

NASb 2025 Public Meeting Notes

January 22, 2026

- **Attendees (34)**

- Trevor Joesph, SGA
- Art Machado, Woodard & Curran
- Jim Blanke, Woodard & Curran
- Ali Taghavi, Woodard & Curran
- Katie Cole, Woodard & Curran
- Jingnan Zhou, Woodard & Curran
- Max McNally, Woodard & Curran
- Christina Hanson, WPGSA
- Brett Storey, West Yost
- Jeremy van Horn, WPGSA
- Jay Boatwright, SSWD
- Kimberly Reese RD 1001 GSA
- Harden Cornwell, SSWD GSA
- Meghan Burkhart, DWR
- Matti Siltanen, DWR
- Joel Leong
- Julain Consoli
- Christina Kohn
- Angel Green
- Betsey Weiland
- Brian Magee
- Bryan Thoreson
- Darin Reintjes
- Holger Huerst
- Kerri London
- Angel Green
- Ellen Fickewirth
- Ken Campbell
- Lynn Wheat
- Jim Peifer
- Lan N
- Janna
- Clyde 2
- Jeff S

- **Welcome and Meeting Purpose**

- See slides

- **GSP Amendment**

- Overview
 - Amendment will:
 - Address six corrective actions from DWR
 - Incorporate the substantial improvements in data and understanding
 - GSAs are also considering refinements to meet local needs
 - To be submitted by January 2027
- Approach to GSP Amendment
 - Review DWR feedback (in the form of corrective actions)
 - Consider what has and hasn't worked as the GSP has been implemented
 - Integrate new data and modeling needs
- DWR's 6 Recommended Corrective Actions
 - Bottom of basin definition
 - Data gaps
 - Water quality criteria
 - Subsidence criteria
 - Interconnected surface water criteria
 - Monitoring network documentation
- Sustainable Management Criteria (SMC) Overview
 - Reviewed definitions for: measurable objectives (MOs), interim milestones, minimum thresholds (MTs), and undesirable results
- Timeline
 - See slide for visual of timeline
- Sustainability Indicators
 - There are 6 sustainability indicators in SGMA; seawater intrusion is not applicable to the basin

- Chronic lowering of groundwater levels (November 19th Public Meeting)
 - Land subsidence (November 19th Public Meeting)
 - Reduction of groundwater storage (tied to previous two)
 - Degraded water quality (January 22nd Public Meeting)
 - Depletions of interconnected surface water (March 12th Public Meeting)
 - Meeting today focuses on degraded water quality
 - Future public meeting will focus on depletions of interconnected surface waters
- Comment by Angel Green: Are any assumptions from the original GSP being revisited due to new data, climate trends, or land use changes?
 - Response by Jim Blanke: Yes! We are considering a broad suite of new data available since the GSP was originally developed. This includes groundwater level data, streamflow data, hydrology and climate data, land use data and more. These are all incorporated into the management approach and in the analysis of water budgets.
- Water Quality SMC
 - Established criteria in 2021 GSP
 - Developed for two types of wells: Shallow aquifer and public water system wells
 - TDS and Nitrate are the primary constituents of concern in the Subbasin
- Why update the water quality SMC?
 - Recommended Corrective Action from DWR
 - New data and information on water quality conditions
 - Knowledge gained in implementation of the GSP
 - Additional time to consider best approaches
 - Specifics
 - Establish one set of criteria for both well types to better manage groundwater quality
 - Apply state or federal standards to better determine when human health risk or crop stress may occur
 - Use of Subbasin-wide data to characterize areas of high concentrations
 - Additional historical data and clear timeframes used to define recent concentrations and trends
- Approach to updating water quality SMC
 - Evaluate DWR's recommendations and 2021 GSP
 - Review data from all well types and refine monitoring network
 - Evaluate link between groundwater level changes and water quality
 - Determine if criteria should be consistent with both well types
 - Revised criteria to be based on state and federal standards
 - Finalize SMC
- Undesirable Results Overview
 - Undesirable results include:
 - Water quality that fails to meet state or federal standards for: municipal/ public water system wells, private well owners, and agricultural crops
 - Measured by MT exceedances
 - Undesirable Result occurs when:
 - 25% or more of all representative monitoring site (RMS) wells exceed MTs for two consecutive reporting periods
 - MTs based on state or federal standards
 - TDS Upper secondary maximum containment level (SMCL): 1,000 g/L
 - Nitrate maximum containment level (MCL): 10 mg/L
 - Proposed MOs and Interim Milestones
 - Set as equal to each other

- See graphs for additional information
- Question by Jeff S.: Any explanation as to why the TDS graph seems to have a high amount of increase from 2023 to 2025? Many wells are increasing significantly
 - Response by Jim Blanke: That's a good observation. There are several wells showing an increase in TDS concentrations between 2023 and 2025. No cause has been identified, but these are wells that we will be watching closely in the future to see if that becomes a longer-term trend or if there was something unique about the 2025 measurements.
 - Response by Trevor Joesph: GSAs are working to identify potential sources for increases in TDS recently observed. Effects could be upstream or impacted by groundwater elevations.
 - Response from Jim Blanke: It's important to note that the 10-year trends are relatively stable which is indicative that the issue is not too great of concern. This is a typical temporal pattern and not cause for alarm.
 - Follow up question by Jeff S.: And/or is there any correlation to rainfall years (increases during high rainfall years or vice-versa)?
 - Response from Trevor Joesph: Yes, we generally correlate these observations to changes in groundwater elevations that are tied to water year types. Not something we have monitored.
 - Response from Jim Blanke: A lot of these wells are very deep and it takes time for the water to percolate down to the well screens. Stability of groundwater quality are indicative of good Subbasin health and do not really require further study of precipitation impacts on water quality.
 - Response by Art Machado: The GSAs will be releasing a groundwater quality memorandum following the release of the 2025 Annual Report. This will be available on the NASb website.
- Question from Clyde: If a groundwater level falls below a MT, who is responsible? Are the GSAs managers or helpers? Are cities responsible at all?
 - Response from Trevor Joesph: GSAs have been grappling with questions regarding whether the setting of initial MTs were accurate and was the threshold set at the right spot. If they were, how can we work to bring water levels above that MT. GSAs have a responsibility per SGMA to investigate and come up with potential solutions, however there are limits. The GSAs exist to set and study SGMA requirements, however, the onus remains on the entity pumping the groundwater.
- Question from Brian Magee: Is there a geographic pattern to these TDS increases? As it relates to TDS and Nitrate these are non-point source pollutants. Is it safe to assume that the GSA might be considering a source survey?
 - Response from Trevor Joesph: Source surveys can be helpful to see if/where contaminates are reaching groundwater. The Subbasin has been lucky to mostly avoid TDS and Nitrate issues. Some subsections of the Subbasin have observed higher TDS but this is often related to the drilling of new wells into areas with soil of higher salinity.
 - Response from Art Machado: No true geographic pattern for either TDS or Nitrate. More resembles small blips here and there. Northwest of the Subbasin has slightly higher Nitrate.
- Question from Clyde: Can you explain why TDS and Nitrate are problems?
 - Response from Art Machado: TDS does not have strict human health risk standards yet, but there are largely aesthetic (e.g., odor, taste, color). TDS and Nitrate were selected for analysis since they are the most prevalent in the Subbasin. It's important to monitor for potential plumes transferring other constituents.
 - Response from Trevor Joesph: TDS and Nitrate are indicative of other ongoing changes/arising issues in the Subbasin. Think of them like a canary in the coal mine. TDS and Nitrate issues are coupled with other actions that the GSAs are interested in and further informs how groundwater is used in the Subbasin.
- Question from Brian Magee: Please feel free to consider this off-line. There is a state-wide sampling program currently being performed with the SWRCB for more than 3,500 residential drinking water

wells to understand the distribution of PFAS (and related compounds). I recommend that this data should be considered if the data is available.

- Response from Trevor Joesph: Thanks, Brian. Can consider offline.

- **CoSANA Model Upgrade Status**

- Snapshot
 - Purpose
 - Update specific model features
 - Data and technical updates
 - Data gaps, hydrology/period of record, hydrogeology, land use, cropping, and stream geometry
 - Model refinements
 - Updated inputs and recalibration
 - Reporting and coordination
 - 2025 Annual Report
 - Next steps
 - Update baseline conditions, analyses (SMCs, surface water depletion, PMAs)
- Overview
 - 900,000 acres (1,400 square miles)
 - Consumnes, South American, and North American Subbasin (and part of Eastern San Joaquin Subbasin)
 - Includes surface, groundwater, and recycled water
 - Historical period
 - 1970-2024
- See slides for further information on stream geometry, stratigraphy, model calibration, model readouts (i.e., water budgets)
- Next Steps
 - Update Baseline Conditions
 - Perform Sustainability Analysis
 - Complete 2025 Annual Report

- Question from Holger Fuerst: Do we know how much of this upward trend in the groundwater storage is attributable to active groundwater banking over the last 2 decades?

- Response from Trevor Joesph: Recently analyzed the effects of previously banked water. There isn't a number yet relating to storage, but over a 27 year period there is about 250,000 AF or more groundwater that would not be there if not for the efforts of local land managers. Volume of water contributed is even higher but there are Subbasin outflows.

- Question from Clyde: Data presented to today was looking back, but is there analysis of what demands will look like in the future in regards to growing demand and client change?

- Response from Jim Blanke: The GSP addresses Current and Projected Conditions Baselines. There is also a Climate Change Scenario that addresses this concern.

- **Upcoming Public Engagement**

- Mar 12, 2026 Meeting
 - Projects & Management Actions (PMAs)
 - GSP Implementation
 - Periodic Evaluation
- Summer 2026
 - 2025 Groundwater Conditions and Annual Report
- Fall/Winter 2026
 - Public Comment on GSP Amendment
 - GSP Amendment Adoption