



Stanislaus & Tuolumne Rivers Groundwater Basin Association
Groundwater Sustainability Agency
1231 11th Street | Modesto, CA 95354
Email: strgba@mid.org

STRGBA GSA AGENDA

July 10, 2024 (1:30 p.m. – 3:00 p.m.)

Webinar Digital Platform or Phone Meeting

<https://us02web.zoom.us/j/82844864384>

By phone: 1-669-900-9128

Webinar ID: 828 4486 4384

PUBLIC PARTICIPATION

The public may participate in this meeting in the three ways described below.

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In person: Oakdale Irrigation District 1205 E. F Street, Oakdale

To view a physical copy of the agenda, please visit the Oakdale Irrigation District office at 1205 East F Street, Oakdale. A complete copy of the agenda packet is also available on www.strgba.org.



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1. Call to Order/Welcome and Introductions
(Four agencies are needed for a quorum)
2. Business from the Public
Who: Public
Expected Outcome: Interested persons are welcome to introduce any topic within the Agency's jurisdiction. Matters presented under this heading may be discussed but no action will be taken by the Agency at this meeting. It is not required, but speakers may provide their name and address. Public Comments will be limited to five minutes per speaker.
3. Topic: Approve 6/5/2024 Meeting Minutes [[Action Item](#)]
Who: Eric Thorburn, Committee
Expected Outcome: Approval
4. Topic: Approve Resolution Adopting a Revised GSP and Documenting the Commitment to Develop and Implement a Well Mitigation Program and Management Actions in the Modesto Groundwater Subbasin [[Action Item](#)]
Who: Todd Groundwater/Woodard & Curran, Committee
Expected Outcome: Approval
5. Next Meeting
August 14, 2024, at 1:30 p.m.
6. Committee Comments/Reports



MEETING MINUTES

June 5, 2024 (1:30 p.m. – 3:00 p.m.)

The meeting was called to order at 1:31 p.m.

1. Welcome and Introductions

The following members of the Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency (STRGBA GSA) attended either in-person or via Zoom.

In-Person Attendees:

Modesto Irrigation District (MID): Jesse Franco
Oakdale Irrigation District (OID): Eric Thorburn
Stanislaus County: Christy McKinnon
City of Oakdale: Ian Sather
City of Modesto: Tim Barahona
City of Riverbank: Darin Smallen

Other Attendees:

Liz Elliott
Hilary Reinhard
Dimitri Que Lee
Jose McEra
Stacy Henderson
Julia Stornetta
Louis Brichetto
Ali Stevens
Iris Priestaf
Sara Cherry
Gordon Enas
Jacob DeBoer

2. Business from the Public

N/A

3. Approve 5/22/2024 Meeting Minutes [Action item]

Barahona moved, 2nd by Sather to approve the 5/22/2024 meeting minutes.

4. Approve MOU for Groundwater Sustainability Planning, Reporting, Studies, Mutual Aid, and Support Services

Smallen moved, 2nd by Franco to approve the MOU for groundwater sustainability planning, reporting, studies, mutual aid and support services.



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5. Draft STRGBA GSA and Member Agency Resolutions Adopting a Revised GSP and Documenting the Commitment to Develop and Implement a Well Mitigation Plan and Management Actions in the Modesto Subbasin

Thorburn provided an update on the commitment to develop a well mitigation plan and management actions by January 31, 2026, with implementation of management actions by January 31, 2027. Additionally, STRGBA GSA is committing to an initial funding of \$300,000 for these projects.

- Henderson asked whether STRGBA plans to allow credits for flood irrigation in the proposed programs. Thorburn responded that while the GSA has not committed to this, there will be opportunities for public involvement.

6. Next Meeting

June 12 meeting canceled: next meeting July 10, 2024, at 1:30 p.m.

7. Committee Comments/Reports



MODESTO SUBBASIN REVISED GSP SUMMARY OF GSP REVISIONS

STRGBA GSA Meeting
July 10, 2024



DEFICIENCY I

The GSP does not provide sufficient information to support the selection of chronic lowering of groundwater levels sustainable management criteria.

DEFICIENCY I – CORRECTIVE ACTION #1

The GSAs should revise the GSP to include a complete and thorough discussion of how the interests of beneficial uses and users of groundwater in the Subbasin have been considered. Department staff recommend that additional assessment be conducted to understand the impacts to beneficial uses and users from continued overdraft, including what impacts may result if groundwater levels reach the established interim milestones in 2027. The GSP should also include a well impact analysis identifying the anticipated number and location of wells that may go dry during the 20-year implementation period based on the proposed interim milestones, for how long they may go dry, and the impacts to land uses and property interests, among others. Additionally, the GSP should include a discussion of how its approach to groundwater management may affect all identified beneficial uses and users in the Subbasin, including environmental users.

DEFICIENCY I – CORRECTIVE ACTION #1

GSA RESPONSE

- Conducted a well impacts analysis
 - Used records of all water supply wells with construction information.
 - Analysis based on records of 4,563 water supply wells.
 - Compared MT and IM elevations at the RMWs to total depths of water supply wells.
- Results showed 29 wells are at risk of being dry at the 2027 IM.

Revised GSP Chapter 6 – Sustainable Management Criteria

- Section 6.3. Chronic Lowering of Groundwater Levels
- Section 6.3.3.1. Impacts to Wells and Beneficial Uses in the Modesto Subbasin

DEFICIENCY I – CORRECTIVE ACTION #2

The GSAs should revise the GSP to describe how impacts to wells experienced at interim milestone levels below minimum thresholds will be managed or mitigated. If the GSAs plan to implement a well mitigation program to avoid causing significant and unreasonable effects to beneficial uses and users, details such as the number of wells anticipated to be eligible for the program, estimated costs, funding sources, and an implementation schedule should be included in the GSP.

DEFICIENCY I – CORRECTIVE ACTION #2

GSA RESPONSE

- Developed a resolution that commits the GSAs to develop and implement a Well Mitigation Program by January 31, 2026.
- Resolution will be approved by GSAs on July 10, 2024, and provided in an appendix to Revised GSP.

Revised GSP Chapter 6 – Sustainable Management Criteria

- Section 6.3. Chronic Lowering of Groundwater Levels
- Section 6.3.3.1 Impacts to Wells and Beneficial Uses in the Turlock Subbasin
- Resolution in Appendix

DEFICIENCY I – CORRECTIVE ACTION #3

The GSAs should revise the GSP to include an analysis describing whether or how managing the Subbasin to allow groundwater levels to drop to interim milestone levels that are below the established minimum thresholds will avoid causing undesirable results for other sustainability indicators.

DEFICIENCY I – CORRECTIVE ACTION #3

GSA RESPONSE

Land Subsidence

- Analyzed the impact of the 2027 IM on the land subsidence sustainability indicator.
- Western Subbasin is most susceptible to land subsidence because it is underlain by Corcoran Clay.
- Eastern Subbasin is less susceptible because it is more consolidated with no known regional clay zones.
- RMWs with 2027 IMs below MTs are in the Eastern Principal Aquifer and far from the edge of the Corcoran Clay.

Conclusion: Lowering groundwater elevations to the IMs will not result in groundwater elevations declining to below the top of the Corcoran Clay.

Therefore, impacts on land subsidence are unlikely.

DEFICIENCY I – CORRECTIVE ACTION #3

GSA RESPONSE

Degradation of Water Quality

- Analyzed impact of 2027 IM on degradation of water quality sustainability indicator.
- Analysis focused on water quality data from GAMA wells with known well construction.
- Compared hydrographs at RMWs to water quality at nearest GAMA wells for seven COCs.
- Used best available data.

Conclusion

Review of water quality data and groundwater elevations showed no clear relationships.

The absence of relationships suggests that lowering groundwater levels should not affect the degradation of water quality sustainability indicator.

DEFICIENCY I – CORRECTIVE ACTION #3

GSA RESPONSE

Interconnected Surface Water (ISW)

- Analyzed impact of 2027 IM on the interconnected surface water sustainability indicator.
- Focused on RMWs in ISW monitoring network that have 2027 IMs below MTs.
- Compared the MT and IM elevations to the nearest stream node invert elevation.

Conclusion

There are two RMWs—more than a mile from the Stanislaus River—where both the MT and the IM are below the nearest stream invert elevation.

It is uncertain if lowering groundwater levels 13-14 feet at these wells will cause an undesirable result (increased streamflow depletion).

GSP recognizes groundwater conditions along the river boundaries as a data gap and will incorporate future guidance into the GSP update.

DEFICIENCY I – CORRECTIVE ACTION #3

GSA RESPONSE

Revised GSP Chapter 6 – Sustainable Management Criteria

- Section 6.3.3.2. Impacts to Other Sustainability Indicators
 - Section 6.3.3.2.1. Degradation of Water Quality
 - Section 6.3.3.2.2. Land Subsidence
 - Section 6.3.3.2.3. Depletion of Interconnected Surface Water

DEFICIENCY 2

The GSP does not include sufficient details of projects and management actions to mitigate overdraft in the Subbasin or provide a feasible path to achieve sustainability.

DEFICIENCY 2 – CORRECTIVE ACTION #1

The GSAs should revise the GSP to include a reasonable means to arrest groundwater level declines and stop the overdraft that is continuing to occur in the Subbasin. Specifically, the GSAs should describe feasible, effective proposed projects and management actions that are commensurate with the level of understanding of groundwater conditions in the Subbasin and provide sufficient details for Department staff to be able to clearly evaluate how the Plan's projects and management actions will ensure achieving the sustainability goal in the Subbasin.

DEFICIENCY 2 – CORRECTIVE ACTION #1

GSA RESPONSE

STRGBA GSA's commitment to long-term sustainability

- Prepared a resolution to be approved July 10, 2024, that commits the GSA to:
 - Develop management actions no later than January 31, 2026,
 - Implement these management actions no later than January 31, 2027.

Conclusions

- **The GSA is committed not only to implementing but prioritizing demand management as the primary method to guarantee sustainability.**
- The goal of management actions is to ensure that groundwater levels reach their inflection point in 2027; such that overdraft is halted, and recovery begins.

DEFICIENCY 2 – CORRECTIVE ACTION #1

GSA RESPONSE

Water Budget Analysis

- Analyzed and presented historical, projected, and sustainable yield water budgets to assess change in aquifer storage under different hydrologic conditions.
- These water budgets are being used to support development of management actions, their triggers, and effectiveness to ensure program adaptability.
- This analysis provides additional detail to Chapter 5 of the GSP, presenting the groundwater budget of all operational conditions by water year type.

Conclusions

- The Subbasin has been in overdraft since GSP adoption.
- Detailed water budgets will support both the GSAs and DWR in assessing progress as we move from projected to sustainable conditions.
- The GSA is well equipped to manage the Subbasin under a wide range of hydrologic conditions and operational uncertainties.

DEFICIENCY 2 – CORRECTIVE ACTION #2

The GSAs should revise the GSP to include a feasible collection of projects and management actions to raise groundwater levels to avoid undesirable results that would occur as a result of groundwater levels dropping below minimum thresholds towards the proposed interim milestones levels.

DEFICIENCY 2 – CORRECTIVE ACTION #2

GSA RESPONSE

Documentation of Management Actions

- Revised GSP now includes a resolution committing the GSA to developing and implementing a well mitigation program and demand reduction management actions.
- These MAs include a pumping management framework: groundwater allocation program, groundwater extraction and surface water use accounting or Monitoring Program, groundwater extraction fee, and potential groundwater allocation exchange program.
- These MAs are in development and will be implemented no later than January 31, 2027.

Conclusions

- In the absence of projects, modeling results estimate 47,000 AFY of demand reduction will be sufficient to meet sustainability objectives.
- The GSA is committed to prioritizing demand-based solutions and will finalize these management actions in time to arrest overdraft and raise groundwater levels by 2027.

DEFICIENCY 2 – CORRECTIVE ACTION #2

GSA RESPONSE

Documentation of Projects

- Projects are being implemented in tandem with management actions and will be used as a tool to supplement and potentially offset demand reduction while achieving sustainability.
- Anticipated projects include an average net-operational yield of 71,900 AFY at buildout.
- Modeling results estimate that projects alone have the capability to arrest overdraft and increase total aquifer storage by 1,400 AFY.

Conclusions

- Projects and management actions documented in the GSP provide a feasible means to raise groundwater levels and avoid undesirable results.
- PMAs will be assessed using empirical monitoring data. Depending on observed aquifer conditions, escalated management actions and/or additional projects will be enacted.

DEFICIENCY 2 – CORRECTIVE ACTIONS

GSA RESPONSE

Revised GSP Chapter 5 – Water Budgets

- Section 5.1.4.3 Projected Water Budget
- Section 5.2.3.3 Modesto Subbasin Water Budget Under Climate Change
- Section 5.3 Sustainable Yield Estimate

Revised GSP Chapter 8 – Projects and Management Actions

- Section 8.1 Management Actions
- Section 8.2 Projects Developed for Near-term Implementation
- Section 8.3 Supplemental Projects

Revised GSP Chapter 9 – Implementation Support Activities

- Section 9.1 Plan Implementation and Schedule

RESOLUTION

Resolution will be passed by both GSAs and in Appendix
Commits to:

- Develop and implement a well mitigation program, including an initial budget in the amount of \$300,000 no later than January 31, 2026.
- Develop management actions, including a fee structure and/or identified sources of funding, no later than January 31, 2026.
- Implement management actions no later than January 31, 2027, and upon implementation, shall continue into perpetuity unless otherwise directed by the GSA.

STANISLAUS AND TUOLUMNE RIVERS GROUNDWATER BASIN ASSOCIATION
GROUNDWATER SUSTAINABILITY AGENCY
RESOLUTION NO. 2024-XX

RESOLUTION ADOPTING A REVISED GROUNDWATER SUSTAINABILITY PLAN
AND DOCUMENTING THE COMMITMENT TO DEVELOP AND IMPLEMENT A
WELL MITIGATION PROGRAM AND DEMAND MANAGEMENT ACTIONS IN THE
MODESTO GROUNDWATER SUBBASIN

A. WHEREAS, the Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency (STRGBA GSA), consisting of the City of Modesto, Modesto Irrigation District, City of Oakdale, Oakdale Irrigation District, City of Riverbank, City of Waterford and County of Stanislaus was formed on February 16, 2017, for the purpose of sustainably managing groundwater in the Modesto Subbasin, within its jurisdictional boundaries, pursuant to the requirements of the Sustainable Groundwater Management Act (SGMA); and

B. WHEREAS, the STRGBA GSA coordinated with the County of Tuolumne GSA to develop a single, coordinated groundwater sustainability plan (GSP) for the Modesto Subbasin which was approved by both the STRGBA GSA and County of Tuolumne GSA; and

C. WHEREAS, the final Modesto Subbasin GSP was submitted to DWR on January 31, 2022; and

D. WHEREAS, Minimum Thresholds (MTs) were established in the Modesto Subbasin GSP as a basis of where long-term Undesirable Results would start to occur; and

E. WHEREAS, 2027 Interim Milestones (IMs) were established in the Modesto Subbasin GSP to acknowledge the continued groundwater level decline anticipated to occur temporarily during the initial years of GSP implementation; and

F. WHEREAS, the STRGBA GSA acknowledges that during the 20-year GSP implementation period it will be necessary to implement projects and management actions to achieve and maintain sustainable groundwater conditions in the Subbasins by or before 2042; and

G. WHEREAS, it is acknowledged that successful implementation of planned GSP projects to achieve their intended recharge benefits during the 20-year GSP implementation period (prior to 2042) is dependent in part on uncertainties related to hydrologic conditions, including precipitation and snowpack, and available water supply during that time period; and

H. WHEREAS, the STRGBA GSA acknowledges that implementation of management actions will be necessary to offset these uncertainties related to project implementation and project benefits to ensure that sustainable groundwater conditions are achieved in the subbasin by or before 2042; and

I. WHEREAS, it is acknowledged that wet hydrologic conditions and faster implementation of projects may result in diminished need for management actions; and

J. WHEREAS, the STRGBA GSA acknowledges that dry hydrological conditions, prolonged drought, and delayed implementation of projects may result in an accelerated need for management actions; and

NEXT STEPS

Complete Revised GSP with GSAs' responses to Corrective Actions.

- July 10, 2024 Adopt Revised GSP
- July 16, 2024 Submit to DWR

Continue to implement the GSP.

- January 31, 2026 Develop and implement a well mitigation program
- January 31, 2026 Develop Management Actions
- January 31, 2027 Implement Management Actions
- 2027 Achieve inflection point
- 2027 Prepare GSP Update



DISCUSSION

**STANISLAUS AND TUOLUMNE RIVERS GROUNDWATER BASIN ASSOCIATION
GROUNDWATER SUSTAINABILITY AGENCY
RESOLUTION NO. 2024-XX**

**RESOLUTION ADOPTING A REVISED GROUNDWATER SUSTAINABILITY PLAN
AND DOCUMENTING THE COMMITMENT TO DEVELOP AND IMPLEMENT A
WELL MITIGATION PROGRAM AND MANAGEMENT ACTIONS IN THE
MODESTO GROUNDWATER SUBBASIN**

- A. WHEREAS**, the Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency (STRGBA GSA), consisting of the City of Modesto, Modesto Irrigation District, City of Oakdale, Oakdale Irrigation District, City of Riverbank, City of Waterford and County of Stanislaus was formed on February 16, 2017, for the purpose of sustainably managing groundwater in the Modesto Subbasin, within its jurisdictional boundaries, pursuant to the requirements of the Sustainable Groundwater Management Act (SGMA); and
- B. WHEREAS**, the STRGBA GSA coordinated with the County of Tuolumne GSA to develop a single, coordinated groundwater sustainability plan (GSP) for the Modesto Subbasin which was approved by both the STRGBA GSA and County of Tuolumne GSA; and
- C. WHEREAS**, the final Modesto Subbasin GSP was submitted to DWR on January 31, 2022; and
- D. WHEREAS**, Minimum Thresholds (MTs) were established in the Modesto Subbasin GSP as a basis of where long-term Undesirable Results would start to occur; and
- E. WHEREAS**, 2027 Interim Milestones (IMs) were established in the Modesto Subbasin GSP to acknowledge the continued groundwater level decline anticipated to occur temporarily during the initial years of GSP implementation; and
- F. WHEREAS**, the STRGBA GSA acknowledges that during the 20-year GSP implementation period it will be necessary to implement projects and management actions to achieve and maintain sustainable groundwater conditions in the Subbasins by or before 2042; and
- G. WHEREAS**, it is acknowledged that successful implementation of planned GSP projects to achieve their intended recharge benefits during the 20-year GSP implementation period (prior to 2042) is dependent in part on uncertainties related to hydrologic conditions, including precipitation and snowpack, and available water supply during that time period, and
- H. WHEREAS**, the STRGBA GSA acknowledges that implementation of management actions will be necessary to offset these uncertainties related to project implementation and project benefits to ensure that sustainable groundwater conditions are achieved in the subbasin by or before 2042; and
- I. WHEREAS**, it is acknowledged that wet hydrologic conditions and faster implementation of projects may result in diminished need for management actions, and
- J. WHEREAS**, the STRGBA GSA acknowledges that dry hydrological conditions, prolonged drought, and delayed implementation of projects may result in an accelerated need for management actions, and

K. WHEREAS, on January 18, 2024, DWR provided notification to the STRGBA GSA and County of Tuolumne GSA that the GSP was considered incomplete and two deficiencies were identified; and

L. WHEREAS, a revised GSP to address the deficiencies identified by DWR must be submitted to DWR by July 16, 2024 to avoid the state intervention process provided for in SGMA; and

M. WHEREAS, on March 29, 2024 the STRGBA GSA and County of Tuolumne GSA released the Notice of Intent to Adopt the Revised GSP to cities and counties in the plan area pursuant to Water Code section 10728.4;

N. WHEREAS, the STRGBA GSA and County of Tuolumne GSA have addressed the deficiencies through the development of a revised GSP which has been reviewed by the GSA member agencies and presented at public meetings; and

O. WHEREAS, the STRGBA GSA and County of Tuolumne GSA have reviewed and responded to comments on the revised Modesto Subbasin GSP; and

P. WHEREAS, all seven STRGBA GSA member agencies have held public hearings, adopted the draft GSP and authorized the Modesto Subbasin Plan Manager to submit the final GSP to DWR; and

Q. WHEREAS, the STRGBA GSA recognizes that in order to obtain a determination that the GSP is complete, DWR is seeking a firm commitment from the STRGBA GSA and County of Tuolumne GSA to develop a well mitigation program and management actions to address and mitigate impacts from groundwater level declines that may occur when water levels drop below the MTs defined in the Modesto Subbasin GSP; and

R. WHEREAS, such management actions to be considered as outlined in the GSP include, but are not limited to:

- A groundwater allocation and pumping management program
- A groundwater extraction and surface water reporting program
- Groundwater extraction fees
- A groundwater pumping credit market and trading program
- Voluntary conservation/land fallowing
- Conservation practices; and

S. WHEREAS, the STRGBA GSA acknowledges that SGMA requires sustainable groundwater management based on a 2015 baseline but does not make STRGBA GSA and County of Tuolumne GSA responsible for injury caused by overdraft; and

T. WHEREAS, the STRGBA GSA acknowledges that they cannot control groundwater conditions not caused by actions taken by the GSA; and

U. WHEREAS, the STRGBA GSA commits to develop a well mitigation program and management actions along with the County of Tuolumne GSA; and

V. **WHEREAS**, funding sources may be subject to the Proposition 218 process and may include GSA fees and assessments, landowner groundwater pumping fees and penalties, agency funds, and grant funding; and

NOW, THEREFORE, BE IT RESOLVED that the STRGBA GSA finds as follows:

1. STRGBA GSA hereby adopts this resolution approving the revised Modesto Subbasin GSP and committing to develop a well mitigation plan and management actions in the Modesto Subbasin to ensure long-term groundwater sustainability.
2. STRGBA GSA authorizes its member agencies to collaborate with consultants, stakeholders and the County of Tuolumne GSA to take such actions as may be reasonably necessary to:
 - a. Develop and implement a well mitigation program inclusive of the procurement of baseline funding amounting to \$300,000 no later than January 31, 2026. Upon implementation, the well mitigation program shall continue into perpetuity unless otherwise directed by the STRGBA GSA.
 - b. Develop management actions, inclusive of a fee structure and/or identified sources of funding, no later than January 31, 2026. Such management actions shall be implemented no later than January 31, 2027 and, upon implementation, shall continue into perpetuity unless otherwise directed by the STRGBA GSA.
3. The STRGBA GSA authorizes the Modesto Subbasin Plan Manager to submit the revised GSP to DWR by July 16, 2024.

Upon motion of _____, seconded by _____, and duly submitted to the STRGBA GSA for its consideration, the above-titled Resolution was adopted this ____ day of _____, 2024.

STRGBA GSA

Eric C. Thorburn
STRGBA GSA Chair

Jesse Franco
STRGBA GSA Vice-Chair