Merced GSP
Coordination Committee Meeting

November 29, 2023

Meeting will begin at 10 am or a few minutes after – thank you for joining us!

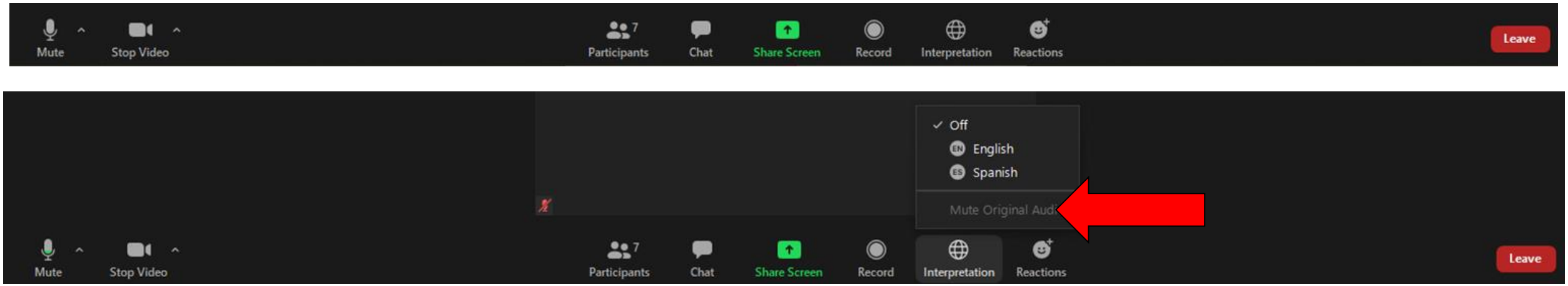
Merced Irrigation-Urban GSA
Merced Subbasin GSA
Turner Island Water District GSA-1

MERCED SGMA

Welcome, Instructions for Zoom
Bienvenidos, Instrucciones para Zoom

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

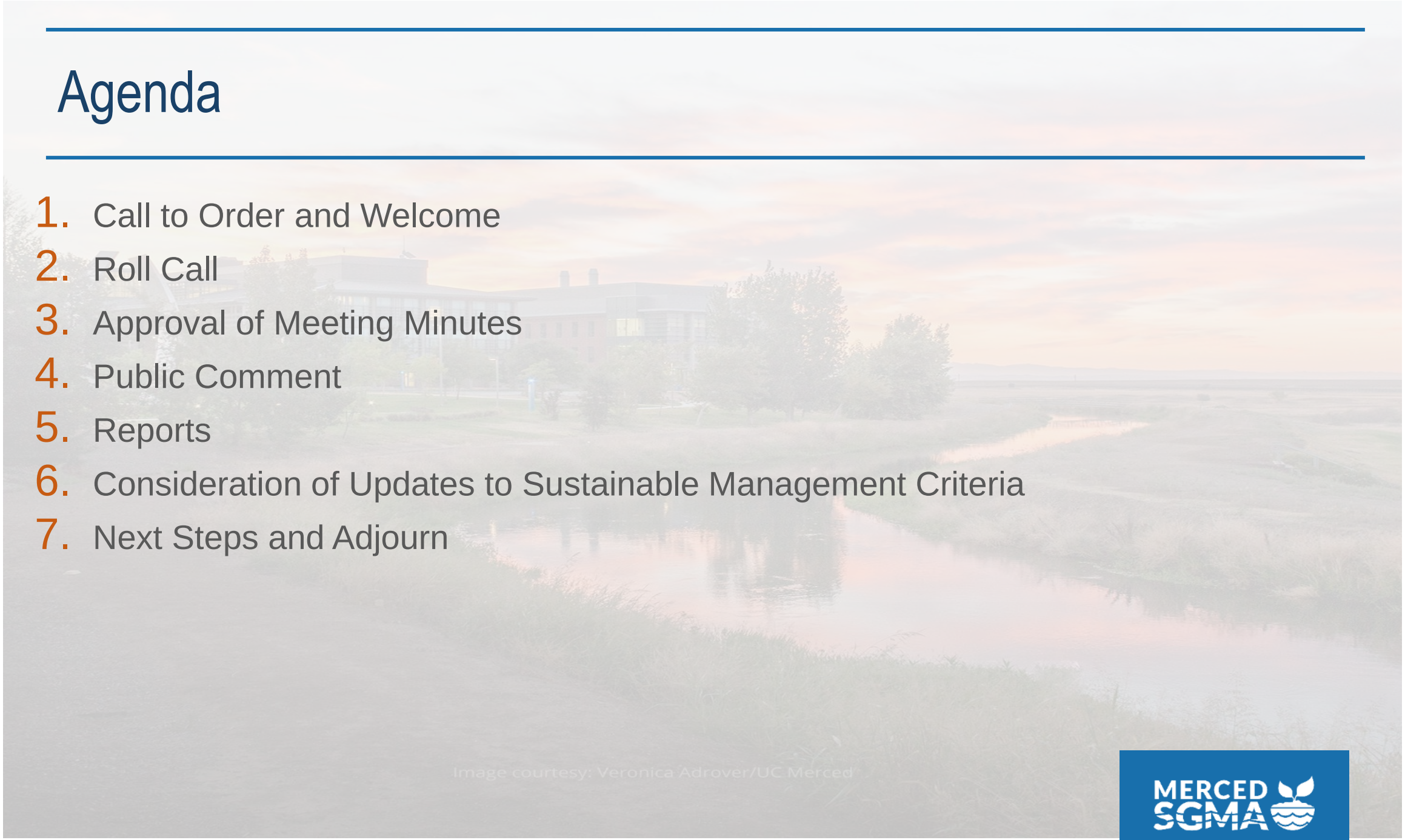
Si solamente habla español, debe seleccionar un canal de idioma



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. Approval of Meeting Minutes
4. Public Comment
5. Reports
6. Consideration of Updates to Sustainable Management Criteria
7. Next Steps and Adjourn



Coordination Committee Roll Call

Representative	GSA
Hicham ElTal	Merced Irrigation-Urban GSA
Scott McBride	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

*Scott McBride has replaced Stephanie Dietz on the committee

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Approval of Meeting Minutes

Image courtesy: Veronica Adrover/UC Merced

Approval of Meeting Minutes

- May 24, 2023
- September 18, 2023

Questions/Comments from Public:

For remote attendees, 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

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

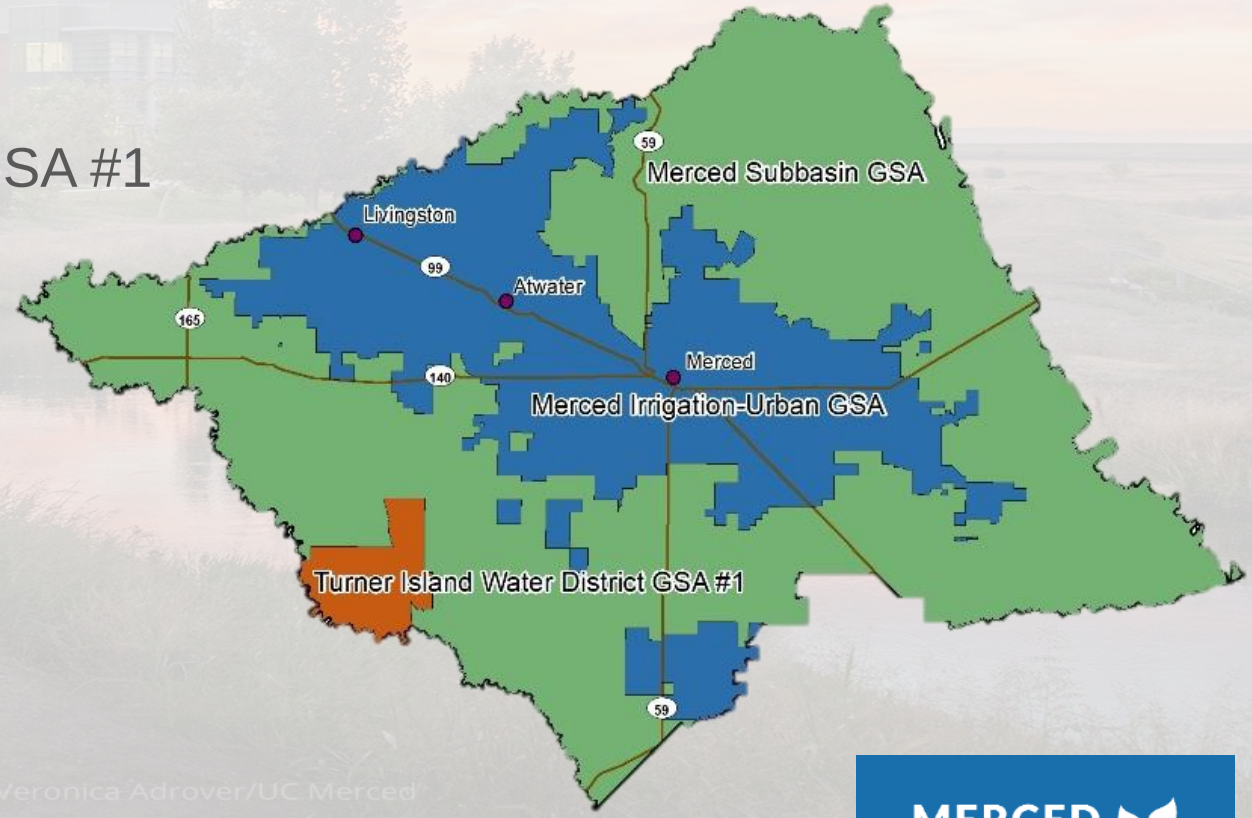

Image courtesy: Veronica Adrover/UC Merced

Current Conditions Report

See separate slide deck

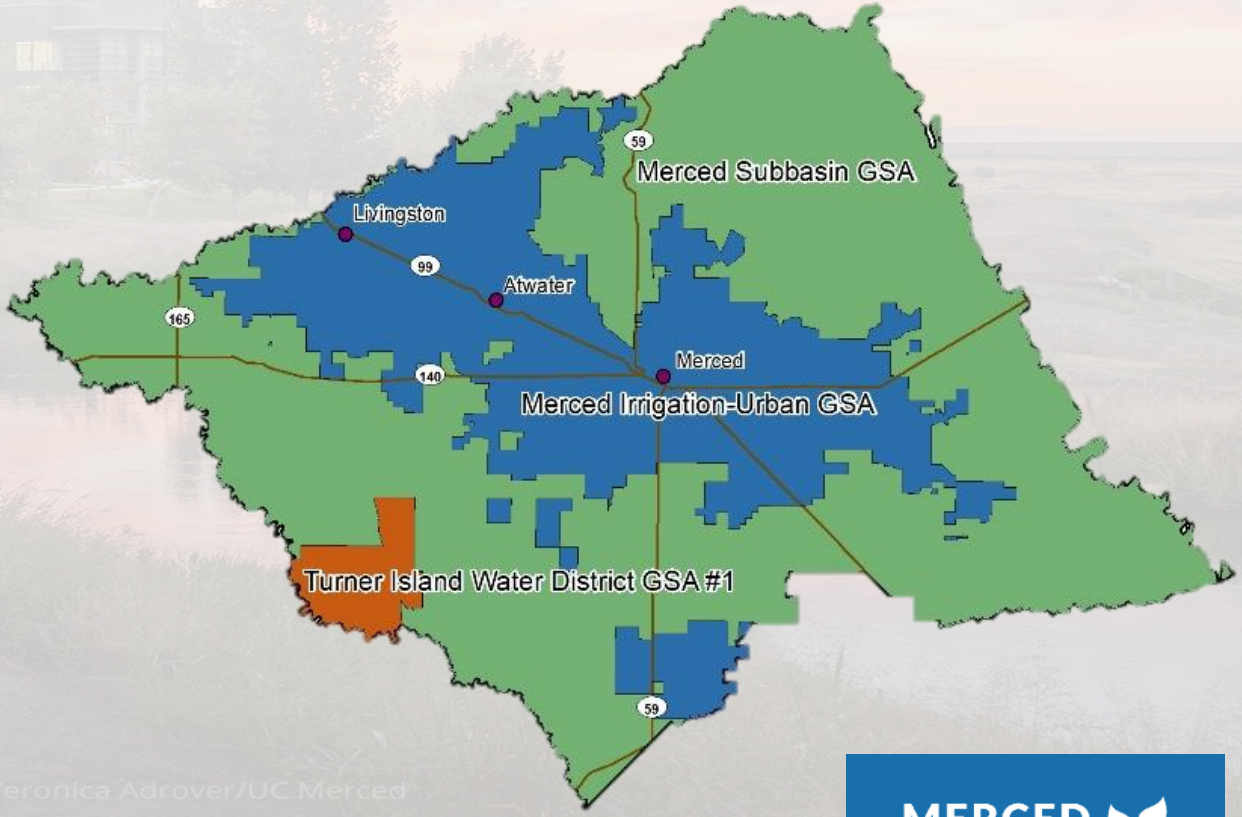

Image courtesy: Veronica Adrover/UC Merced

Consideration of Updates to Sustainable Management Criteria

Image courtesy: Veronica Adrover/UC Merced

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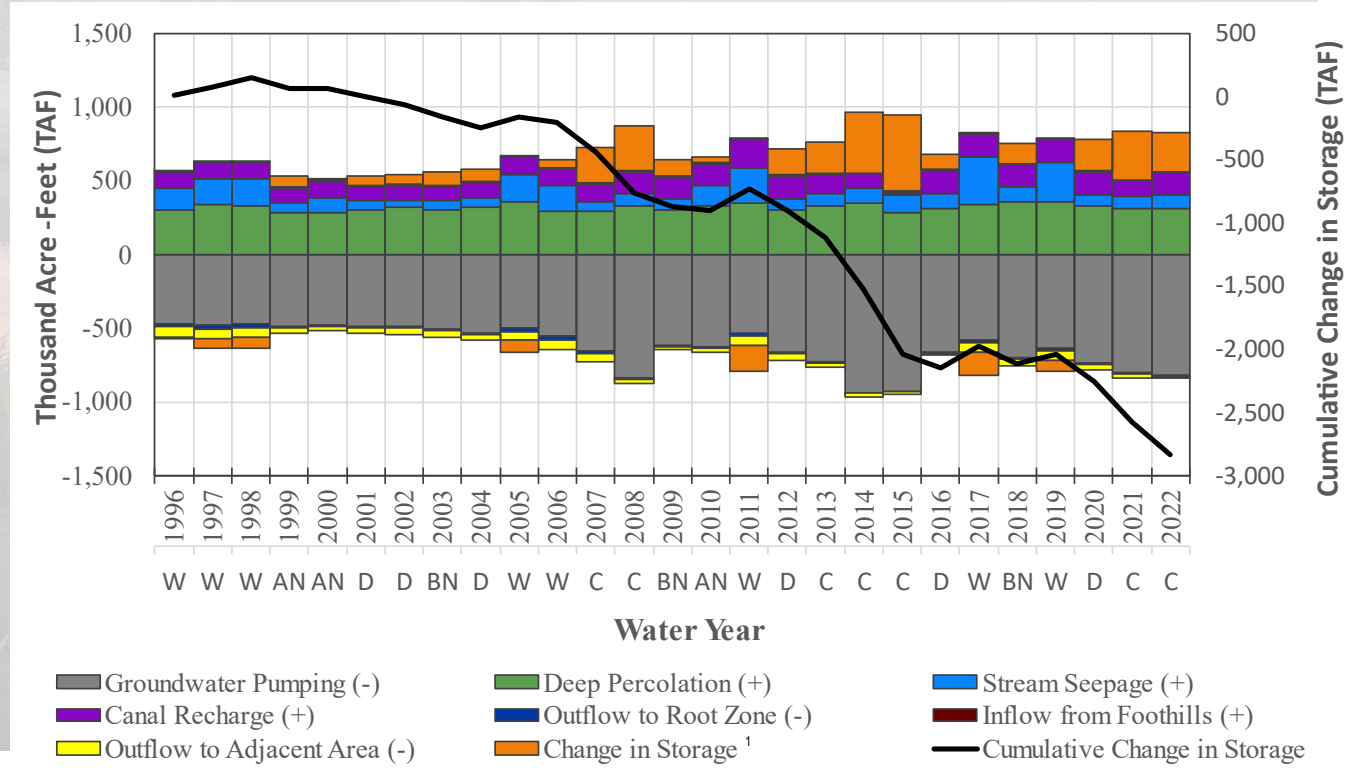
Reduction of Groundwater Storage

- GSP does not include sustainable management criteria for groundwater storage
- DWR recommended corrective action #5 requests establishing SMC
- Per DWR: Reduction of groundwater storage is applicable to the basin because:
  - Groundwater levels are anticipated to decline below historical lows prior to achieving sustainability by 2040
  - Basin has demonstrated an increased overdraft rate of 0.3% per year, indicating a reduction of groundwater storage



Merced GSP WY 2022 Annual Report Cumulative Change in Storage Graph

Reduction of Groundwater Storage – nearby basins

- Neighboring basins (Turlock, Delta-Mendota, Chowchilla) have each established SMC for reduction of groundwater storage
- Each neighboring basin uses groundwater levels as a proxy and their SMC for groundwater storage are equivalent to those established for groundwater levels
- While the Delta-Mendota and Chowchilla GSPs were determined inadequate, the Department did not have any recommended actions for the basins' approach to using groundwater levels as a proxy for groundwater storage

Image courtesy: Veronica Adrover/UC Merced

Considerations for Establishing Sustainable Management Criteria for the Reduction of Groundwater Storage

- Establish SMC for reduction of groundwater storage using:
  a) Groundwater levels as a proxy (most common method used in GSPs)

  or

  b) A set storage volume or annual storage volume change (least common method in GSPs)

  or

- Maintain current approach that storage is not a relevant indicator

Image courtesy: Veronica Adrover/UC Merced

Degraded Water Quality

- Existing GSP includes SMC for only salinity (measured as total dissolved solids, TDS)
- GSP discusses other potential constituents of concern (COC) such as arsenic, iron, uranium, and manganese
  - Criteria not established because there is no distinct nexus between GSA management activities impacting/exacerbating these COCs
- DWR recommended additional justification and explanation be provided on:
  - How the other COCs will be managed and monitored as the GSP is implemented
  - If establishing sustainable management criteria for these COCs is warranted in the future

Image courtesy: Veronica Adrover/UC Merced

Degraded Water Quality – nearby basins

- Neighboring basins (Turlock, Chowchilla, Delta-Mendota) and similar basins (Eastern San Joaquin) have identified similar COCs in their GSPs
- Turlock established SMCs for nitrate, TDS, and arsenic where minimum thresholds are equal to California maximum contaminant levels (MCLs)
- In Chowchilla, minimum thresholds were set at MCLs for locations where exceedances above the MCL were not observed; in the event existing or historical concentrations already exceeded the MCL, minimum thresholds were established as the current concentration plus 20 percent of that concentration
  - For example: 540 mg/L (historical exceedance) + 108 (20%) = 648 mg/L (minimum threshold)

Image courtesy: Veronica Adrover/UC Merced

Degraded Water Quality – nearby basins

- Eastern San Joaquin and Delta-Mendota are similar to Merced: TDS is only COC (Minimum thresholds equal to the secondary maximum contaminant level [SMCL])
- Eastern San Joaquin: SMC based on stakeholder concerns for drinking water and crop tolerances.
- Eastern San Joaquin, like Merced, does not have criteria for arsenic or nitrate.
  - However, the GSAs plan to monitor these COCs to determine if criteria are needed in the future

Crop Type	Salinity Tolerance (mg/L TDS)
Fruit & Nut Trees - Almonds	900
Fruit & Nut Trees - Apples	1,000
Vineyards - Grapes	1,100
Alfalfa	1,400
Grain - Wheat	4,000
Field Crops - Corn	1,100
Truck Crops - Tomatoes	1,500
Rice	1,700

Eastern San Joaquin GSP
Salinity Tolerances of Major Subbasin Crops

Image courtesy: Veronica Adrover/UC Merced

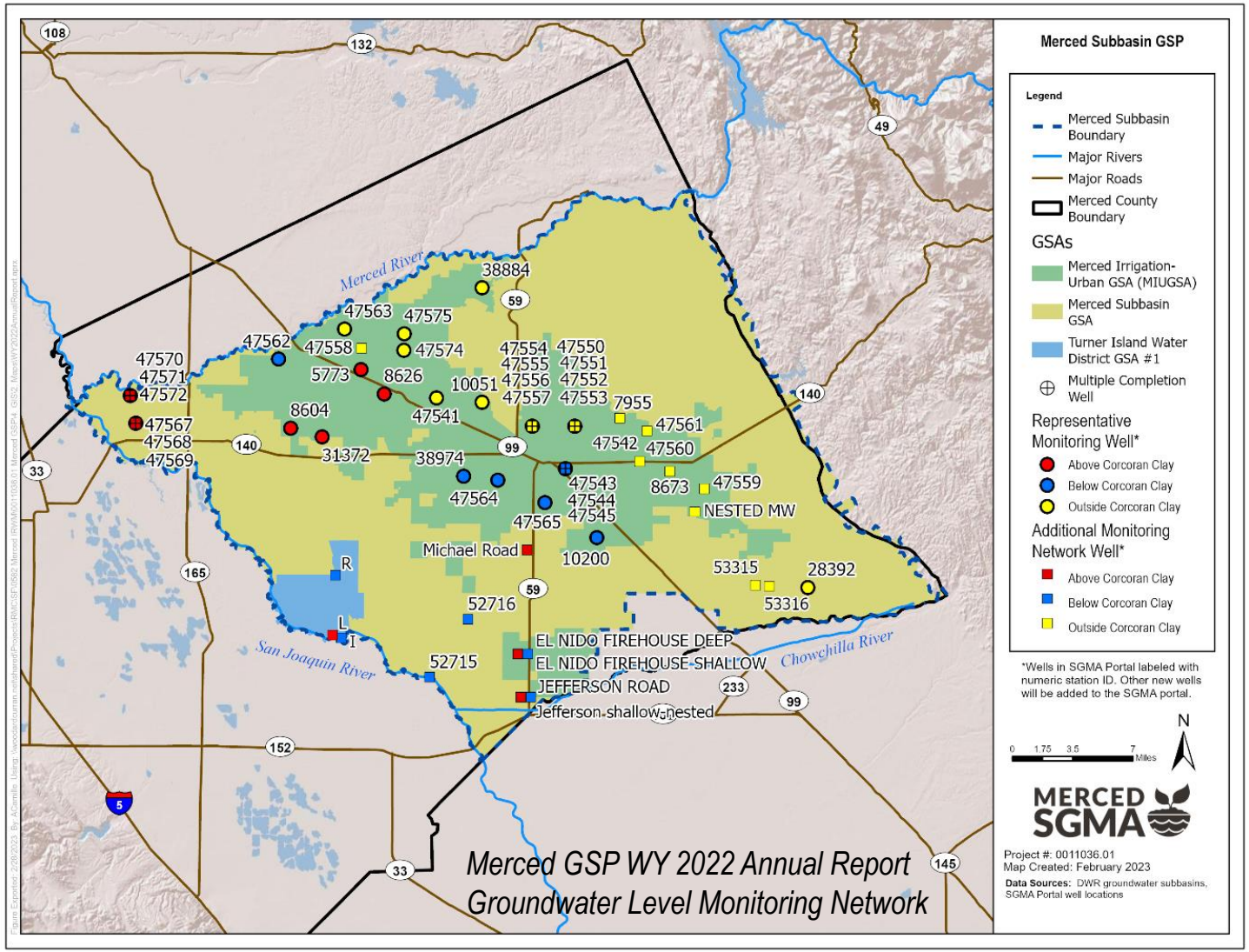
Considerations for Revising Degraded Water Quality Sustainable Management Criteria

- Already planned:
  - Continued monitoring of COCs which do not have established SMC in conjunction with local monitoring programs
- Potential new considerations:
  - Near-term task: graph groundwater elevation and COC concentrations to identify and evaluate trends that may exist
  - If no correlation observed: update GSP with this additional analysis
  - If correlation observed, return to CC to discuss potential establishment of SMC or other follow-up actions needed

Image courtesy: Veronica Adrover/UC Merced

Expanding the Chronic Lowering of Groundwater Levels Representative Monitoring Network

- GSAs have made progress in filling data gaps in the monitoring network
- Efforts continue at additional sites
- Next step – turn new monitoring wells into <u>representative</u> monitoring wells



Expanding the Chronic Lowering of Groundwater Levels Representative Monitoring Network

Sustainability Indicator	Minimum Threshold (MT)	Interim Milestone (IM)	Measurable Objective (MO)	Undesirable Result
Groundwater Levels	Fall 2015 groundwater elevation	Based on range of projected values that account for hydrologic uncertainty	November or October 2011 groundwater elevation (measured, or estimation if historical record not available)	Greater than 25% of representative wells fall below MT in 2 consecutive years

- New wells don't have historical data from 2011 or 2015 to set MOs/MTs
- Some new wells aren't located near existing wells with a longer monitoring history
- Propose to evaluate use of linear regression to set MTs and MOs at these sites
- Will return to CC with draft results

Next Steps

Image courtesy: Veronica Adrover/UC Merced

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What's coming up next?

- Adjourn to next meeting, proposed January 24, 2024 at 10am
- Anticipated topics:
  - Updates to basin conditions, including, as appropriate, incorporation of AEM data, recently collected groundwater level data, recently performed groundwater quality sampling, and consideration of refinement of the characterization of depletions of interconnected surface water.

Image courtesy: Veronica Adrover/UC Merced

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