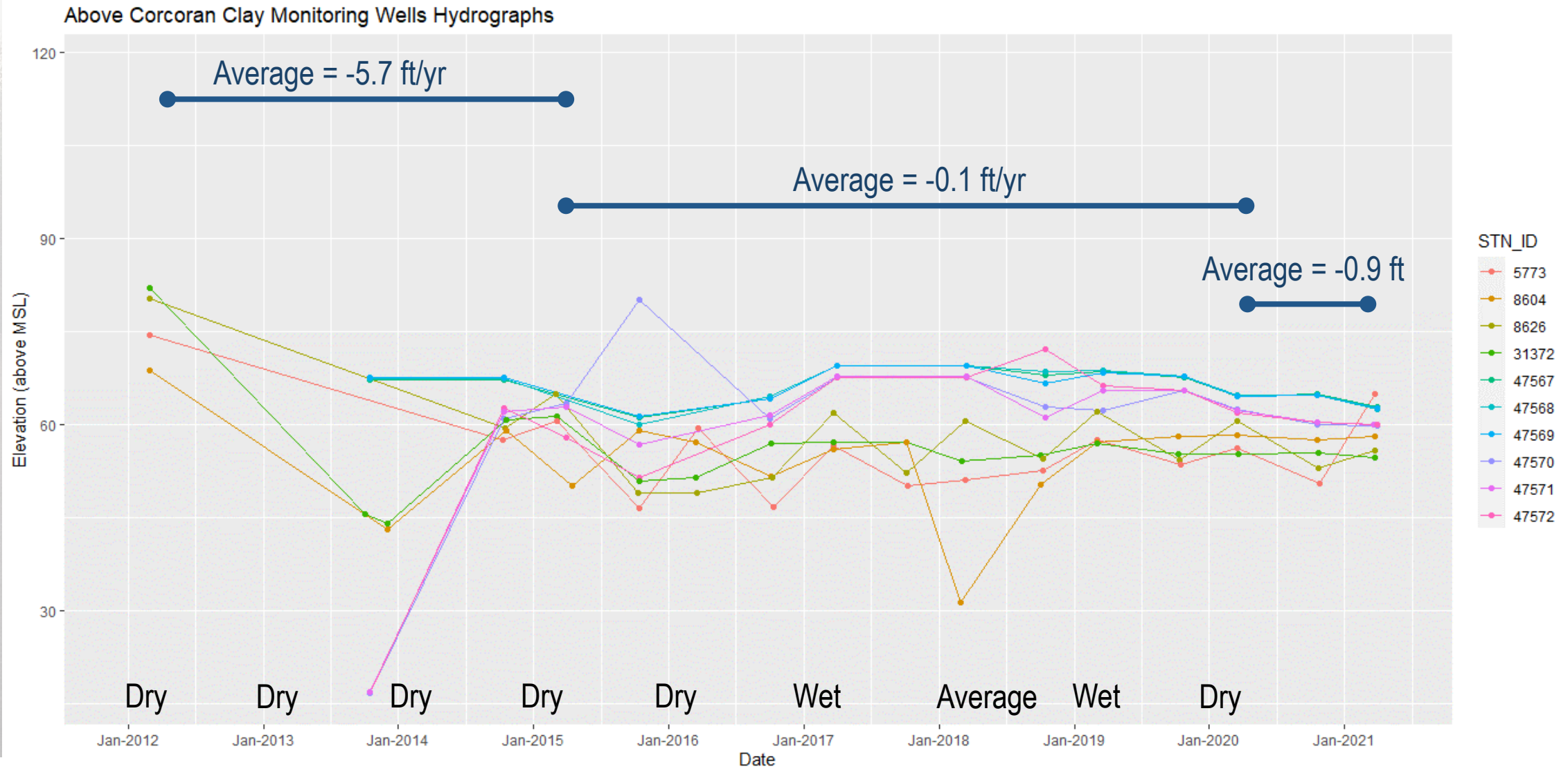
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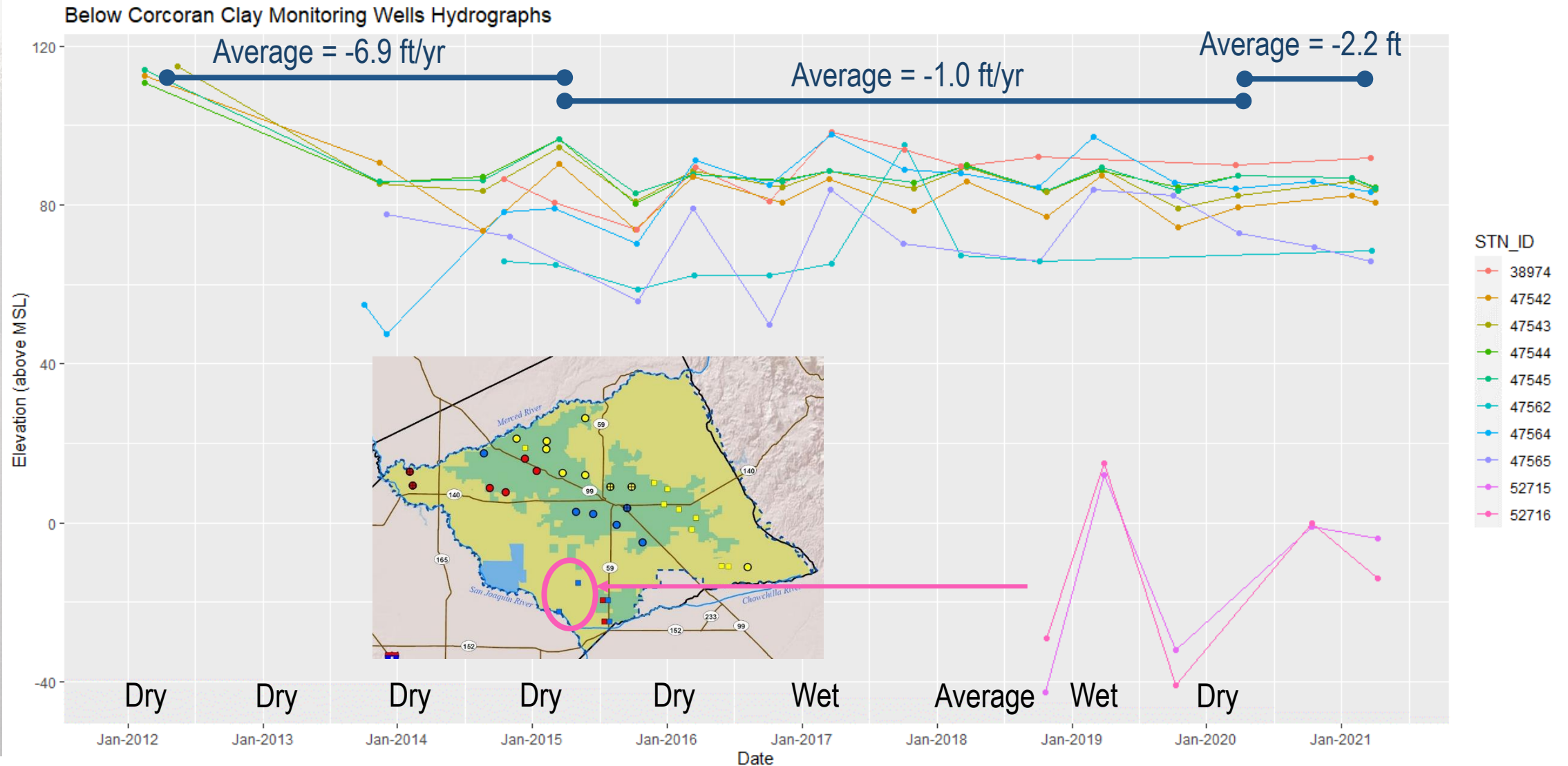




# Current Basin Conditions – Spring 2021 measurements



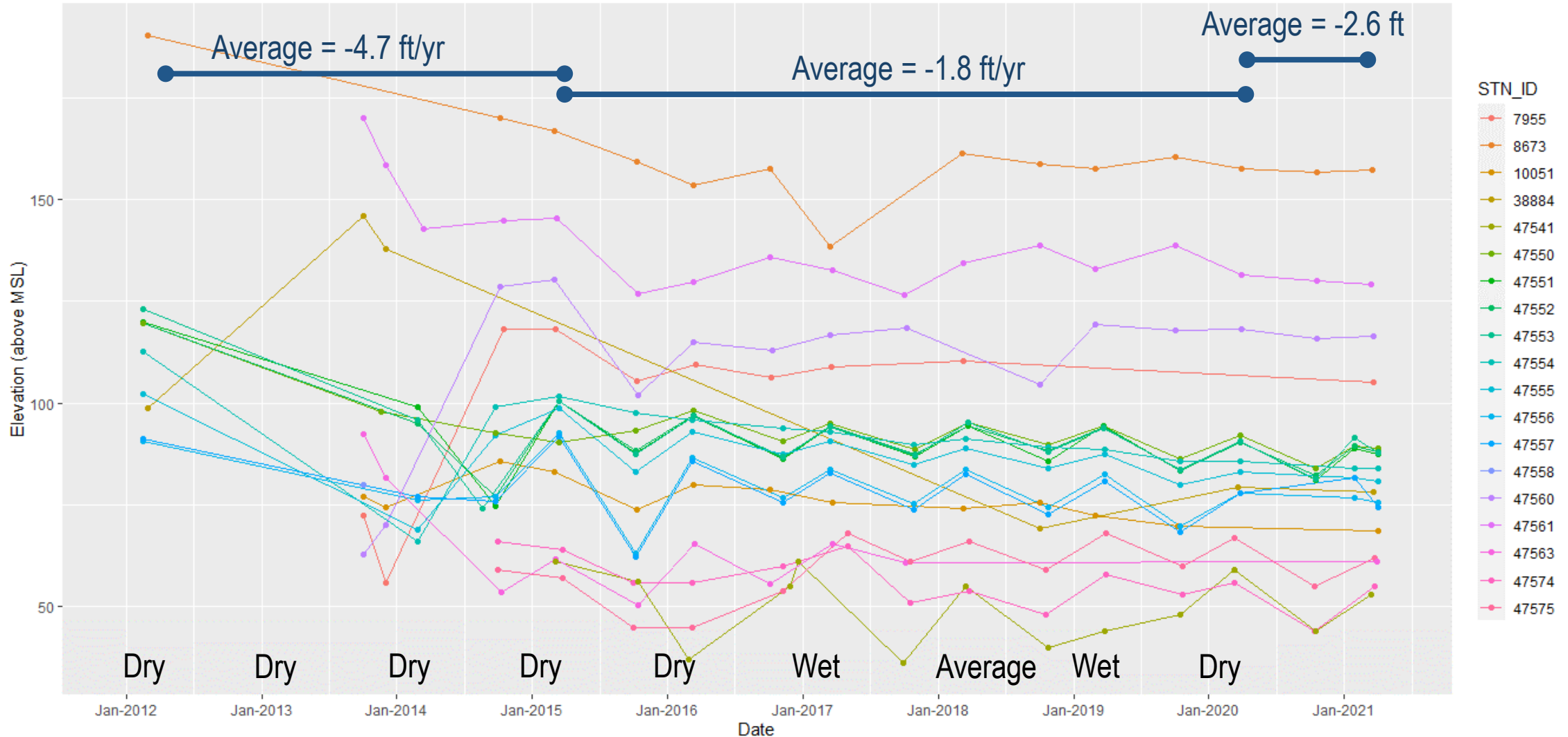
# Current Basin Conditions – Spring 2021 measurements





# Current Basin Conditions – Spring 2021 measurements

Outside Corcoran Clay Monitoring Wells Hydrographs



# Meadowbrook Intertie Study Update

- AECOM presented results of Prop 1 funded study (slides on Merced GSP website)
- Goal: evaluate the needs and feasibility of connecting the Meadowbrook water system to either the Atwater or Merced city water system
- Meadowbrook system serves population of 5,640 with four wells and no significant storage
- Evaluation found emergency intertie of at least 1,250 gpm would benefit the system
- Interties to both Merced and Atwater systems are feasible with costs ranging from \$1M to \$2.5M depending on location



Image courtesy: Veronica Adrovo





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# Data Gaps Plan

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Image courtesy: Veronica Adrover/UC Merced



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# Purpose & Goal

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- **Purpose** – Improve scientific understanding of Subbasin to support ongoing basin management and policy making
- **Goal** – Develop a plan that identifies and ranks priority areas for the installation of monitoring wells or subsidence monitoring stations to support basin characterization and future GSP refinement.

Image courtesy: Veronica Adrover/UC Merced



# Data needs identified in GSP

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- Better understand groundwater levels in poorly monitored portions of the subbasin
- Improve characterization of groundwater quality without duplicating other efforts
- Better understand depth at which subsidence is occurring
- Better understanding of shallow groundwater condition near GDEs and rivers
- Others
  - Inter-basin flows
  - Model improvement
  - Agro-climate station (e.g. CIMIS station)
  - Areas of interest (e.g., high pumping areas, groundwater level depressions, significant recharge areas, specific projects)



# Data Gaps Tool Overview

Existing Well Tiering Rank

Depth to Groundwater

Distance to Streams

Water Quality

Subsidence

Distance to Subbasin Boundary

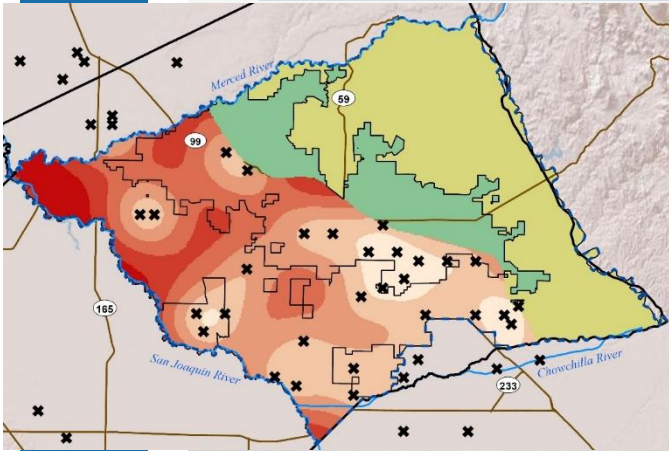
Natural Communities Commonly Associated with Groundwater

Disadvantaged Communities

Highlight areas of uncertainty

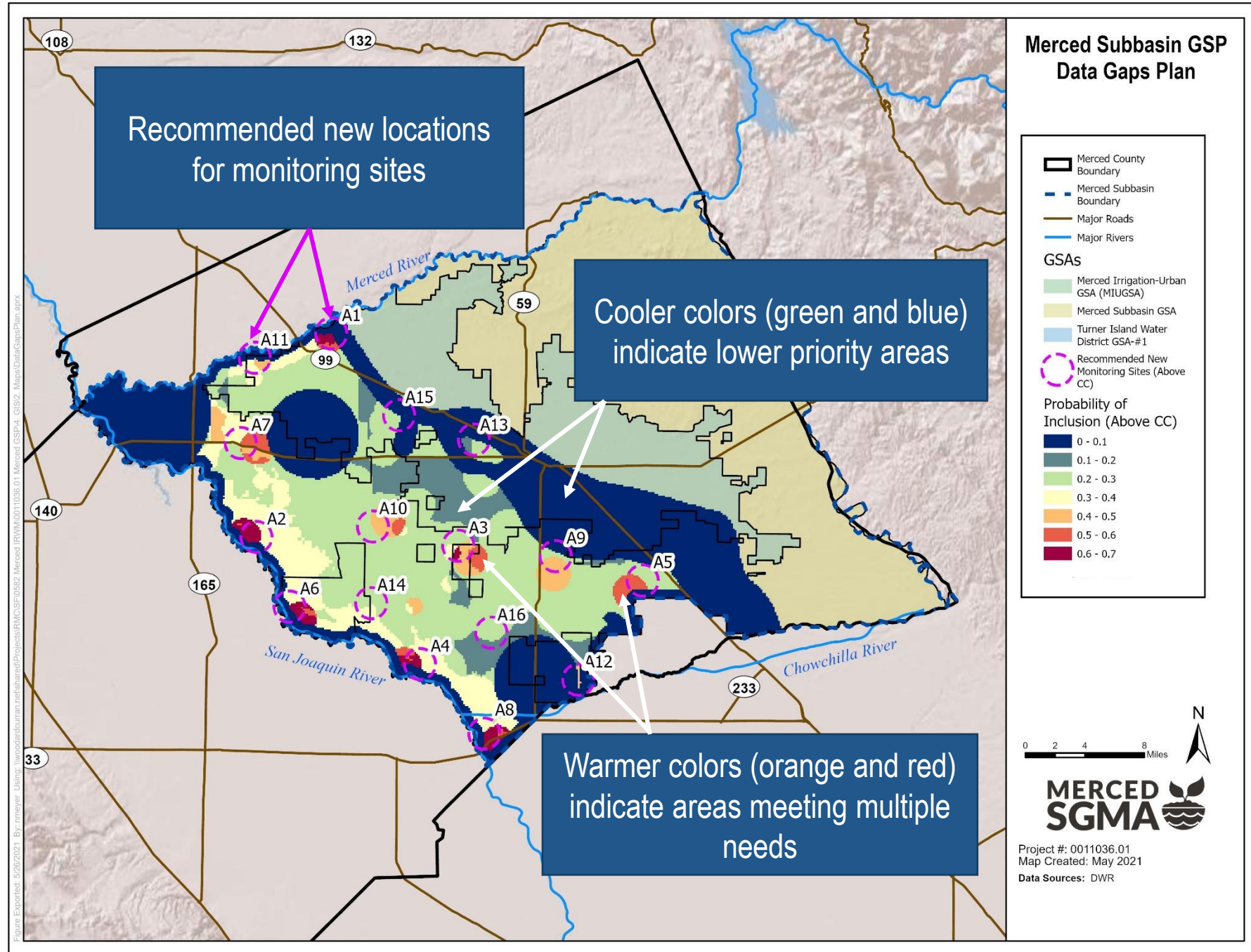
Consider other important factors for monitoring site locations

Run spatial analysis tool to get recommendations on where to locate additional wells



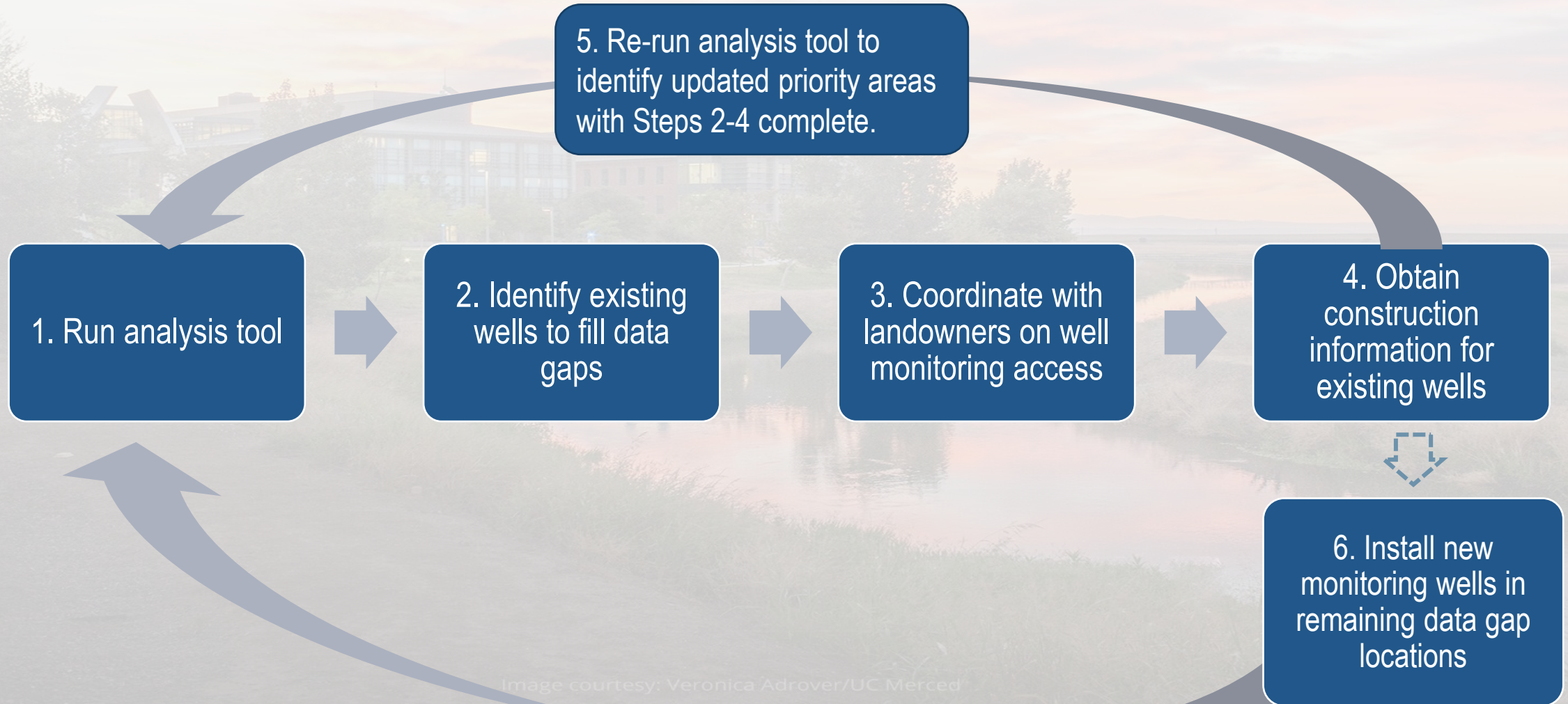


Run spatial analysis tool to get recommended locations for additional wells:  
Example results for Above Corcoran Clay





# Implementation Plan for Groundwater Level Wells





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# Other Recommendations

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## Groundwater Quality

- Increase monitoring frequency - coordinate with existing efforts by ESJWQC in GQTM & work with well owners to coordinate increased TDS sampling at existing wells.
- Identify additional wells in Below Corcoran Clay or rural/deep Outside Corcoran Clay

## Subsidence

- Contact drillers/well owners to look at depth of casing failures
- Consider extensometers to measure depth at which compaction is occurring (\$\$\$ likely requires outside funding)

## Interconnected Surface Waters

- Expand monitoring network, incorporate new data, coordinate data collection adjacent to Subbasin boundary

## Model / Climate

- Consider installation of a second CIMIS station in the Subbasin

Image courtesy: Veronica Adrover/UC Merced





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# Drought Preparedness

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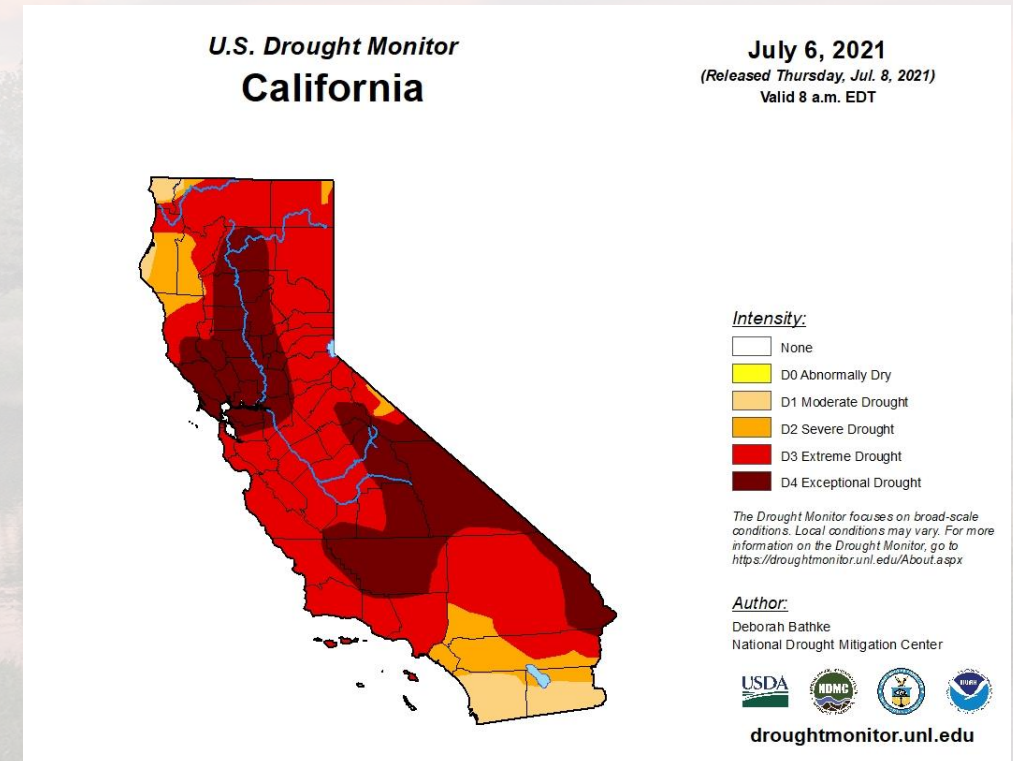
Image courtesy: Veronica Adrover/UC Merced





# Available Resources

- **California Department of Water Resources - Household Water Supply Shortage Reporting System**  
<https://mydrywatersupply.water.ca.gov/report/>
- **Self-Help Enterprises – Emergency Services Program**
  - Water Well Assessment, Repair or Replacement
  - Emergency Access to Water Tanks, Hauled Water & Bottled Water
  - Water Quality Testing and Filtration<https://www.selfhelpenterprises.org/programs/emergency-services/>  
Phone: (559) 802-1685
- **California Water Board – Drought Information & Updates**  
[https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/drought/](https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/)
- **National Integrated Drought Information System**  
<https://www.drought.gov/drought-in-action/drought-relief-recovery-and-support>







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# Public Comment

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Image courtesy: Veronica Adrover/UC Merced







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# Next Steps

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Image courtesy: Veronica Adrover/UC Merced





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# What's coming up next?

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- Coordination Committee meets on July 26 at 1:15pm
- Adjourn to next Stakeholder Advisory Committee meeting: October 18

Image courtesy: Veronica Adrover/UC Merced



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# Merced GSP Stakeholder Advisory Committee

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