



**SACRAMENTO GROUNDWATER AUTHORITY
MEETING OF THE BOARD OF DIRECTORS**

**Thursday, June 12, 2025
at 9:00 a.m.**

**2295 Gateway Oaks, Suite 100
Sacramento, CA 95833
(916) 967-7692**

The Board will discuss all items on this agenda, and may take action on any of those items, including information items and continued items. The Board may also discuss other items that do not appear on this agenda but will not act on those items unless action is urgent, and a resolution is passed by a two-thirds (2/3) vote declaring that the need for action arose after posting of this agenda.

IMPORTANT NOTICE REGARDING VIRTUAL PUBLIC PARTICIPATION:

The Sacramento Groundwater Authority currently provides in person as well as virtual public participation via the Zoom link below until further notice. The public shall have the opportunity to directly address the Board on any item of interest before or during the Board's consideration of that item. Public comment on items within the jurisdiction of the Board is welcomed, subject to reasonable time limitations for each speaker.

Join Zoom Meeting

<https://us06web.zoom.us/j/86234537375>

Meeting ID: 862 3453 7375 Passcode: 955951

Dial by your location

+1 669 444 9171 US or +1 669 900 6833 US (San Jose)

If we experience technical difficulties and the Zoom link drops and you are no longer able to connect to the Board meeting, please dial 1-877-654-0338 – Guest Code 198

Public documents relating to any open session item listed on this agenda that are distributed to all or a majority of the members of the Board of Directors less than 72 hours before the meeting are available for public inspection on SGA's website. In compliance with the Americans with Disabilities Act, if you have a disability and need a disability-related modification or accommodation to participate in this meeting, please contact jpeifer@rwah2o.org. Requests must be made as early as possible, and at least one full business day before the start of the meeting.

AGENDA

1. CALL TO ORDER AND ROLL CALL

2. PUBLIC COMMENT: Members of the public who wish to address the Board may do so at this time. Please keep your comments to less than three minutes.

3. CONSENT CALENDAR:

All items listed under the Consent Calendar are considered and acted upon by one motion. Anyone may request an item be removed for separate consideration.

3.1 Approve the draft meeting minutes of April 10, 2025, SGA Board Meeting

3.2 Approve Change Order 2025-02 to West Yost Agreement

3.3 Approve Change Order 2024-02 to Woodard & Curran Agreement

Action: Approve Consent Calendar items as presented

4. INFORMATION: SACRAMENTO REGIONAL WATER BANK AND WATER ACCOUNTING SYSTEM UPDATES

Presenter: Trevor Joseph, Manager of Technical Services

5. INFORMATION: SGMA GRANT UPDATE

Presenter: Raiyna Villaseñor, Senior Project Manager

6. INFORMATION: LEGISLATIVE UPDATE

Presenter: Ryan Ojakian, Manager of Government Affairs

7. EXECUTIVE DIRECTOR'S REPORT

8. DIRECTORS' COMMENTS

ADJOURNMENT

Next SGA Board of Director's Meetings:

August 14, 2025, 9:00 a.m. at the RWA/SGA office, 2295 Gateway Oaks, Suite 100, Sacramento, CA 95833. The location is subject to change.

Notification will be emailed when the SGA electronic packet is complete and posted on the SGA website at <https://www.sgah2o.org/meetings/board-meetings/>

Posted on: June 6, 2025



Ashley Flores, CMC, Board Clerk

2025 SGA BOARD MEMBERS

Organization	Representative/Alternate	Appointing Authority	Term Ends
California American Water	S. Audie Foster Terry Coleman (Alternate)	Sacramento City Council	August 2028
Carmichael Water District	Paul Selsky Jeff Nelson (Alternate)	Sacramento County	August 2026
Citrus Heights Water District	Caryl Sheehan Raymond Riehle (Alternate)	Citrus Heights City Council	February 2028
City of Folsom	Marcus Yasutake Barbara Leary (Alternate)	Folsom City Council	Jan 2027
City of Sacramento	Lisa Kaplan Brett Ewart (Alternate)	Sacramento City Council	April 2028 (Annual Review)
County of Sacramento	Rosario Rodriguez Chris Hunley Chair Kerry Schmitz (Alternate) Matt Satow (Alternate)	Sacramento County	July 17, 2026
Del Paso Manor Water District	Gwynne Pratt	Sacramento City Council	August 2028
Fair Oaks Water District	Randy Marx Christian Petersen (Alternate)	Sacramento County	August 2026
Golden State Water Company	Paul Schubert Sean Twilla (Alternate)	Sacramento City Council	August 2028
Natomas Central MWC	Matt Lauppe Brett Gray (Alternate)	Sacramento City Council	August 2028
Orange Vale Water Company	John Wingerter Craig Davis (Alternate)	Sacramento County	August 2026
Rio Linda/Elverta CWD	Maria Liverett Anthony Cline (Alternate)	Sacramento County	August 2026
Sacramento Suburban Water District	Jay Boatwright Vice Chair Robert Wichert (Alternate) Kevin Thomas (Alternate)	Sacramento City Council	July 2026 (Updated 4/4/23)
San Juan Water District	Ted Costa Dan Rich (Alternate)	Sacramento County	August 2026
Agriculture	Mike DeWit Nathan Doyel (Alternate)	Sacramento County	August 2026
Self-Supplied Industry	Clint Luedtke Del Paso Country Club	Sacramento City Council	August 2028

Topic: Public Comment
Type: New Business
Item For: Information/Discussion
Purpose: Routine

SUBMITTED BY: Ashley Flores, CMC
Board Clerk

PRESENTER: Jim Peifer
Executive Director

EXECUTIVE SUMMARY

This is an information item to provide an opportunity for the Sacramento Groundwater Authority Board of Directors to recognize or hear from visitors that may be attending the meeting or to allow members of the public to address the Board of Directors on matters that are not on the agenda.

As noted on the agenda, members of the public who wish to address the committee may do so at this time. Please keep your comments to less than three minutes.

STAFF RECOMMENDED ACTION

None. This item is for information only.

BACKGROUND

Public agencies are required by law to provide an opportunity for the public to address the SGA Board of Directors matters that are not on the agenda.

3.0 CONSENT CALENDAR

Attachment 1

Draft meeting minutes of the Sacramento Groundwater Authority

Board of Directors Meeting of April 10, 2025



SACRAMENTO GROUNDWATER AUTHORITY

Board Meeting

Draft Minutes

April 10, 2025

1. CALL TO ORDER

Chair Hunley called the regular meeting of the SGA Board of Directors to order on April 10, 2025 at 9:00 a.m. at the RWA conference room located at 2295 Gateway Oaks Drive, Suite 100, Sacramento, CA 95833.

A quorum was established of 10 participating members. Individuals in attendance are listed below:

Board Members

Marcus Yasutake, City of Folsom

Lisa Kaplan, City of Sacramento

Chris Hunley, County of Sacramento, Chair

Gwynne Pratt, Del Paso Manor Water District

Sean Twilla, Golden State Water Company

Maria Liverett, Rio Linda/Elverta Community Water District

Jay Boatwright, Sacramento Suburban Water District, Vice Chair

Ted Costa, San Juan Water District

Nathan Cameron Doyel, Agriculture

Clint Luedtke, Self Supplied Industry

Staff Members

Jim Peifer, Trevor Joseph, Tom Hoffart, Raiyna Villaseñor, Monica Garcia, Ashley Flores and Chris Sanders, legal counsel

Others in Attendance

Barbara Leary, City of Folsom; Todd Eising, City of Folsom; Brett Ewart, City of Sacramento; Dan York, Sacramento Suburban Water District; Craig Locke, Sacramento Suburban Water District; Brett Gray, Natomas CMWD; Ali Taghavi; Kevin Thomas, Sacramento Suburban Water District; Greg Zlotnick, San Juan Water District; and Paul Helliker, San Juan Water District.

2. PUBLIC COMMENT

None

3. 2025 BOARD MEETING DISCUSSION TOPICS

This is an administrative item presented by Executive Director Peifer for the Sacramento Groundwater Authority Board of Directors to review upcoming Board Meeting Discussion Topics. No action was taken.

4. CONSENT CALENDAR

- 4.1** Approve the draft meeting minutes of February 13, 2025, SGA Board Special and Regular Meetings
- 4.2** Approve Change Order No. 1 to Woodard & Curran Task Order 24-02 for Groundwater Sustainability Plan amendment and modeling support
- 4.3** Approve Change Order No. 1 to West Yost Agreement SGA 2024-001 for Groundwater Quality Degradation Study

A motion was made to approve the Consent Calendar.

M/S/C: Director Boatwright moved with a second by Director Kaplan

Marcus Yasutake, City of Folsom; Lisa Kaplan, City of Sacramento; Chris Hunley, County of Sacramento; Gwynne Pratt, Del Paso Manor Water District; Maria Liverett, Rio Linda Elverta Community Water District; Jay Boatwright, Sacramento Suburban Water District; Ted Costa, San Juan Water District; Nathan Cameron Doyel, Agriculture; and Clint Luedtke, Self Supplied Industry; Voted yes.

Ayes- 9
Noes- 0
Abstained- 0
Absent- 7

5. REVISIONS TO POLICY 400.3 (BUDGET POLICY)

This is an action item presented by Tom Hoffart, Finance and Administrative Services Manager for the Board of Directors to approve Revisions to Policy 400.3 (Budget Policy).

A motion was made to approve Revisions to Policy 400.3 (Budget Policy)

M/S/C: Director Yasutake moved with a second by Director Pratt

Marcus Yasutake, City of Folsom; Lisa Kaplan, City of Sacramento; Chris Hunley, County of Sacramento; Gwynne Pratt, Del Paso Manor Water District; Maria Liverett, Rio Linda Elverta Community Water District; Jay Boatwright, Sacramento Suburban Water District; Ted Costa, San Juan Water District; Nathan Cameron Doyel, Agriculture; and Clint Luedtke, Self Supplied Industry; Voted yes.

Ayes- 9
Noes- 0
Abstained- 0
Absent- 7

Director Twilla and Director Leary entered the meeting at 9:07 a.m.

6. FISCAL YEAR 2025/26 BUDGET

This was an action item presented by Tom Hoffart, Finance and Administrative Services Manager to receive the final Fiscal Year 2025/26 Budget and adopt SGA Resolution 2025-02 entitled, "A Resolution of the SGA Adopting and Assigning Costs to Fund the Administrative and Program Budgets for FY 2025/26 and Providing for the Collection of Said Funds."

A motion was made to adopt SGA Resolution 2025-02 entitled, "A Resolution of the SGA Adopting and Assigning Costs to Fund the Administrative and Program Budgets for FY 2025/26 and Providing for the Collection of Said Funds." including the amended rate for Carmichael Water District.

This item requires a double majority weight vote, per Section 8 of SGA JPA.

M/S/C: Director Kaplan moved with a second by Director Boatwright

Marcus Yasutake, City of Folsom; Lisa Kaplan, City of Sacramento; Chris Hunley, County of Sacramento; Gwynne Pratt, Del Paso Manor Water District; Sean Twilla, Golden State Water Company; Maria Liverett, Rio Linda Elverta Community Water District; Jay Boatwright, Sacramento Suburban Water District; Ted Costa, San Juan Water District; Nathan Cameron Doyel, Agriculture; and Clint Luedtke, Self Supplied Industry; Voted yes.

Ayes- 10

Noes- 0

Abstained- 0

Absent- 6

Director Kaplan exited the meeting at 10:11 a.m.

7. SUSTAINABLE GROUNDWATER MANAGEMENT ACT NORTH AMERICAN SUBBASIN ANNUAL REPORT (POST FILING)

This was an information item presented by Trevor Joseph, Manager of Technical Services briefed the Board of Directors on the Sustainable Groundwater Management Act required water year 2024 Annual Report for the North American Subbasin. No action was taken.

8. SACRAMENTO REGIONAL WATER BANK AND WATER ACCOUNTING FRAMEWORK UPDATES

This was an information item presented by Trevor Joseph, Manager of Technical Services briefed the Board of Directors on the

9. EXECUTIVE DIRECTOR'S REPORT

Executive Director Peifer reported the State of the Basin is being held on April 23 at

the Water Forum office. He thanked the Budget Committee for their work on reviewing this year's budget with Mr. Hoffart. He also recognized Director Pratt and thanked her for her time serving on both the SGA and RWA Board of Directors.

10.DIRECTORS' COMMENTS

None.

ADJOURNMENT

With no further business to come before the Board, Chair Hunley adjourned the meeting at 11:17 a.m.

By:

Chris Hunley, SGA Chair

Attest:

Ashley Flores, CMC, Clerk of the Board

Topic: Change Order 2025-02 for SGA Consulting Agreement 2024-001 for Professional Services between West Yost and SGA

Type: New Business

Item for: Consent Calendar

Purpose: Action, Approve Change Order 2025-02

SUBMITTED BY:	Trevor Joseph, Manager of Technical Services	PRESENTER:	Trevor Joseph, Manager of Technical Services
---------------	---	------------	---

EXECUTIVE SUMMARY

This is an action item for the Sacramento Groundwater Authority (SGA) Board of Directors to authorize the SGA Executive Director to execute a change order to West Yost's existing Professional Services Agreement in the amount of \$22,200 to advance Component 3: Water Quality Degradation Study under the North American Subbasin Department of Water Resources (DWR) Sustainable Groundwater Management Grant (Grant). The Executive Directors execution of this change order would be dependent on a future Grant agreement amendment with DWR that increases the funds available in component 3 to fully cover this requested change order amount (i.e. \$22,200).

STAFF RECOMMENDED ACTION

Approve change order 2025-02 to the Professional Services Agreement with West Yost in the amount of \$22,200 to advance Component 3.

BACKGROUND

At the February 8, 2024, SGA Board Meeting, the Board of Directors waived SGA Policy 300.1 and authorized the Executive Director to enter into a Consulting Agreement with West Yost to support SGA's ability to complete Component 3: Water Quality Degradation Study of the Grant. The total amount awarded by the Grant is \$244,000 and the amount identified in West Yost's Consultant Agreement is for a total Not-To-Exceed Budget of \$230,800.

On April 10, 2025, the SGA Board authorized the SGA Executive Director to execute change order #1 to increase West Yost's contract by increasing the fee \$13,200 to a Not-To-Exceed-Budget of amount of \$244,000, equaling the maximum amount identified in the DWR Grant agreement for component #3. This change order was executive to support cost increases associated with:

- Greater than anticipated level of effort for outreach and coordination with Stakeholder agencies.
- Greater than anticipated level of effort associated with data requests and receipt, including receipt of incomplete datasets and data received in unwieldy formats. These complexities required additional processing and coordination with multiple Stakeholder agencies.

Agenda Item 3.2

- Additional project management tasks associated with grant component administration, including completing grant progress reports.
- Additional Stakeholder engagement activities and presentations for the SGA Regional Contamination Issues Committee (RCIC) and Regional Water Authority (RWA) Water Quality Committee.
- Extension of the overall project schedule.

This staff report provides information to support a recommendation for a second change order to West Yost's contract. Execution of change order #2 would increase West Yost's contract \$22,200 to a Not-To-Exceed Budget of \$266,200. The Executive Directors execution of this change order would be dependent on a future Grant agreement amendment with DWR that increases the funds available in component 3 to fully cover this requested change order amount (i.e. \$22,200). This change order was executive to support cost increases associated with:

- The list of evaluated contaminants of concern was expanded to include hexavalent chromium, manganese, and perchlorate. The original scope of work only included the evaluation of tetrachloroethylene (PCE).
- The Study Area was expanded to include two additional participating agencies, encompassing four service area districts, not originally scoped for the Study. The Study area increased from 28,413 acres to 45,233 acres.
- Greater than anticipated level of effort for outreach and coordination with participating agencies.
- Greater than anticipated level of effort associated with data requests and receipt, including receipt of incomplete datasets and data received in unwieldy formats. These complexities required additional processing and coordination with multiple Stakeholder agencies.
- Additional project management tasks associated with grant component administration, including completing grant progress reports.
- Additional Stakeholder engagement activities and presentations for the SGA Regional Contamination Issues Committee (RCIC) and Regional Water Authority (RWA) Water Quality Committee and multiple individual stakeholder meetings were added throughout the duration of the Study. Additionally, comments on the draft Report were received verbally instead of electronically, which included a separate meeting with the participating agency.
- Extension of the overall project schedule.

FISCAL IMPACT

The amount authorized through change order 2025-02, will be within the proposed amended Grant amount of \$266,200. Change order #1 was authorized on April 10, 2024, increase the Master Services Agreement a total budget for the West Yost contract to a not to exceed of \$244,000.

FINDING/CONCLUSION

Staff have identified and are requesting that additional funding of \$22,200 be reallocated to Grant Component 3 awarded amount and the cost of effort identified in West Yost's Consulting Agreement SGA 2024-001 dependent on a future Grant agreement amendment with DWR that

Agenda Item 3.2



increases the funds available in component 3 to fully cover this requested change order amount (i.e. \$22,200).

ATTACHMENTS

Attachment 1 – SGA Consultant Agreement 2024-001

Attachment 2 – West Yost Supporting Letter and Amendment

Attachment 3 – Change Order #2

SACRAMENTO GROUNDWATER AUTHORITY CONSULTING AGREEMENT

THIS AGREEMENT is made and entered into this 4th day of April 2024, by and between the Sacramento Groundwater Authority, a California joint exercise of powers authority ("SGA"), and a West Yost ("Consultant"), concerning the Groundwater Quality Degradation Study (the "Services").

RECITALS:

- A. SGA has identified the need for the completion of a Groundwater Quality Degradation Study Pursuant to Component 3 of a Department of Water Resources (DWR) Grant Agreement Number 4600015622; and
- B. Consultant was selected by SGA to provide the Services on the basis of its qualifications, experience, and facilities for performing the work contemplated; and
- C. Consultant, by reason of its qualifications, experience and facilities for performing the type of work contemplated herein, has proposed to provide the Services; and
- D. SGA desires to engage Consultant to perform the Services.

AGREEMENT:

1. RETENTION OF CONSULTANT

SGA hereby retains Consultant for performance of the Services, and Consultant hereby accepts such retention at the compensation described herein.

2. SCOPE OF SERVICES

The scope of the Services to be provided by Consultant under this Agreement, the schedule for performance and the compensation to be paid to Consultant will be set forth in written task orders ("Task Orders") agreed to in writing from time to time by SGA and Consultant. Consultant agrees to perform all services described in Task Orders to this Agreement for the compensation set forth therein. The services of the Task Order are severable, and not all of them may be required by SGA. Consultant will initiate Task Order items only with written authorization of SGA. The actual cost of each Task Order item may vary from the cost estimates set forth in the Task Order, and funds allocated for one item may be shifted to one or more other items under the Task Order, but within the Not-To-Exceed-Budget Amount for the Task Order. The scope of services, schedule for performance and compensation to be paid to Consultant under a Task Order can be revised if approved in writing by SGA and Consultant.

3. SCHEDULE

Consultant will perform the services in Task Orders in accordance with a schedule that is set forth in the Task Order or otherwise agreed to in writing by SGA and Consultant.

4. COMPENSATION AND NOT-TO-EXCEED-BUDGET AMOUNT

The compensation paid to Consultant will be based on Consultant's time and material necessarily and actually expended in performing and completing the Task Order on a time and expense basis not to exceed the budget amount ("Not-To-Exceed-Budget Amount") specified in a Task Order, at Consultant's hourly rates set forth in the Task Order. Total compensation, including fees, expenses, and profit for services rendered by Consultant under a Task Order will not exceed the Not-To-Exceed-Budget Amount specified in the Task Order unless approved in writing by SGA. Consultant will identify in a Task Order the primary personnel to be assigned to perform the services under the Task Order. SGA will not be obligated to make a payment to Consultant under a Task Order in an amount greater than the Not-To-Exceed-Budget Amount for any additional services, unless such services and corresponding payment therefor have been agreed to in writing by SGA.

5. INVOICES, PAYMENTS, AND NOTICES

A. Consultant will submit periodic invoices to SGA for the services actually rendered during the preceding period. Invoices will be in sufficient detail to describe the services performed and expenses incurred. SGA may require reasonable documentation to support invoiced amounts. Consultant's failure to furnish such supporting documentation will relieve SGA of the duty to make payment for the services unless and until such documentation is furnished. Consultant will submit invoices to SGA for work completed on all outstanding Task Orders, and SGA will approve the invoices. In cases where Task Order funding is provided by state or federal funds, SGA will forward all undisputed invoices to the appropriate state or federal agency for reimbursement. SGA will remit payment on said invoices within ten (10) days following the date on which SGA receives payment from the state or federal agency for those invoices. In cases where Task Order funding is provided directly through SGA funds, SGA will pay, within thirty (30) days of receipt and approval, all undisputed invoices. The source of funds will be clearly indicated on each new Task Order. The parties agree to exercise good faith and diligence in the resolution of any disputed invoiced amounts. If any amounts due Consultant under this Agreement are not paid within ninety days from the due date, Consultant will not be obligated to perform further services under this Agreement until all payments due Consultant for work performed have been paid.

B. Any invoice, payment, notice, demand, request, consent, approval or notification of change of address that either party hereto may or is required to give the other will be in writing and signed for each party by an authorized officer. All such notices will be deemed to have been received on the date of delivery if either personally delivered or sent by recognized overnight courier service or three days after mailing if enclosed in a properly addressed and stamped envelope and deposited in a United States post office for first-class delivery. Unless and until notified in writing as provided in this paragraph, all notices will be addressed as follows:

TO SGA:

Jim Peifer
Executive Director
Sacramento Groundwater Authority
5620 Birdcage Street, Suite 180
Citrus Heights, CA 95610-7632

TO CONSULTANT:

Ken Loy
Principal Hydrogeologist
West Yost
2020 Research Park Drive Suite 100
Davis, CA 95618

6. INDEMNIFICATION

To the fullest extent permitted by law, Consultant shall indemnify and hold harmless SGA, its directors, officials, officers and employees from and against any and all suits, actions, judgments, legal or administrative proceedings, arbitrations, claims, demands, causes of action, damages, liabilities, interest, attorney's fees, fines, penalties, losses, costs and expenses regardless of nature or type ("claims" or "claim"), arising out of, pertaining to or in any way connected with the negligence, recklessness or willful misconduct of Consultant or arising out of or in any way related to the negligence, recklessness or willful misconduct of Consultant's employees, agents, or subcontractors or the agent, employee or subcontractors of any one of them in the performance of their duties or in their operations under this Agreement. The provisions of this section survive the completion of the services under or the termination of this Agreement. Submission of insurance certificates or submission of other proof of compliance with the insurance requirements in this Agreement does not relieve Consultant from liability under this indemnification and hold harmless clause. The obligations of this indemnity article shall apply whether or not such insurance policies shall have been determined to be applicable to any of such damages or claims for damages.

7. GENERAL INSURANCE

Consultant, at its sole cost and expense, shall procure and maintain for the duration of this Agreement the following types and limits of insurance:

<u>Type</u>	<u>Limits</u>	<u>Scope</u>
General liability	\$2,000,000 per occurrence and aggregate	at least as broad as ISO CG00 01
Automobile liability	\$2,000,000 per occurrence and aggregate	at least as broad as ISO CA00 01 (hired or non-owned)
Workers' compensation	Statutory limits	

The general and automobile policy(ies) shall be endorsed to name the SGA, its directors, officers, officials, employees and volunteers as additional insureds regarding liability arising out of the services of this Agreement. Consultant shall provide SGA with ISO CG 2010 endorsement form or equivalent. The coverage shall contain no special limitations on the scope of protection afforded to SGA, its directors, officers, officials, employees or volunteers. Consultant's coverage shall be primary and shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability. SGA's insurance, if any, shall be excess and shall not contribute with Consultant's insurance. The workers' compensation policy shall be endorsed to include a waiver of subrogation against SGA, its directors, officials, officers and employees.

The insurance is to be placed with insurers licensed to do business by and in good standing with the California Department of Insurance, with a current A.M. Best's rating of A:VII or better unless otherwise acceptable to SGA. Prior to commencing the services provided for herein, Consultant shall provide to SGA certificates of insurance signed by a person authorized to bind coverage on behalf of the insurer(s) and original endorsements evidencing this insurance. The certificates and policies shall provide that 30 days' written notice of any material change,

reduction of coverage or cancellation of the insurance policies will be provided to SGA. The requirements as to the types, limits, and SGA's approval of insurance coverage to be maintained by the Consultant are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Consultant under this Agreement. In addition, in the event any change is made in the insurance carrier, policies or nature of coverage required under this Agreement, Consultant shall notify SGA prior to making such changes.

8. ERRORS AND OMISSIONS INSURANCE

Consultant shall have such errors and omissions insurance for the benefit of SGA as shall protect SGA, its officers, officials, directors, employees, agents and volunteers from claims based on alleged errors or negligent acts or omissions which may arise from the Services or Consultant's operations or performance under this Agreement, whether any such claim is made during or subsequent to the term of this Agreement, and whether such operations or performance be by Consultant or its employees, consultants, agents or anyone else employed by any of the foregoing. The amount of this insurance shall not be less than \$1,000,000. Said policy shall be continued in full force and effect during the term of this Agreement and for a period of five years following the completion of the Work. In the event of termination of said policy, new coverage shall be obtained for the required period to insure for the prior acts of Consultant during the course of performing services under the terms of this Agreement. Consultant shall provide to SGA a certificate of insurance on a form acceptable to SGA indicating the deductible or self-retention amounts and the expiration date of said policy, and shall provide renewal certificates within 10 days after expiration of each policy term. The insurance is to be placed with insurers licensed to do business by and in good standing with the California Department of Insurance, with a current A.M. Best's rating of A:VII or better unless otherwise acceptable to SGA.

9. INDEPENDENT CONTRACTOR

A. It is expressly understood and agreed by the parties that Consultant's relationship to SGA is that of an independent contractor. All persons hired by Consultant and performing the Services will be exclusively Consultant's employees, subcontractors and agents. SGA will not be obligated in any way to pay any wages, benefits or other claims by any such employees, subcontractors or agents or any other person by reason of this Agreement. Consultant shall be solely liable to such employees, subcontractors and agents for losses, costs, damages, or injuries by said employees, subcontractors or agents during the course of the Services. SGA will not be required to make any deductions or withholdings from the compensation payable to Consultant under the provisions of this Agreement.

B. It is further understood and agreed by SGA and Consultant that, subject to the provisions of this Agreement, Consultant, in the performance of its obligation hereunder, is subject to the control or direction of SGA as to the designation of tasks to be performed and the results to be accomplished by the Services, but that SGA is not responsible for directing the means, methods, or sequence used by Consultant for accomplishing the results.

C. If, in the performance of this Agreement, any third persons are employed by Consultant, such persons will be entirely and exclusively under the direction, supervision, and control of Consultant. All terms of employment, including hours, wages, working conditions, discipline,

hiring, and discharging, or any other terms of employment or requirements of law, will be determined by Consultant.

D. It is further understood and agreed that Consultant must issue W-2 and 941 Forms for income and employment tax purposes for all of Consultant's employees, subcontractors and agents under the terms and conditions of this Agreement.

10. PROFESSIONAL SERVICES

A. Consultant agrees that the Services will be performed and completed in a professional manner as diligently and expeditiously as possible. All Services will be performed in the manner and according to the professional standards observed by a competent practitioner of the profession in which Consultant and any sub-contractors are engaged. Consultant will not, either during or after the term of this Agreement, disclose to any third party any confidential information relative to the work of SGA without the prior written consent of SGA. SGA representatives will, with reasonable notice, have access to Consultant's work for purposes of inspecting same and determining that the work is being performed in accordance with the terms of the Agreement.

B. Consultant will perform each Task Order in compliance with all applicable federal, state and local laws and regulations, including applicable State Department of Industrial Relations regulations. Consultant will possess and maintain all permits, licenses and certificates that may be required for it to perform the work.

11. RESPONSIBILITY OF SGA

SGA will furnish to Consultant information and documents as may be reasonably required for Consultant to perform the Service or any Task Order thereunder. SGA will review all documents submitted by Consultant and render decisions pertaining thereto, as promptly as is reasonable under the circumstances at the time, in order to avoid unreasonable delay in Consultant's performance under this Agreement.

12. RESPONSIBILITY OF THE CONSULTANT

A. Consultant will produce work of a high quality for review by SGA. SGA will review Consultant's Task Order work that is prepared for publication for public dissemination for completeness, accuracy and compliance with the Task Order. If the work is found acceptable, SGA will so indicate in writing. SGA's approval will indicate its acceptance of all aspects of the material prepared for issuance to the public. Any SGA approval or failure to approve under this section will not affect Consultant's indemnification obligations.

B. Consultant will coordinate the activities of any subcontractors and will be responsible to ensure that all work and deliverables interface with the other applicable work and deliverables to produce a unified, workable and acceptable product.

13. AUTHORITY OF CONSULTANT

Consultant is retained to provide the Services and the specific Task Orders executed under this Agreement. SGA is responsible for and will make all policy and governmental decisions related to performance of a Task Order by Consultant. In so doing, Consultant will abide by position statements furnished to Consultant by SGA.

14. CONSULTANT'S RECORDS

During the entire term of this Agreement, and for not less than three years thereafter, Consultant will maintain all of its records pertaining to performance of each Task Order under this Agreement relating to time and materials, including records of all reimbursable expenses incurred in connection therewith, which will be maintained in accordance with generally-accepted professional accounting principles consistently applied. Consultant will make such records available upon request by SGA or SGA's authorized representative for purposes of examination, audit or copying.

15. PUBLICATION OF DOCUMENTS AND DATA

Consultant will not publish, or disclose to any third party, documents or data provided to or developed by Consultant in the performance of the Services without the prior written approval of SGA. Submission or distribution to meet official regulatory requirements or for purposes authorized by this Agreement, will not be construed as publication in violation of SGA's rights.

16. OWNERSHIP OF WORK PRODUCT

All technical data, evaluations, reports, documents, images, photo ready copy, electronic media, or other work products of Consultant provided to SGA will become the exclusive property of SGA and will be delivered to SGA upon completion of the services authorized hereunder. Consultant may retain copies of its work products for its files and internal use. By this Agreement, Consultant transfers all of its right, title and interest in such documents to SGA. To the extent any document provided to SGA constitutes a copyrightable work, it shall be considered a work for hire and by this Agreement, Consultant shall be deemed to transfer all rights, title and interest in the copyrightable work to SGA, including the exclusive copyright. Consultant shall not provide any documents prepared under this Agreement to any other person without SGA's prior written approval. SGA may make such use of any item prepared by Consultant as it deems fit, including copying, reproducing, republishing and distributing such items without compensation to Consultant, but also without liability of Consultant for damages that may arise from the use of such items outside the scope of this Agreement.

17. PROJECT CONTACTS

Key contacts for the work to be performed under this Agreement will be as follows:

SGA: Jim Peifer

CONSULTANT: Ken Loy

18. ASSIGNMENT AND SUBCONTRACTING

Consultant's obligations authorized under this Agreement are not assignable or transferable, and Consultant agrees not to subcontract any work authorized hereunder, beyond that indicated in a Task Order, without the prior written approval of SGA. It is recognized, however, that Consultant may obtain services from suppliers such as printers, graphic designers, writers and other like entities without requiring such approval.

19. CONFLICT OF INTEREST

Consultant certifies that it has disclosed to SGA any actual, apparent, or potential conflicts of interest that may exist relative to the services to be provided pursuant to this Agreement. Consultant hereby agrees to advise SGA of any actual, apparent, or potential conflicts of interest that may develop subsequent to the date of execution of this Agreement. SGA reserves the right to require Consultant to submit a financial disclosure statement at the request of the SGA.

20. EMPLOYMENT PRACTICES

Consultant, by execution of this Agreement, certifies that it does not discriminate against any person upon the basis of race, color, creed, national origin, age, sex, gender, disability or marital status in its employment practices.

21. TERMINATION

This Agreement may be terminated at any time by either part upon ten days' advance written notice to the other party. In the event of any termination of this Agreement by either party:

A. Consultant will immediately cease rendering services pursuant to this Agreement;

B. Consultant will deliver to SGA copies of all writings prepared pursuant to this Agreement designed or intended for dissemination to the public, including preliminary drafts thereof. The term "writings" will be construed to mean and include: handwriting, typewriting, printing, photocopying, photography, storage in electronic media and every other means of recording upon any tangible thing, any form of communication or representation, including letters, words, pictures, sounds, or symbols, or combinations thereof; and

C. SGA will reimburse Consultant for services performed through the effective termination date at time and expense rates stated in the applicable Task Order. Compensation under this paragraph shall not include costs related to lost profit associated with the expected completion of the Services or other such payments relating to the benefit of the bargain.

22. TERM OF AGREEMENT

This Agreement will be effective as of the date executed and approved by all parties and will continue in effect until the Services provided for in this Agreement have been fully performed unless otherwise terminated as set forth in section 20 (Termination of this Agreement).

23. SUBCONTRACTORS

No subcontract shall be awarded nor any outside consultant engaged by Consultant without SGA's prior written approval. Any approved subcontractor shall be covered by Consultant's insurance in accordance with the insurance requirements of sections 7 and 8 of this Agreement or such subcontractor services will be subject to a separate agreement between SGA and the subcontractor.

24. ENTIRE AGREEMENT

This Agreement, all exhibits attached hereto, all other terms or provisions incorporated herein by reference, and any notice to proceed issued in accordance with the terms hereof, constitute the entire Agreement and understanding between the SGA and the Consultant as to the subject matter contained herein. No modification to this Agreement will be effective unless and until such modification is evidenced by a writing signed by both SGA and Consultant. There are no

understandings, agreements, conditions, representations, warranties, or promises with respect to the subject matter of this Agreement except those contained in or referred to in this Agreement.

25. ATTORNEY'S FEES.

In the event that any arbitration, litigation or other action or proceeding of any nature between SGA and Consultant becomes necessary to enforce or interpret all or any portion of this Agreement or because of an alleged breach by either party of any of the terms of this Agreement, it is mutually agreed that the losing or defaulting party shall pay the prevailing party's reasonable attorney's fees, expert witness fees and costs, and litigation costs and expenses incurred in connection with the prosecution or defense of such action or proceeding.

26. INTERPRETATION.

SGA and Consultant each had the opportunity to consult independent counsel in the negotiation and execution of this Agreement. For the purposes of interpretation of this Agreement, neither party will be deemed to have been its drafter.

27. GOVERNING LAW.

This Agreement will be governed by and construed in accordance with the laws of the State of California, and any action brought on this Agreement shall be filed and prosecuted to final judgment in Sacramento County.

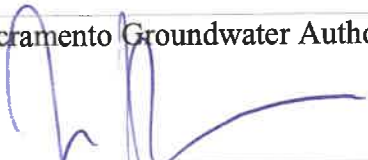

28. NO WAIVER OF RIGHTS.

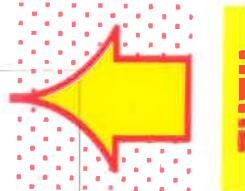
Any waiver at any time by either SGA or Consultant of its rights with respect to a breach or default, or any other matter arising in connection with this Agreement, shall not be deemed to be a waiver with respect to any other breach, default or matter.

29. LICENSING.

Consultant represents that it is licensed by the California Department of Consumer Affairs – Board for Professional Engineers, Land Surveyors, and Geologists, and that Consultant's license is in good standing and will be kept in good standing during the term of this Agreement.

The foregoing is hereby approved by the parties and executed on the date first written above.

Sacramento Groundwater Authority 	West Yost 
By Jim Peifer Executive Director	By Greg Chung Vice President
4/4/2024 Date	3/27/2024 Date





2020 Research Park Drive
Suite 100
Davis CA 95618

530.756.5905 phone
530.756.5991 fax
westyost.com

February 1, 2024

SENT VIA: EMAIL

Trevor Joseph
Manager of Technical Services
Sacramento Groundwater Authority
2295 Gateway Oaks Dr #100
Sacramento, CA 95833

SUBJECT: Proposal for Professional Services for Groundwater Quality Degradation Study Pursuant to Component 3 of DWR Grant Agreement Number 4600015622

Dear Trevor:

West Yost is pleased to present this proposal for professional services to the Sacramento Groundwater Authority (SGA). This proposal provides our scope of services, estimated budget, and schedule to conduct a Groundwater Quality Degradation Study (Study) that addresses Component 3 of the SGA grant agreement with the California Department of Water Resources (DWR). The proposal is organized into the following sections:

- Project Understanding
- Approach
- Scope of Services
- Budget
- Schedule
- Project Team

PROJECT UNDERSTANDING

The SGA is one of five Groundwater Sustainability Agencies (GSAs) that have worked cooperatively in the preparation of the North American Subbasin (NASb or Subbasin) Groundwater Sustainability Plan (GSP). On behalf of the NASb GSAs, SGA submitted a grant application to DWR under the Sustainable Groundwater Management Act (SGMA) Round II grants process. The SGA grant application was focused on "Advancing NASb Sustainable Groundwater Management" and identified seven work components. Component 3 proposed completing a Groundwater Quality Degradation Study. The grant application was approved by DWR and Grant Agreement 4600015622 (Agreement) was executed on January 18, 2024. Per the Agreement, Component 3 consists of the following:

"The study will evaluate the Tetrachloroethylene (PCE) vertical and horizontal extent in lower western Placer and northeastern Sacramento counties and to identify those wells that could be affected in the future. In addition, this study will identify the potential need for well head treatment, areas more favorable to locate new wells, and the potential effects of conjunctive use on the migration of PCE and using aquifer storage and recovery (ASR) wells."

This study is intended to be a “desk-top” study with no field investigations. This study is not intended to identify potential responsible parties, assess contamination from Aerojet or former Mather of McClellan AFB which are being remediated and are under regulatory agency direction.”

The Agreement describes the technical work of Component 3 under two tasks:

Task 1: Review Existing Studies

“Review and evaluate other existing reports regarding PCE in the study area. Review well completion reports to evaluate the vertical extent of contamination and create cross sections to display the vertical and horizontal extent. Identify downgradient wells within a six-mile radius with similar well screen intervals.”

Task 2: Groundwater Modeling Forecast

“Assess the future migration of PCE by using particle tracking in the [Cosumnes, South American, and North American Groundwater Subbasins] CoSANA model from existing contaminated wells and identify those wells that could be affected into the future with projected water transfers and climate change to develop baseline conditions. Perform additional scenarios (minimum of two) to assess PCE migration under the scenario of operating the Sacramento Regional Water Bank (SRWB).”

Per the Agreement, the remaining scope of Component 3 consists of Component Administration and Engagement/Outreach. Component Administration involves SGA’s reporting to the DWR on the status of work under the Agreement and is not part of this proposal. Engagement/Outreach is included as part of this proposal and per the Agreement consists of:

“Engage interested parties and stakeholders at a public meeting prior to initiation of the study to gain feedback and participation in the study objectives and after the study is completed to provide the results and respond to questions.”

Per the Agreement, Component 3 deliverables consist of:

- Technical Memorandum (TM) documenting a list of municipal water supplies that are potentially at risk for future PCE contamination
- TM documenting the vertical and horizontal extent of PCE contamination
- Hand out materials, as applicable, for two stakeholder meetings

APPROACH

Our proposed approach is to meet the intent of Component 3 of the Agreement while being responsive to SGA and stakeholder agency goals and objectives and listen to and incorporate the stakeholder agencies’ local knowledge of their wells, groundwater conditions near their wells, and impacts to their wells by PCE. We will initiate the Study by organizing and participating in a meeting with SGA and stakeholder agencies (initial meeting). This initial meeting will be used to review, discuss, and refine the scope of work presented in this proposal. The outcomes of the meeting will be documented in the meeting minutes and in a letter to SGA formally requesting approval of the scope refinements and any

corresponding adjustments to the task-level budgets. During this process, we will work with SGA to maintain the overall budget within the originally agreed to amount.

After the initial meeting, we will assemble the available data and information and develop hydrogeologic and PCE fate and transport conceptual models. These will provide a description of the subsurface processes under which municipal wells draw in PCE. The conceptual models will consist of maps, cross sections, tabulated data and parameters, simplified schematics, and written descriptions. The conceptual models are described separately in Tasks 4 and 5 of the scope of services below for clarity but will be integrated in the work presented to SGA and the stakeholder agencies.

The integrated conceptual model will be used to assess threats to existing and future municipal wells. The threat assessment will identify:

- Affected and potentially affected municipal wells, including downgradient wells within a six-mile radius with similar well screen intervals
- Wells needing or potentially needing wellhead treatment
- Areas favorable for new wells, including ASR wells
- Potential effects of conjunctive use, including ASR, on the migration of PCE

The threat assessment will include analysis of capture zones around municipal wells. We propose to conduct the capture zone analysis based on basin-scale observed groundwater elevation contour maps on which drawdown from the municipal wells is superimposed. We propose developing the drawdown for each municipal well based on its observed pump test results and other operational input provided by the stakeholder agencies.

As noted above in the Study description, the use of the CoSANA IWFM was assumed in the grant application for delineating capture zones and particle tracking. The model is a large, basin-scale model that is generally best suited for assessing future climate change and basin-scale operations, such as conjunctive use scenarios. We anticipate that the CoSANA IWFM model's conceptualization, spatial discretization, and temporal discretization may not be sufficiently detailed at the Study scale to achieve all the Study goals put forth by the stakeholder agencies. We have therefore assumed it will not be used for particle tracking in this proposal. That said, key information from previous runs of the model can be used to support our alternative approach. A possible path forward that includes assessments using the CoSANA IWFM would be to conduct the CoSANA assessments of future climate change and basin-scale conjunctive use as a separate project from the Groundwater Quality Degradation Study (this is being done by other consultants to SGA) and merge the findings with this Study when both studies are at or near completion. This approach also has the advantages of not duplicating CoSANA modeling efforts and enabling completion of the Groundwater Quality Degradation Study on a timeline not dependent on the CoSANA modeling effort. In implementation, we can evaluate the CoSANA IWFM application's suitability for use in delineating capture zones using particle tracking and adjust the approach and scope accordingly at the direction of SGA and the stakeholder agencies.

We will organize and participate in a meeting with SGA and stakeholder agencies to present the methods, results, and preliminary conclusions of the Study after completing the threat assessment. The purpose of the meeting will be to inform SGA and the stakeholder agencies and receive their input on the Study prior to completing the draft Study report.

We will complete the Study by preparing a draft report, meeting with SGA and stakeholder agencies to present the draft report, and subsequently finalizing the report in response to comments received from SGA and the stakeholder agencies.

SCOPE OF SERVICES

Our proposed scope of services consists of the following tasks:

- Task 1. Project Management and Quality Assurance/Quality Control (QA/QC)
- Task 2. Stakeholder Meetings
- Task 3. Compile Existing Information
- Task 4. Prepare Hydrogeologic Conceptual Model
- Task 5. Prepare Conceptual Model for Contaminant Transport
- Task 6. Assess Threats to Existing and Future Municipal Wells
- Task 7. Prepare Groundwater Quality Degradation Study Report

Task 1. Project Management and QA/QC

Project management for the Study includes general project management of controlling budget and schedule, a kickoff meeting with the SGA project team, monthly progress updates, and managing work product quality. Any proposed refinements or adjustments to the scope of work resulting from input from SGA or the stakeholder agencies, at the initial meeting in Task 2 or otherwise, will be developed under this task and submitted to SGA in writing in advance of implementation.

West Yost project management includes all activities that are not specific to any one task, including overall project management and coordination of activities with SGA. Communication will occur to keep SGA's Project Manager informed on the progress of the Study. Included in the project management task is the kickoff meeting, where West Yost will meet with the Project Manager and key SGA staff to initiate the work, and SGA and West Yost will discuss and capture any new or additional information needed to make sure SGA's and the agency stakeholders' vision for the Study is met. The kickoff meeting agenda will include reconfirming the goal of the Study, reviewing project tasks, introducing the project team, and establishing communication channels. We will provide monthly Study progress updates to the SGA's Project Manager via email, supplemented with calls or meetings as the SGA requires.

West Yost values producing high-quality work products and providing timely client service. Our project management tools include systems for tracking work progress and expenditures, proactive communications, and QA/QC of all work products. Also, the monthly review of the project by our West Yost Principal-in-Charge is an integral part of our QA/QC process. Budget for QA/QC is included in the project management task.

Task 1 Assumptions

- Kick off meeting with SGA staff will be one hour and virtual.
- Monthly project updates will be via virtual half-hour check-in meetings.

Task 1 Deliverables

- West Yost will prepare a kick off and progress meeting agendas and notes.
- West Yost will prepare a letter to SGA with proposed refinements to scope, schedule, and task-level budgets.

Task 2. Stakeholder Meetings

West Yost will organize and participate in three in-person or hybrid meetings with SGA and stakeholder agency staff as described below.

- **Initial Meeting** – This meeting will be held at the beginning of the project and will be used to:
 - Refine goals and objectives
 - Define list of participating stakeholder agencies
 - Define geographic extent of study area
 - Identify agency-specific concerns
 - Prioritize municipal wells to be included in Study
 - Review and refine proposed scope, deliverables, and schedule

West Yost will document the outcomes of the meeting and prepare and send written requests for agency-specific information to the participating agencies after this meeting. West Yost will set up a secure One-Drive site for easy transfer of requested information.

- **Meeting to Present Preliminary Results** – This meeting will be held after the threat analysis is completed and will be used to:
 - Present methods, results, and preliminary conclusions in PowerPoint presentation format
 - Inform SGA and stakeholder agencies
 - Receive comments and direction from SGA and stakeholder agencies
- **Meeting to Present Draft Groundwater Quality Degradation Study Report** – This meeting will be held after issuance of the draft report and will be used to:
 - Present and discuss draft report
 - Receive comments on draft report from SGA and stakeholder agencies

Task 2 Assumptions

- SGA or a participating agency will provide accommodations for the meetings.
- Participating agencies will provide the information requested within two weeks of receipt of the data request.

Task 2 Deliverables

- West Yost will prepare an agenda, presentation, and minutes for three (3) stakeholder agency meetings.
- West Yost will prepare written requests for agency-specific information.

Task 3. Compile Existing Information

The following information will be compiled in ArcGIS, Microsoft Excel and Word, and PDF formats:

- **Municipal Wells:** Locations, construction, lithologic and geophysical logs, operational/condition history, well modifications, production data, special water quality studies, field water quality data
- **Monitoring Wells (Selected monitoring wells relevant to Study):** Locations, construction, lithologic and geophysical logs, operational/condition history, well modifications
- **Water quality data:** Data sources will be the Safe Drinking Water Information (SDWIS) Federal Reporting Services, State Water Resources Control Board GeoTracker Groundwater Ambient Monitoring and Assessment Program (GAMA) data repository, California Environmental Data Exchange Network, the National Water Quality Monitoring Council website and published reports.
- **Prior Studies:** Geology, hydrogeology, contaminants, degree, extent, fate and transport, delineated plumes and exclusion zones, age of groundwater, recharge areas
- **Fate and transport information:** Physicochemical properties of PCE, aquifer properties (hydraulic conductivity, porosity, bulk density, fraction of organic carbon).
- **Parcel information:** Sacramento County APNs
- **CoSANA IWFM model information:** mesh, layers, model well specifications (locations, layers, depth, screened intervals), and model outputs (water levels, flow fields)

Task 3 Assumptions:

- Participating agencies are Sacramento Suburban Water District (SSWD) and Carmichael Water District (CWD).
- Geographic extent of the study area is lower western Placer and northeastern Sacramento counties, the SSWD service area and the CWD service area.

Task 3 Deliverables:

- West Yost will prepare a Technical Memorandum (TM) documenting a list of municipal wells that are potentially at risk for future PCE contamination.

Task 4. Prepare Hydrogeologic Conceptual Model

This task will consist of preparing a hydrogeologic conceptual model (HCM) for the study area in ArcGIS. The HCM will be developed specifically for meeting Study objectives and will consist of:

- **Geologic map and cross sections depicting:**
 - Geologic and hydrogeologic units
 - Well locations, construction and known modifications
- Groundwater elevation contour and horizontal gradient maps
- Groundwater elevations on cross sections showing vertical gradients where data are available
- Tabulated summary of available aquifer hydraulic parameter data based on pump test data

Task 4 Assumptions

- See Task 3 assumptions.
- One geologic map and four geologic cross sections will be prepared.
- Up to four groundwater elevation contour maps will be prepared.

Task 4 Deliverables

- West Yost will provide all work products incorporated in subsequent tasks.

Task 5. Prepare Conceptual Model for Contaminant Transport

This task will consist of preparing a conceptual model for PCE transport to municipal wells. The transport conceptual model will build upon and be integrated with the HCM and will consist of:

- Mapping of PCE plumes and point sources
- Mapping of time series PCE detections at municipal wells and selected monitoring wells, including production data where available
- Posting of recent PCE detections on cross sections at sampled depth intervals
- Tabulating physicochemical properties of PCE and aquifer, culminating in estimated transport velocity and half-life
- Mapping conceptual capture zones based on observed regional groundwater gradient and measured drawdown at each municipal well

Task 5 Assumptions

- See Task 3 and 4 assumptions.

Task 5 Deliverables

- West Yost will provide work products incorporated in following tasks.

Task 6. Assess Threats to Existing and Future Municipal Wells

This task will consist of the following:

- Project concentration trends at existing municipal wells, and identify current and projected future MCL exceedances as well as the need for wellhead treatment
- Delineate areas with potential well sites currently threatened by PCE
- Delineate areas with potential well sites threatened by PCE in the future (assuming no new releases)
- Develop preliminary conclusions on the impact of conjunctive use and ASR on PCE impacts to municipal wells
- Develop preliminary conclusions on the use of the CoSANA IWFM model for particle tracking based on mesh, layers, and model wells

Task 6 Assumptions

- See Task 3, 4, and 5 assumptions.
- Up to 15 municipal wells will be evaluated.
- Groundwater modeling is not included.

Task 6 Deliverables

- West Yost will provide work products presented in Meeting No. 2 and incorporated in following tasks.

Task 7. Prepare Groundwater Quality Degradation Study Report

This task will consist of preparing the Groundwater Quality Degradation Study Report as follows:

- Prepare draft report
- Meet with participating stakeholder agencies to present and discuss draft report (see Task 2 – Stakeholder Meetings)
- Receive comments from SGA and stakeholder agencies
- Prepare and issue final report

Task 7 Assumptions

- SGA will provide one set of consolidated comments within three weeks of submittal of the draft report.
- Only SGA and participating agencies will submit comments.

Task 7 Deliverables

- West Yost will provide a draft in Microsoft Word and PDF formats.
- West Yost will provide a Final report in PDF format.
- West Yost will provide a comment-response log.
- West Yost will provide GIS files developed for the Study.

PROPOSED BUDGET

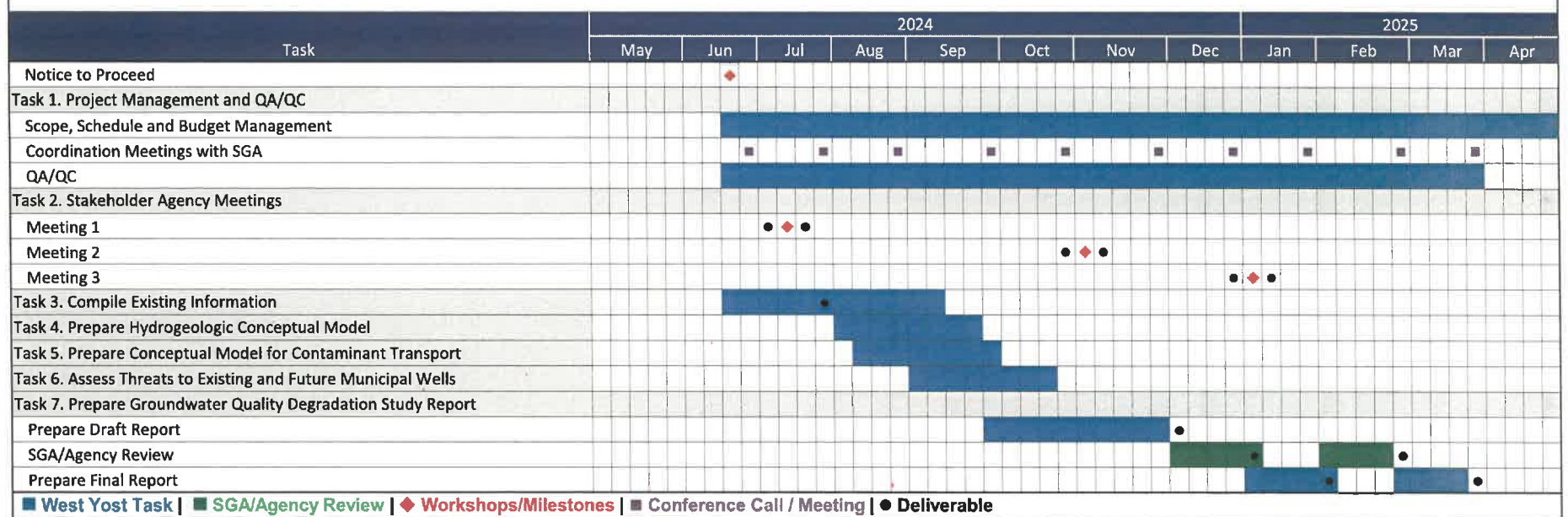
West Yost's proposed level of effort and budget for each of the tasks described above is shown in Table 1. West Yost will perform the Scope of Services described above on a time-and-expenses basis, at the billing rates set forth in Attachment A, West Yost's 2024 Billing Rate Schedule, with a not-to-exceed budget of \$230,800. Any additional services not included in this Scope of Services will be performed only after receiving written authorization and a corresponding budget augmentation. A detailed breakdown of the budget is included in Attachment B.

Table 1. Estimated Project Hours and Budget		
Task	Level of Effort, hours	Estimated Budget, dollars
Task 1. Project Management and QA/QC	160	47,700
Task 2. Stakeholder Meetings	87	23,700
Task 3. Compile Existing Information	132	31,200
Task 4. Prepare Hydrogeologic Conceptual Model	116	28,900
Task 5. Prepare Conceptual Model for Contaminant Transport	76	19,200
Task 6. Assess Threats to Existing and Future Municipal Wells	84	22,700
Task 7. Prepare Groundwater Degradation Study Report	214	57,400
Total Project Hours and Budget	869	\$230,800

SCHEDULE

West Yost is prepared to begin work within one week of receiving notice to proceed. Table 2 provides our proposed schedule.

Table 2. Proposed Schedule



PROJECT TEAM

Kelye McKinney will serve as Principal In-Charge. Kelye is a professional engineer with 33 years of experience in municipal water utilities.

Ken Loy will serve as the technical lead for the Study and primary author of the Groundwater Quality Degradation Study Report. Ken is a Certified Hydrogeologist and Engineering Geologist with nearly 35 years of experience in hydrogeologic and water quality characterization, data analysis, and modeling. Ken is currently serving as Owner's Representative for SSWD's progressive design-build well construction projects and has assisted SSWD with groundwater quality assessments, well siting studies, and ASR evaluations. Ken was the technical lead and managed the investigation and modeling of the PCE plume at the former Mather Air Force Base, and the modeling and three-dimensional visualization of the PCE plume in Aerojet's American River Study Area.

Clay Sorensen will support Ken by serving as the Project Manager and providing technical support to the Study. Clay is a Certified Hydrogeologist with eight years of geologic and environmental consulting experience, including water-well drilling, groundwater resource investigations and litigation support, investigation and remediation of chemically impacted sites, and surface and groundwater monitoring.

Anna Reimer will provide support in assembling the available data, conducting the analysis, and report preparation. Anna is a Professional Geologist with 15 years of experience working with Ken, including on the SSWD projects listed above.

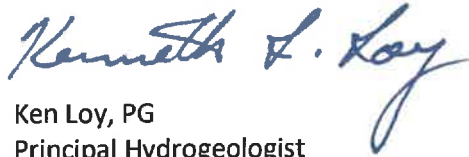
Samantha Adams will serve as the QA/QC reviewer of all work products. Samantha is an environmental scientist with 18 years of experience in groundwater management, including salt and nutrient management planning, design and implementation of monitoring programs, and regulatory compliance support. Samantha has served as a project manager and QA/QC reviewer of complex, basin-scale water quality modeling studies in the Chino Basin and Elsinore Basin in southern California.

Supporting staff will include:

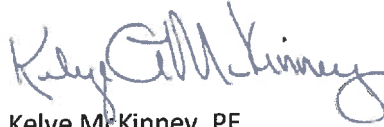
- **Alice Kwok** - Alice is a geologist-in-training with six years of experience. Alice will support assembling the available data, conducting the analysis, and preparing the report.
- **Lucey Hedley** - Lucy is an associate scientist with five years of experience in data management, water quality analysis, GIS and geospatial analysis, and ground and surface water monitoring program implementation. Lucy will provide Python programming support for efficient water quality data processing.
- **Ben Klayman, PhD** - Ben will support the threat analysis by providing as-needed technical expertise in water quality and wellhead treatment. Ben is a professional engineer licensed in Oregon and has 16 years of experience.

Thank you for providing West Yost the opportunity to assist SGA. Please contact me at 530-792-3276 or via email at kloy@westyost.com if you wish to discuss any of the information presented in this proposal.

Sincerely,
WEST YOST



Ken Loy, PG
Principal Hydrogeologist
PG #7008
530.792.3276



Kelye McKinney, PE
Principle-In-Charge
RCE #49414
916.846.4687

Attachments: Attachment A. West Yost 2024 Billing Rate Schedule
Attachment B. Detailed Fee Estimate

Attachment A

West Yost 2024 Billing Rate Schedule

2024 Billing Rate Schedule

(Effective January 1, 2024, through December 31, 2024)*

POSITIONS	LABOR CHARGES (DOLLARS PER HOUR)
ENGINEERING	
Principal/Vice President	\$355
Engineer/Scientist/Geologist Manager I / II	\$335 / \$351
Principal Engineer/Scientist/Geologist I / II	\$302 / \$322
Senior Engineer/Scientist/Geologist I / II	\$272 / \$286
Associate Engineer/Scientist/Geologist I / II	\$226 / \$243
Engineer/Scientist/Geologist I / II	\$176 / \$205
Engineering Aide	\$106
Field Monitoring Services	\$131
Administrative I / II / III / IV	\$97 / \$121 / \$145 / \$160
ENGINEERING TECHNOLOGY	
Engineering Tech Manager I / II	\$349 / \$351
Principal Tech Specialist I / II	\$320 / \$331
Senior Tech Specialist I / II	\$293 / \$306
Senior GIS Analyst	\$265
GIS Analyst	\$251
Technical Specialist I / II / III / IV	\$187 / \$213 / \$239 / \$267
Technical Analyst I / II	\$134 / \$160
Technical Analyst Intern	\$108
Cross-Connection Control Specialist I / II / III / IV	\$140 / \$151 / \$170 / \$189
CAD Manager	\$211
CAD Designer I / II	\$164 / \$185
CONSTRUCTION MANAGEMENT	
Senior Construction Manager	\$338
Construction Manager I / II / III / IV	\$201 / \$215 / \$228 / \$289
Resident Inspector (Prevailing Wage Groups 4 / 3 / 2 / 1)	\$181 / \$201 / \$224 / \$232
Apprentice Inspector	\$164
CM Administrative I / II	\$87 / \$118
Field Services	\$232

- Hourly rates include charges for technology and communication, such as general and CAD computer software, telephone calls, routine in-house copies/prints, postage, miscellaneous supplies, and other incidental project expenses.
- Outside services, such as vendor reproductions, prints, and shipping; major West Yost reproduction efforts; as well as engineering supplies, etc., will be billed at the actual cost plus 15%.
- The Federal Mileage Rate will be used for mileage charges and will be based on the Federal Mileage Rate applicable to when the mileage costs were incurred. Travel other than mileage will be billed at cost.
- Subconsultants will be billed at actual cost plus 10%.
- Expert witness services, research, technical review, analysis, preparation, and meetings will be billed at 150% of standard hourly rates. Expert witness testimony and depositions will be billed at 200% of standard hourly rates.
- A finance charge of 1.5% per month (an annual rate of 18%) on the unpaid balance will be added to invoice amounts if not paid within 45 days from the date of the invoice.

2024 Billing Rate Schedule

(Effective January 1, 2024, through December 31, 2024)*

Equipment Charges

EQUIPMENT	BILLING RATES
2" Purge Pump & Control Box	\$300 / day
Aquacalc / Pygmy or AA Flow Meter	\$28 / day
Emergency SCADA System	\$35 / day
Field Vehicles (Groundwater)	\$1.02 / mile
Gas Detector	\$80 / day
Generator	\$60 / day
Hydrant Pressure Gauge	\$10 / day
Hydrant Pressure Recorder, Impulse (Transient)	\$55 / day
Hydrant Pressure Recorder, Standard	\$40 / day
Low Flow Pump Back Pack	\$135 / day
Low Flow Pump Controller	\$200 / day
Powers Water Level Meter	\$32 / day
Precision Water Level Meter 300ft	\$30 / day
Precision Water Level Meter 500ft	\$40 / day
Precision Water Level Meter 700ft	\$45 / day
QED Sample Pro Bladder Pump	\$65 / day
Storage Tank	\$20 / day
Sump Pump	\$24 / day
Transducer Communications Cable	\$10 / day
Transducer Components (per installation)	\$23 / day
Trimble GPS – Geo 7x	\$220 / day
Tube Length Counter	\$22 / day
Turbidity Meter	\$30 / day
Turbidity Meter (2100Q Portable)	\$35 / day
Vehicle (Construction Management)	\$10 / hour
Water Flow Probe Meter	\$20 / day
Water Quality Meter	\$50 / day
Water Quality Multimeter	\$185 / day
Well Sounder	\$30 / day

Attachment B

Detailed Fee Estimate

West Yost Associates	EM/SM/GM I	PE/PS/PG II	PE/PS/PG II	SE/SS/SG I	AE/AS/AG II	AE/AS/AG I	ESG II	P	Labor		Costs			
	\$335 K. McKinney	\$322 K. Loy	\$322 B. Klayman	\$272 C. Sorensen	\$243 A. Reimgr.	\$226 L. Hedley	\$205 A. Kwok	\$355	Hours	Fee	Sub. w/ markup 10%	Other Direct	Total Costs	
PROJECT: Groundwater Quality Degradation Study														
Task 1 Project Management														
1.01 Scope, Schedule and Budget Management	4	16		60					80	\$ 22,812			\$ 22,812	
1.02 Coordination Meetings with SGA	4	24		32					60	\$ 17,772			\$ 17,772	
1.03 QA/QC								20	20	\$ 7,100			\$ 7,100	
Subtotal, Task 1 (hours)	8	40	0	92	0	0	0	20	160					
Subtotal, Task 1 (\$)	\$ 2,680	\$ 12,880		\$ 25,024				\$ 7,100		\$ 47,684			\$ 47,684	
Task 2 Stakeholder Meetings														
2.01 Initial Meeting	1	8		6	6				21	\$ 6,001		\$ 75	\$ 6,076	
2.02 Preliminary Findings Meeting	1	12		8	8		8		37	\$ 9,959		\$ 75	\$ 10,034	
2.03 Draft Report Review Meeting	1	8		4	8		8		29	\$ 7,583		\$ 75	\$ 7,658	
Subtotal, Task 2 (hours)	3	28	0	18	22	0	16	0	87					
Subtotal, Task 2 (\$)	\$ 1,005	\$ 9,016		\$ 4,896	\$ 5,346		\$ 3,280			\$ 23,543		\$ 225	\$ 23,768	
Task 3 Compile Existing Information														
3.01		16		16	20	20	60		132	\$ 31,184			\$ 31,184	
Subtotal, Task 3 (hours)	0	16	0	16	20	20	60	0	132					
Subtotal, Task 3 (\$)		\$ 5,152		\$ 4,352	\$ 4,860	\$ 4,520	\$ 12,300			\$ 31,184			\$ 31,184	
Task 4 Prepare Hydrogeologic Conceptual Model														
4.01		24		12	40		40		116	\$ 28,912			\$ 28,912	
Subtotal, Task 4 (hours)	0	24	0	12	40	0	40	0	116					
Subtotal, Task 4 (\$)		\$ 7,728		\$ 3,264	\$ 9,720		\$ 8,200			\$ 28,912			\$ 28,912	
Task 5 Prepare Conceptual Model for Contaminant Transport														
5.01		16		12	24		24		76	\$ 19,168			\$ 19,168	
Subtotal, Task 5 (hours)	0	16	0	12	24	0	24	0	76					
Subtotal, Task 5 (\$)		\$ 5,152		\$ 3,264	\$ 5,832		\$ 4,920			\$ 19,168			\$ 19,168	
Task 6 Assess Threats to Existing and Future Municipal Wells														
6.01		24	8	12	24		16		84	\$ 22,680			\$ 22,680	
Subtotal, Task 6 (hours)	0	24	8	12	24	0	16	0	84					
Subtotal, Task 6 (\$)		\$ 7,728	\$ 2,576	\$ 3,264	\$ 5,832		\$ 3,280			\$ 22,680			\$ 22,680	
Task 7 Prepare Groundwater Degradation Study														
7.01 Prepare Draft Groundwater Degradation Study Report	1	40	8	24	40		24		137	\$ 36,959			\$ 36,959	
7.02 Prepare Final Groundwater Degradation Study Report	1	20	4	12	24		16		77	\$ 20,439			\$ 20,439	
Subtotal, Task 7 (hours)	2	60	12	36	64	0	40	0	214					
Subtotal, Task 7 (\$)	\$ 670	\$ 19,320	\$ 3,864	\$ 9,792	\$ 15,552		\$ 8,200			\$ 57,398			\$ 57,398	
TOTAL (hours)	13	208	20	198	194	20	196	20	869					
TOTAL (\$)	\$ 4,355	\$ 66,976	\$ 6,440	\$ 53,856	\$ 47,142	\$ 4,520	\$ 40,180	\$ 7,100		\$ 230,569	\$ 0	\$ 225	\$ 230,794	



2020 Research Park Drive
Suite 100
Davis CA 95618

530.756.5905 phone
530.756.5991 fax
westyost.com

June 4, 2025

SENT VIA: EMAIL

Trevor Joseph, PG, CHG
Manager of Technical Services
Sacramento Groundwater Authority
2295 Gateway Oaks Dr #100
Sacramento, CA 95833

SGA Consulting Agreement: 2024-001
West Yost Project: 1121-80-24-01

SUBJECT: Request for Budget Augmentation: Sacramento Groundwater Authority Consulting Agreement Dated April 4, 2024, SGA 2024-001, Component 3 of DWR Grant Agreement Number 4600015622

Dear Trevor,

West Yost is providing professional services to the Sacramento Groundwater Authority (SGA) to conduct a Groundwater Quality Degradation Study (Study) pursuant to Component 3 of Department of Water Resources (DWR) Grant Agreement Number 4600015622 (Grant Agreement). West Yost is providing these services under Consulting Agreement SGA 2024-001 (Consulting Agreement).

The purpose of this letter is to request authorization for budget augmentation to cover greater than anticipated costs for the work conducted to date to perform the Study. Factors leading to additional costs have been communicated with SGA staff during Study development. These factors are summarized below and more fully described throughout the rest of this Request for Budget Augmentation:

- **Extension of the overall project schedule (Task 1).**
- **Additional Project Management Tasks (Task 1):** Additional project management tasks associated with grant component administration, such as assistance with completing grant progress reports, were requested by SGA staff and fulfilled by West Yost.
- **Expanded Study Area and Participating Stakeholders (Task 2):** The Study Area was expanded to include two additional participating agencies, encompassing four service area districts, not originally scoped for the Study. The Study area increased from 28,413 acres to 45,233 acres.
- **Additional Constituents of Concern (Task 2):** The list of evaluated contaminants of concern was expanded to include hexavalent chromium, manganese, and perchlorate. The original scope of work only included the evaluation of tetrachloroethylene (PCE).
- **Preparation of Formal Requests for Information (Task 2):** The level of effort associated with data requests and receipt was greater than anticipated due to preparing and tracking formal requests for information, coordination and communication with participating agencies to receive needed information, and preprocessing incomplete or unformatted datasets, scanned images of paper files, and/or PDFs for use in the Study. These complexities resulted in additional processing and coordination with the participating agencies.
- **Additional Outreach and Coordination Efforts (Task 2):** A greater than anticipated level of effort was required for outreach and coordination with participating agencies during the duration of the Study.

- **Additional Stakeholder Engagement Activities (Task 3):** Additional stakeholder engagement activities and presentations for the SGA Regional Contaminate Issues Council (RCIC), Regional Water Authority (RWA) Water Quality Committee, and multiple individual stakeholder meetings were added throughout the duration of the Study. Additionally, comments on the draft Report were received verbally instead of electronically, which included a separate meeting with the participating agency.

Budget Augmentation Request

The current authorized budget under the Consulting Agreement is \$244,000. It is estimated we will need an additional \$22,200 to complete the scope of work. This would bring the total anticipated budget to \$266,200. Table 1 shows by task the current authorized budget, the requested additional budget, and requested revised total West Yost budget.

Based on our conversations, an additional \$22,200 may be available under the DWR Grant Agreement, pending approval from the DWR Grant Manager and the SGA Board. West Yost is requesting the SGA Board's authorization of the \$22,200 to our Consulting Agreement to address out-of-scope services bringing the total authorized budget to \$266,200.

West Yost proposes to continue performing services under the Grant Agreement on a time-and-expenses basis in accordance with our 2024 Billing Rate Schedule (Attachment A).

Table 1. Sacramento Groundwater Authority Groundwater Degradation Study Project Budget Analysis

West Yost Task	DWR Grant Category and Task	Authorized Budget	Costs through 5/9/2025	Estimated Cost to Complete	Estimated Cost at Completion	Projected Cost Variance	Proposed Task-Level Budget Increase	Proposed Task-Level Budget	Variance for Proposed Task-Level Budgets
Task 001.0 - Component Administration	Category a	\$20,000.00	\$19,899.99	\$100.01	\$20,000.00	\$0.00	\$0.00	\$20,000.00	\$ -
Task 002.1 - Compile Existing Information	Category b (Task 1 - Review Existing Studies)	\$36,100.00	\$36,067.25	\$0.00	\$36,100.00	\$0.00	\$0.00	\$36,100.00	\$ -
Task 002.2 - Prepare Hydrogeologic Conceptual Model	Category b (Task 1 - Review Existing Studies)	\$37,200.00	\$35,874.00	\$1,300.00	\$37,200.00	\$0.00	\$0.00	\$37,200.00	\$ -
Task 002.3 - Prepare Conceptual Model for Contaminant Transport	Category b (Task 1 - Review Existing Studies)	\$25,400.00	\$25,409.50	\$0.00	\$25,400.00	\$0.00	\$0.00	\$25,400.00	\$ -
Task 002.4 - Assess Threats to Existing and Future Wells	Category b (Task 2 - Groundwater Modeling Forecast)	\$32,700.00	\$32,687.50	\$0.00	\$32,700.00	\$0.00	\$0.00	\$32,700.00	\$ -
Task 002.5 - Prepare Groundwater Degradation Study Report	Category b (Task 1 and Task 2)	\$79,600.00	\$80,639.00	\$21,199.99	\$101,800.00	-\$22,200.00	\$22,200.00	\$101,800.00	\$ -
Task 003.0 - Engagement / Outreach	Category e	\$13,000.00	\$12,897.96	\$100.00	\$13,000.00	\$0.00	\$0.00	\$13,000.00	\$ -
Totals		\$244,000.00	\$243,475.20	\$22,700.00	\$266,200.00	-\$22,200.00	\$22,200.00	\$266,200.00	\$ -

Budget Augmentation Request Details

The following provides additional information, by work task, on the out-of-scope work leading to additional costs and this augmentation request. While we have documented the additional work by task, it is our understanding that Tasks 1 and 3 cannot be adjusted. Therefore, we propose that available funds under the DWR Grant Agreement be authorized and applied entirely to Task 2.

Task 1. Component Administration (DWR Category a)

Based on previous discussions with SGA staff and our understanding of the DWR grant agreement, Task 1 budget cannot be modified. While no budget augmentation is requested for this task, we are providing detail regarding additional services performed under this Task.

The estimated level of effort for this task was based on a project duration of ten months and included ten virtual meetings to discuss progress status with SGA. The project has been underway for approximately 15 months. One additional month of work is anticipated to complete the report and close out the project. The extended schedule has increased the level of effort necessary to complete this task. Additionally, SGA requested that West Yost assist with the DWR grant progress reports which was not included in the original scope of work.

Task 2. Technical Tasks (DWR Category b)

Task 2 of the DWR Grant Agreement Category b consists of the following authorized subtasks:

- Subtask 2.1 - Compile Existing Information
- Subtask 2.2 - Prepare Hydrogeologic Conceptual Model
- Subtask 2.3 - Prepare Contaminant Conceptual Model
- Subtask 2.4 - Assess Threats to Existing and Future Wells
- Subtask 2.5 - Prepare Groundwater Degradation Study Report

Each subtask under Task 2 has been completed except for the final Groundwater Degradation Study Report. West Yost is currently preparing the final document based on comments received from stakeholder agency staff from Sacramento Suburban Water District (SSWD).

The additional services performed under Task 2 is detailed below.

Expanded Study Area and Participating Stakeholders: The stakeholder list in the proposed scope was limited to SSWD and Carmichael Water District (CWD). Data compilation was assumed to be for these two agencies. Two additional agencies, California American Water (CalAm) and Citrus Heights Water District (CHWD), were added to the stakeholder list of participating agencies at the start of the Study. Additional details are discussed below that expanded the scope of work.

Following the addition of CalAm and CHWD, the Study Area was subsequently expanded to include the service areas of three CalAm districts (Antelope, Arden, and Lincoln Oaks) and CHWD. Including these additional agencies resulted in a more robust Study, however, the level of effort required to complete the Study increased.

Additional Constituents of Concern: The original scope of work assumed PCE as the only constituent of concern (COC) to be addressed in the Study. Hexavalent chromium, manganese, and perchlorate were identified during the kickoff meeting and were added to the Study COC list. COCs other than PCE were not accounted for in the initial scope of work and increased the level of effort needed to complete the water quality analysis. Adding these additional COCs added value to the Study but increased the level of effort necessary to complete this task.

Preparation of Formal Requests for Information: During the data compilation phase of the Study, stakeholder agencies requested West Yost prepare formal Requests for Information (RFI). These RFIs were specifically developed for each participating stakeholder and were modified to exclude information West Yost already had from previous projects. Preparing these formal RFIs were not accounted for in the initial scope of work and increased the level of effort for this task.

Additional Outreach and Coordination Efforts: Additional outreach and coordination were required for all stakeholder agencies due to incomplete data deliveries and datasets delivered in unwieldy and in some cases unusable format. Over a roughly two-month period, West Yost conducted additional follow up with stakeholder agencies to complete data gaps and to receive data in usable format(s). Critical information still missing or received in unusable formats after the two-month period were ultimately sought through publicly available data repositories and third-party reports (e.g., review of DWR's Online System for Well Completion Reports to identify missing well logs associated with stakeholder wells) and underwent additional processing by West Yost prior to use in the Study. Data synthesis, formatting, and processing exceeded the anticipated level of effort due to missing or incomplete data, or when data was delivered in an incompatible format. This additional effort was necessary to compile complete, usable data but increased the level of effort and exceeded the budget for this task.

The authorized budget for Task 2 is \$211,000. A budget augmentation for additional funds under the Grant of \$22,200 is requested.

Task 3. Engagement / Outreach (DWR Category e)

Based on previous discussions with SGA staff and our understanding of the DWR grant agreement, Task 3 budget cannot be modified. While no budget augmentation is requested for this task, we are providing detail regarding additional services performed under this Task.

Task 3 is complete. West Yost participated in nine public outreach or stakeholder engagement meetings. The original scope of work included West Yost participation in three public outreach or stakeholder engagement meetings consisting of a kickoff meeting and two stakeholder engagement meetings to present the draft and final Report. The following is a list of the comprehensive public outreach or stakeholder engagement meetings that West Yost participated in:


- One stakeholder engagement Kick-Off meeting;
- One public outreach meeting;
- Two individual stakeholder meetings with CWD and SSWD;
- Two RCIC meetings in April 2024 and October 2024;
- One joint RCIC/RWA Water Quality Committee meeting in February 2025;
- One individual stakeholder meeting with SSWD to receive and record verbal comments on the draft Report; and,
- One stakeholder engagement meeting to present the draft Report.

Closing

West Yost is proud of the comprehensive Study developed for the Sacramento area through SGA, the stakeholder agencies, and as funded by the DWR grant. We have no doubt the additional level of effort added important additional detail regarding water quality within the Study Area. We request your written authorization of the additional \$22,200 to our Consultant Agreement. Please contact me at (831) 706-5135 or csorensen@westyost.com if you have any questions or need additional information.

Sincerely,

WEST YOST



Clay Sorensen
Senior Hydrogeologist I

Attachments A. West Yost 2024 Billing Rate Schedule



Attachment A

West Yost 2024 Billing Rate Schedule

2024 Billing Rate Schedule

(Effective January 1, 2024, through December 31, 2024)*

POSITIONS	LABOR CHARGES (DOLLARS PER HOUR)
ENGINEERING	
Principal/Vice President	\$355
Engineer/Scientist/Geologist Manager I / II	\$335 / \$351
Principal Engineer/Scientist/Geologist I / II	\$302 / \$322
Senior Engineer/Scientist/Geologist I / II	\$272 / \$286
Associate Engineer/Scientist/Geologist I / II	\$226 / \$243
Engineer/Scientist/Geologist I / II	\$176 / \$205
Engineering Aide	\$106
Field Monitoring Services	\$131
Administrative I / II / III / IV	\$97 / \$121 / \$145 / \$160
ENGINEERING TECHNOLOGY	
Engineering Tech Manager I / II	\$349 / \$351
Principal Tech Specialist I / II	\$320 / \$331
Senior Tech Specialist I / II	\$293 / \$306
Senior GIS Analyst	\$265
GIS Analyst	\$251
Technical Specialist I / II / III / IV	\$187 / \$213 / \$239 / \$267
Technical Analyst I / II	\$134 / \$160
Technical Analyst Intern	\$108
Cross-Connection Control Specialist I / II / III / IV	\$140 / \$151 / \$170 / \$189
CAD Manager	\$211
CAD Designer I / II	\$164 / \$185
CONSTRUCTION MANAGEMENT	
Senior Construction Manager	\$338
Construction Manager I / II / III / IV	\$201 / \$215 / \$228 / \$289
Resident Inspector (Prevailing Wage Groups 4 / 3 / 2 / 1)	\$181 / \$201 / \$224 / \$232
Apprentice Inspector	\$164
CM Administrative I / II	\$87 / \$118
Field Services	\$232

- Hourly rates include charges for technology and communication, such as general and CAD computer software, telephone calls, routine in-house copies/prints, postage, miscellaneous supplies, and other incidental project expenses.
- Outside services, such as vendor reproductions, prints, and shipping; major West Yost reproduction efforts; as well as engineering supplies, etc., will be billed at the actual cost plus 15%.
- The Federal Mileage Rate will be used for mileage charges and will be based on the Federal Mileage Rate applicable to when the mileage costs were incurred. Travel other than mileage will be billed at cost.
- Subconsultants will be billed at actual cost plus 10%.
- Expert witness services, research, technical review, analysis, preparation, and meetings will be billed at 150% of standard hourly rates. Expert witness testimony and depositions will be billed at 200% of standard hourly rates.
- A finance charge of 1.5% per month (an annual rate of 18%) on the unpaid balance will be added to invoice amounts if not paid within 45 days from the date of the invoice.

2024 Billing Rate Schedule

(Effective January 1, 2024, through December 31, 2024)*

Equipment Charges

EQUIPMENT	BILLING RATES
2" Purge Pump & Control Box	\$300 / day
Aquacalc / Pygmy or AA Flow Meter	\$28 / day
Emergency SCADA System	\$35 / day
Field Vehicles (Groundwater)	\$1 / mile
Gas Detector	\$80 / day
Generator	\$60 / day
Hydrant Pressure Gauge	\$10 / day
Hydrant Pressure Recorder, Impulse (Transient)	\$55 / day
Hydrant Pressure Recorder, Standard	\$40 / day
Low Flow Pump Back Pack	\$135 / day
Low Flow Pump Controller	\$200 / day
Powers Water Level Meter	\$32 / day
Precision Water Level Meter 300ft	\$30 / day
Precision Water Level Meter 500ft	\$40 / day
Precision Water Level Meter 700ft	\$45 / day
QED Sample Pro Bladder Pump	\$65 / day
Skydio 2+ Drone (2 hour mimimum)	\$100 / hour
Storage Tank	\$20 / day
Sump Pump	\$24 / day
Transducer Communications Cable	\$10 / day
Transducer Components (per installation)	\$23 / day
Trimble GPS – Geo 7x	\$220 / day
Tube Length Counter	\$22 / day
Turbidity Meter	\$30 / day
Turbidity Meter (2100Q Portable)	\$35 / day
Vehicle (Construction Management)	\$10 / hour
Water Flow Probe Meter	\$20 / day
Water Quality Meter	\$50 / day
Water Quality Multimeter	\$185 / day
Well Sounder	\$30 / day

Topic: Change Order 2025-02 for SGA Consulting Agreement 2024-001 for Professional Services between Woodard & Curran and SGA

Type: New Business

Item for: Consent Calendar

Purpose: Action, Approve Change Order 2025-02

SUBMITTED BY:	Trevor Joseph, Manager of Technical Services	PRESENTER:	Trevor Joseph, Manager of Technical Services
---------------	---	------------	---

EXECUTIVE SUMMARY

This is an action item for the Sacramento Groundwater Authority (SGA) Board of Directors to authorize the SGA Executive Director to execute Change Order 2025-02 to increase Woodard & Curran’s professional services agreement in the amount of \$43,060 for water quality sampling and analysis. Water quality sampling and analysis supports implementation of the Northern American Subbasin (NASb) Groundwater Sustainability Plan (GSP) consistent with the Sustainable Groundwater Management Act (SGMA).

STAFF RECOMMENDED ACTION

Authorize the SGA Executive Director to execute Change Order 2025-02 to increase Woodard & Curran’s professional services agreement in the amount of \$43,060.

BACKGROUND

At the August 2024 Board meeting SGA entered into a professional services agreement with Woodard & Curran, Inc. to support SGMA implementation and other groundwater management activities including but not limited to an amendment to the NASb GSP and groundwater modeling support.

To date Woodard & Curran has assisted staff in completing the Water Year 2024 Annual Report in accordance with the SGMA and GSP regulations and start a series of tasks to begin the 5-year GSP evaluation.

At the April 10, 2025 SGA Board meeting, the Board of Directors authorized the SGA Executive Director to execute Change Order #1 (e.g., TO 24-02) with Woodard & Curran for the remaining tasks 4 and 7 which will enable SGA to complete the responsibilities under SGMA to fully evaluate and amend the 2021 GSP for the NASb.

As identified in Table 10-2, Summary of Implementation Actions, of the NASb 2021 GSP, one of the GSP implementation actions is the collection of water quality samples in the shallow water quality monitoring network in the fall of odd numbered years (e.g., 2025) to be included as an appendix in the applicable water years annual report. Task 8 – Water Year 2025 Water Quality Sampling (\$43,060) will provide that service for SGA.

FISCAL IMPACT

This change order of \$43,060 will increase the total contracted amount from \$806,395 to a not-to-exceed amount of \$849,455. Funding for this effort is provided within the 2021 GSP 5-year Implementation Budget and the SGM Department of Water Resources (DWR) grant award.

FINDING/CONCLUSION

Staff recommends the SGA Board of Director's authorize the SGA Executive Director to execute Change Order 2025-02 to increase Woodard & Curran's professional services agreement in the amount of \$43,060 for water quality sampling and analysis support.

ATTACHMENTS

Attachment 1 – Agreement with Woodard & Curran and Change Order 2025-01

Attachment 2 – Change Order 2025-02

Sacramento Groundwater Authority Services Agreement

This Agreement is entered into as of the date last signed and dated below by and between Sacramento Groundwater Authority, a local government agency ("SGA"), and Woodard & Curran, Inc., a Maine corporation ("Contractor"), who agree as follows:

1 Scope of Work

Contractor is being retained to provide support services for Sustainable Groundwater Management Act ("SGMA") implementation and other Groundwater Management activities. Contractor shall perform the work and render the services described in the attached Exhibit A (the "Work") and subsequent task orders to be negotiated and approved by SGA and Contractor. Contractor shall provide all labor, services, equipment, tools, material and supplies required or necessary to properly, competently and completely perform the Work. Contractor shall determine the method, details and means of doing the Work.

2 Payment

2.1 SGA shall pay to Contractor a fee based on:

- ☒ Contractor's time and expenses necessarily and actually expended or incurred on the Work in accordance with Contractor's fee schedule on the attached Exhibit A.
- ☐ The fee arrangement described on the attached Exhibit A.

The total fee for the Work shall not exceed \$352,881. There shall be no compensation for extra or additional work or services by Contractor unless approved in advance in writing by SGA. Contractor's fee includes all of Contractor's costs and expenses related to the Work.

2.2 At the end of each month, Contractor shall submit to SGA an invoice for the Work performed during the preceding month. The invoice shall include a brief description of the Work performed, the dates of Work, number of hours worked and by whom (if payment is based on time), payment due, and an itemization of any reimbursable expenditures. If the Work is satisfactorily completed and the invoice is accurately computed, SGA shall pay the invoice within 30 days of its receipt.

3 Term

3.1 This Agreement shall take effect as of the date last signed and dated below and continue in effect until completion of the Work, unless sooner terminated as provided below. Time is of the essence in this Agreement. If Exhibit A includes a Work schedule or deadline, then Contractor must complete the Work in accordance with the specified schedule or deadline, which may be extended by SGA for good cause shown by Contractor. If Exhibit A does not include a Work schedule or deadline, then Contractor must perform the Work diligently and as expeditiously as possible, consistent with the professional skill and care appropriate for the orderly progress of the Work.

3.2 This Agreement may be terminated at any time by SGA upon 10 days advance written notice to Contractor. In the event of such termination, Contractor shall be fairly compensated for all work performed to the date of termination as calculated by SGA based on the fee and payment provisions in Exhibit A. Compensation under this section shall not include any termination-related expenses, cancellation or demobilization charges, or lost profit associated with the expected completion of the Work or other such similar payments relating to Contractor's claimed benefit of the bargain.

4 Professional Ability of Contractor

4.1 Contractor represents that it is specially trained and experienced, and possesses the skill, ability, knowledge and certification, to competently perform the Work provided by this Agreement. SGA has relied upon Contractor's training, experience, skill, ability, knowledge and certification as a material inducement to enter into this Agreement. All Work performed by Contractor shall be in accordance with applicable legal requirements and meet the standard of care and quality ordinarily to be expected of competent professionals in Contractor's field.

5 Conflict of Interest

Contractor represents and acknowledges that (a) it does not now have and shall not acquire any direct or indirect investment, interest in real property or source of income that would be affected in any manner or degree by the performance of Contractor's services under this Agreement, and (b) no person having any such interest shall perform any portion of the Work. The parties agree that Contractor is not a designated employee within the meaning of the Political Reform Act and SGA's conflict of interest code because Contractor will perform the Work independent of the control and direction of the SGA or of any SGA official, other than normal contract monitoring, and Contractor possesses no authority with respect to any SGA decision beyond the rendition of information, advice, recommendation or counsel.

6 Contractor Records

6.1 Contractor shall keep and maintain all ledgers, books of account, invoices, vouchers, canceled checks, and other records and documents evidencing or relating to the Work and invoice preparation and support for a minimum period of three years (or for any longer period required by law) from the date of final payment to Contractor under this Agreement. SGA may inspect and audit such books and records, including source documents, to verify all charges, payments and reimbursable costs under this Agreement.

6.2 In accordance with California Government Code section 8546.7, the parties acknowledge that this Agreement, and performance and payments under it, are subject to examination and audit by the California State Auditor for three years following final payment under the Agreement.

7 Ownership of Documents

Except for Contractor's proprietary software, source code, software frameworks and methodologies, and intellectual property, all works of authorship and every report, study, spreadsheet, worksheet, plan, design, blueprint, specification, drawing, map, photograph, computer model, computer disk, magnetic tape, CAD data file, computer software and any

other document or thing prepared, developed or created by Contractor under this Agreement and provided to SGA ("Work Product") shall be the property of SGA, and SGA shall have the rights to use, modify, reuse, reproduce, publish, display, broadcast and distribute the Work Product and to prepare derivative and additional documents or works based on the Work Product without further compensation to Contractor or any other party. Contractor may retain a copy of any Work Product and use, reproduce, publish, display, broadcast and distribute any Work Product and prepare derivative and additional documents or works based on any Work Product; provided, however, that Contractor shall not provide any Work Product to any third party without SGA's prior written approval, unless compelled to do so by legal process. If any Work Product is copyrightable, Contractor may copyright the same, except that, as to any Work Product that is copyrighted by Contractor, SGA reserves a royalty-free, nonexclusive and irrevocable license to use, reuse, reproduce, publish, display, broadcast and distribute the Work Product and to prepare derivative and additional documents or works based on the Work Product. If SGA reuses or modifies any Work Product for a use or purpose other than that intended by the scope of work under this Agreement, then SGA shall hold Contractor harmless against all claims, damages, losses and expenses arising from such reuse or modification. For any Work Product provided to SGA in paper format, upon request by SGA at any time (including, but not limited to, at expiration or termination of this Agreement), Contractor agrees to provide the Work Product to SGA in a readable, transferable and usable electronic format generally acknowledged as being an industry-standard format for information exchange between computers (e.g., Word file, Excel spreadsheet file, AutoCAD file).

8 Confidentiality of Information

8.1 Contractor shall keep in strict confidence all confidential, privileged, trade secret, and proprietary information, data and other materials in any format generated, used or obtained by the SGA or created by Contractor in connection with the performance of the Work under this Agreement (the "Confidential Material"). Contractor shall not use any Confidential Material for any purpose other than the performance of the Work under this Agreement, unless otherwise authorized in writing by SGA. Contractor also shall not disclose any Confidential Material to any person or entity not connected with the performance of the Work under this Agreement, unless otherwise authorized in advance in writing by SGA. If there is a question if Confidential Material is protected from disclosure or is a public record or in the public domain, the party considering disclosure of such materials shall immediately notify and consult with the other party concerning the proposed disclosure.

8.2 Contractor, and its officers, employees, agents, and subcontractors, shall at all times take all steps that are necessary to protect and preserve all Confidential Material. At no time shall Contractor, or its officers, employees, agents, or subcontractors in any manner, either directly or indirectly, use for personal benefit or divulge, disclose, or communicate in any manner, any Confidential Material to any person or entity unless specifically authorized in writing by the SGA or by order of a court or regulatory entity with jurisdiction over the matter. Contractor, and its officers, employees, agents, and subcontractors shall protect the Confidential Material and treat it as strictly confidential in accordance with applicable law, SGA policies and directives, and best industry security practices and standards.

8.3 If any person or entity, other than SGA or Contractor, requests or demands, by subpoena, discovery request, California Public Records Act request or otherwise, Confidential

Material or its contents, the party to whom the request is made will immediately notify the other party, so that the parties may collectively consider appropriate steps to protect the disclosure of those materials. The parties agree to take all steps reasonably necessary to preserve the confidential and privileged nature of the Confidential Material and its content. In the event that the parties cannot agree whether to oppose or comply with a disclosure demand, the opposing party may oppose the demand at its sole cost and expense, in which event the party favoring disclosure will refrain from disclosing the demanded Confidential Material until such time as a final agreement regarding disclosure is reached or, if an agreement is not reached, a judicial determination is made concerning the demand.

8.4 Unless otherwise directed in writing by the SGA, upon contract completion or termination, Contractor must destroy all Confidential Materials (written, printed and/or electronic) and shall provide a written statement to the SGA that such materials have been destroyed provided however that Contractor may retain one copy of such Confidential Information for archival purposes only to be kept in its confidential file. Notwithstanding the foregoing, SGA acknowledges that Contractor may maintain back up of documents held on its computer systems in accordance with its normal IT systems policy.

9 Compliance with Laws

9.1 General. Contractor shall perform the Work in compliance with all applicable federal, state and local laws and regulations. Contractor shall possess, maintain and comply with all federal, state and local permits, licenses and certificates that may be required for it to perform the Work. Contractor shall comply with all federal, state and local air pollution control laws and regulations applicable to the Contractor and its Work (as required by California Code of Regulations title 13, section 2022.1). Contractor shall be responsible for the safety of its workers and Contractor shall comply with applicable federal and state worker safety-related laws and regulations.

9.2 California Labor Code Compliance for Pre- and Post-Construction Related Work and Maintenance.

9.2.1 This section 9.2 applies if the Work includes either of the following:

9.2.1.1 Labor performed during the design, site assessment, feasibility study and pre-construction phases of construction, including, but not limited to, inspection and land surveying work, and labor performed during the post-construction phases of construction, including, but not limited to, cleanup work at the jobsite. (See California Labor Code section 1720(a).) If the Work includes some labor as described in the preceding sentence and other labor that is not, then this section 9.2 applies only to workers performing the pre-construction and post-construction work.

9.2.1.2 "Maintenance" work, which means (i) routine, recurring and usual work for the preservation, protection and keeping of any SGA facility, plant, building, structure, utility system or other property ("SGA Facility") in a safe and continually usable condition, (ii) carpentry, electrical, plumbing, glazing, touchup painting, and other craft work designed to preserve any SGA Facility in a safe, efficient and continuously usable condition, including repairs, cleaning and other operations on SGA machinery and equipment, and (iii) landscape maintenance. "Maintenance" excludes (i) janitorial or custodial services of a routine, recurring or usual nature, and (ii) security, guard or other protection-related

services. (See California Labor Code section 1771 and 8 California Code of Regulations section 16000.) If the Work includes some "maintenance" work and other work that is not "maintenance," then this section 9.2 applies only to workers performing the "maintenance" work.

9.2.2 Contractor shall comply with the California Labor Code provisions concerning payment of prevailing wage rates, penalties, employment of apprentices, hours of work and overtime, keeping and retention of payroll records, and other requirements applicable to public works as may be required by the Labor Code and applicable state regulations. (See California Labor Code division 2, part 7, chapter 1 (sections 1720-1861), which is incorporated in this Agreement by this reference.) The state-approved prevailing rates of per diem wages are available at <http://www.dir.ca.gov/oprl/DPreWageDetermination.htm>. Contractor also shall comply with Labor Code sections 1775 and 1813, including provisions that require Contractor to (a) forfeit as a penalty to SGA up to \$200 for each calendar day or portion thereof for each worker (whether employed by Contractor or any subcontractor) paid less than the applicable prevailing wage rates for any labor done under this Agreement in violation of the Labor Code, (b) pay to each worker the difference between the prevailing wage rate and the amount paid to each worker for each calendar day or portion thereof for which the worker was paid less than the prevailing wage, and (c) forfeit as a penalty to SGA the sum of \$25 for each worker (whether employed by Contractor or any subcontractor) for each calendar day during which the worker is required or permitted to work more than 8 hours in any one day and 40 hours in any one calendar week in violation of Labor Code sections 1810 through 1815.

9.2.3 If the Work includes labor during pre- or post-construction phases as defined in section 9.2.1.1 above and the amount of the fee payable to Contractor under section 2 of this Agreement exceeds \$25,000, Contractor must be registered and qualified to perform public work with the Department of Industrial Relations pursuant section 1725.5 of the Labor Code.

Contractor's Public Works Contractor Registration Number: - N /A=-----

9.2.4 If the Work includes maintenance as defined in section 9.2.1.2 above and the amount of the fee payable to Contractor under section 2 of this Agreement exceeds \$15,000, Contractor must be registered and qualified to perform public work with the Department of Industrial Relations pursuant section 1725.5 of the Labor Code.

Contractor's Public Works Contractor Registration Number: N /A=-----

10 Indemnification.

10.1 Contractor shall indemnify SGA, and its officers, employees and agents ("Indemnitees") from and against any claims, liability, losses, damages and expenses (including attorney, expert witness and Contractor fees, and litigation costs) (collectively a "Claim") that arise out of, the negligence, recklessness, or willful misconduct of Contractor or its employees, agents or subcontractors. The duty to indemnify, including the duty and the cost to defend, is limited as provided in this section. However, this indemnity provision will not apply to any Claim arising from the sole negligence or willful misconduct of SGA or its employees or agents. Contractor's

obligations under this indemnification provision shall survive the termination of, or completion of Work under, this Agreement.

10.2 This section 10.2 applies as the Contractor is a "design professional" as that term is defined in Civil Code section 2782.8. If a court or arbitrator determines that the incident or occurrence that gave rise to the Claim was partially caused by the fault of an Indemnatee, then in no event shall Contractor's total costs incurred pursuant to its duty to defend Indemnitees exceed Contractor's proportionate percentage of fault as determined by a final judgment of a court or final decision of arbitrator.

11 Insurance

Types & Limits. Contractor at its sole cost and expense shall procure and maintain for the duration of this Agreement the following types and limits of insurance: *[The general liability and automobile coverage limits may be adjusted depending on the overall risks, cost and complexity associated with the work.]*

Type	Limits	Scope
Commercial general liability	\$2,000,000 per occurrence & \$4,000,000 aggregate	at least as broad as Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01) including products and completed operations, property damage, bodily injury, personal and advertising injury
Automobile liability	\$1,000,000 per accident	at least as broad as ISO Business Auto Coverage (Form CA 00 01)
Workers' compensation	Statutory limits	
Employers' liability	\$1,000,000 per accident	
Professional liability*	\$1,000,000 per claim	

*Required only if Contractor is a licensed engineer, land surveyor, geologist, architect, doctor, attorney or accountant.

11.1 Other Requirements. The general and automobile liability policy(ies) shall be endorsed to name SGA, its officers, employees, volunteers and agents as additional insureds regarding liability arising out of the Work. Contractor's general and automobile coverage shall be primary and apply separately to each insurer against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability. SGA's insurance or self-insurance, if any, shall be excess and shall not contribute with Contractor's insurance. Each insurance policy shall be endorsed to state that coverage shall not be canceled, except after 30 days (10 days for non-payment of premium) prior written notice to SGA. Insurance is to be placed with insurers authorized to do business in California with a current AM. Best's

rating of A:VII or better unless otherwise acceptable to SGA. Workers' compensation insurance issued by the State Compensation Insurance Fund is acceptable. Except for professional liability insurance, Contractor agrees to waive subrogation that any insurer may acquire from Contractor by virtue of the payment of any loss relating to the Work. Contractor agrees to obtain any endorsement that may be necessary to implement this subrogation waiver. The workers' compensation policy must be endorsed to contain a subrogation waiver in favor of SGA for the Work performed by Contractor.

11.2 **Proof of Insurance.** Upon request, Contractor shall provide to SGA the following proof of insurance: (a) certificate(s) of insurance evidencing this insurance; and (b) endorsement(s) on ISO Form CG 2010 (or insurer's equivalent), signed by a person authorized to bind coverage on behalf of the insurer(s), and certifying the additional insured coverage.

12 General Provisions

12.1 **Entire Agreement; Amendment.** The parties intend this writing to be the sole, final, complete, exclusive and integrated expression and statement of the terms of their contract concerning the Work. This Agreement supersedes all prior oral or written negotiations, representations, contracts or other documents that may be related to the Work, except those other documents (if any) that are expressly referenced in this Agreement. This Agreement may be amended only by a subsequent writing, approved and signed by both parties.

12.2 **Independent Contractor.** Contractor's relationship to SGA is that of an independent contractor. All persons hired by Contractor and performing the Work shall be Contractor's employees or agents. Contractor and its officers, employees and agents are not SGA employees, and they are not entitled to SGA employment salary, wages or benefits. Contractor shall pay, and SGA shall not be responsible in any way for, the salary, wages, workers' compensation, unemployment insurance, disability insurance, tax withholding, and benefits to and on behalf of Contractor's employees. Contractor shall, to the fullest extent permitted by law, indemnify SGA, and its officers, employees, volunteers and agents from and against any and all liability, penalties, expenses and costs resulting from any adverse determination by the federal Internal Revenue Service, California Franchise Tax Board, other federal or state agency, or court concerning Contractor's independent contractor status or employment-related liability.

12.3 **Subcontractors.** No subcontract shall be awarded nor any subcontractor engaged by Contractor without SGA's prior written approval. Contractor shall be responsible for requiring and confirming that each approved subcontractor meets the minimum insurance requirements specified in section 11 of this Agreement. Any approved subcontractor shall obtain the required insurance coverages and provide proof of same to SGA in the manner provided in section 11 of this Agreement.

12.4 **Assignment.** This Agreement and all rights and obligations under it are personal to the parties. The Agreement may not be transferred, assigned, delegated or subcontracted in whole or in part, whether by assignment, subcontract, merger, operation of law or otherwise, by either party without the prior written consent of the other party. Any transfer, assignment, delegation, or subcontract in violation of this provision is null and void and grounds for the other party to terminate the Agreement.

12.5 No Waiver of Rights. Any waiver at any time by either party of its rights as to a breach or default of this Agreement shall not be deemed to be a waiver as to any other breach or default. No payment by SGA to Contractor shall be considered or construed to be an approval or acceptance of any Work or a waiver of any breach or default.

12.6 Severability. If any part of this Agreement is held to be void, invalid, illegal or unenforceable, then the remaining parts will continue in full force and effect and be fully binding, provided that each party still receives the benefits of this Agreement.

12.7 Governing Law and Venue. This Agreement will be governed by and construed in accordance with the laws of the State of California. The county and federal district court where SGA's office is located shall be venue for any state and federal court litigation concerning the enforcement or construction of this Agreement.

12.8 Notice. Any notice, demand, invoice or other communication required or permitted to be given under this Agreement must be in writing and delivered either (a) in person, (b) by prepaid, first class U.S. mail, (c) by a nationally-recognized commercial overnight courier service that guarantees next day delivery and provides a receipt, or (d) by email with confirmed receipt. Such notices, etc. shall be addressed as follows:

SGA:

Sacramento Groundwater Authority

Attn: Trevor Joseph

Sacramento Groundwater Authority, 2295 Gateway Oaks Drive, #100, Sacramento CA, 95833

E-mail: tjoseph@rwh2o.org

Contractor: Woodard & Curran, Inc.

Attn: Ali Taghavi, Ph.D., P.E.

801 T Street, Sacramento, CA 95811

E-mail: ataghavi@woodardcurran.com

Notice given as above will be deemed given (a) when delivered in person, (b) three days after deposited in prepaid, first class U.S. mail, (c) on the date of delivery as shown on the overnight courier service receipt, or (d) upon the sender's receipt of an email from the other party confirming the delivery of the notice, etc. Any party may change its contact information by notifying the other party of the change in the manner provided above.

12.9 Signatures and Authority. Each party warrants that the person signing this Agreement is authorized to act on behalf of the party for whom that person signs. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute the same instrument. Counterparts may be delivered by facsimile, electronic mail (including PDF or any electronic signature complying with California's Uniform Electronic Transactions Act (Cal. Civ. Code, §1633.1, et seq.) or any other applicable law) or other transmission method. The parties agree that any electronic signatures appearing on the Agreement are the same as handwritten signatures for the purposes of validity, enforceability, and admissibility.


Sacramento Groundwater Authority:

Dated: 10/25/2024

By: 
Jim Peifer
Executive Director

Woodard & Curran, Inc.

Dated: 10/25/2024

By: 
Ali Taghavi
Senior Principal / Senior Technical Practice Leader

Support Services for Sustainable Groundwater Management Act (SGMA) Implementation and Other Groundwater Management Activities

Scope of Work

October 1, 2024

TASK 1: PROJECT MANAGEMENT & COORDINATION

Task 1 focuses on the administrative and managerial efforts required to execute the project. This task includes general project activities internal to the GSP development team; project management meetings, budgeting, contract management, agency coordination, and project reporting.

1.1 Kick-Off Meeting

Upon Notice to Proceed from the Sacramento Groundwater Authority (SGA), the Project Manager will convene a kick-off meeting with SGA, North American Subbasin (NASb) Groundwater Sustainability Agencies (GSAs), and key Woodard & Curran staff. The meeting will review the roles and responsibilities, schedule, and deliverables. An internal roster and communication preferences will be outlined. A PowerPoint slide deck will be prepared and presented, containing an initial schedule of internal coordination meetings will be provided, key technical milestones as well as a high-level plan for the suite of meetings outlined in Task 2.

Deliverables:

- Kick-off meeting roster, agenda, PowerPoint slides

1.2 Coordination Meetings

Woodard & Curran will prepare for and attend bi-weekly (every two weeks) meetings with SGA. The purpose of these meetings will be to communicate progress, receive feedback and information, coordinate the work effort, and troubleshoot challenges. These meetings will be 1-hour in length and conducted virtually. An estimated total of 24 coordination meetings will be scheduled over the course of GSP evaluation, revision/amendment, and adoption. Discussion topics and a summary of key issues and decisions will be developed for each meeting.

On an as-needed basis limited to the budgeted hours, Woodard & Curran will coordinate with DWR to facilitate discussions around proposed modifications and amendments to the NASb GSP to address the Recommended Corrective Actions, to obtain feedback as required to inform decisions, and to generally solicit input as to acceptability on revised GSP chapters.

Deliverables:

- Bi-weekly coordination meeting materials: agenda and, if relevant, presentation slides

Assumptions:

- All meetings will be held virtually and be one hour in length.
- At least one member of the Woodard & Curran team will attend every meeting, with additional Woodard & Curran team members attending at the discretion of the Project Manager.
- 12 "as needed" meetings may occur outside the scheduled bi-weekly meetings. These meetings include those with SGA to discuss project-related items with up to two Woodard & Curran staff in attendance.

1.3 Intrabasin GSA Coordination Support

Woodard & Curran will support SGA with intrabasin coordination activities resulting between the Subbasin's GSAs. These support activities may include but are not limited to: SGMA implementation progress updates, upcoming meeting topics or information on previous meeting discussions, technical/regulatory guidance, and/or check-in meetings. It is assumed check-in meetings with intrabasin GSAs, if needed, would occur up to four times during the project timeline, may include one or more GSA, and will last no more than one hour.

Deliverables:

- Meeting agendas

1.4 Interbasin Coordination Meetings

Woodard & Curran will hold up to four coordination meetings with the four neighboring basins' GSAs to facilitate discussions around proposed modifications and amendments to the NASb GSP and how these modifications may impact the neighboring basins. It is assumed coordination meetings will be held individually by basin and be one hour in length.

Deliverables:

- Meeting agendas

1.5 Contract Administration

Subtask 1.5 includes monthly invoicing and progress reporting, general communications with SGA, and other actions required to complete the scope of work identified in the project contract.

Deliverables:

- Monthly invoices and progress reports

TASK 2: OUTREACH & COMMUNICATIONS

2.1 Public Meetings

Woodard & Curran will host and provide technical-related support for up to two meetings for the general public. It is anticipated that information prepared for these meetings will be related to updates on the amended GSP, Periodic Evaluation, and/or Water Year 2024 Annual Report.

Deliverables:

- Meeting agendas, PowerPoint presentation materials, and minutes

Assumptions:

- Each meeting will be up to two hours in length.
- Attendance is anticipated to be virtual but may also be in-person depending on SGA preference, meeting topics, and/or level of interest from the public and stakeholders in the Subbasin. If held in-person, SGA will be responsible for the meeting venue.

2.2 Sustainable Management Criteria Outreach

Given the potential changes in sustainable management criteria, this task provides targeted outreach and engagement related to potential modifications of sustainable management criteria, which may include meetings with regulatory agencies, NGOs, and other relevant stakeholder groups. It is assumed up to four meetings will be held with these entities.

Deliverables:

- Meeting agendas, PowerPoint presentation materials, and minutes

Assumptions:

- All meetings will be up to two hours in length, held virtually.

2.3 Website Migration and 1 Year Hosting

Woodard & Curran will migrate the existing NASb website to a new server, which includes the following activities:

- Conducting a backup of the current website, including files and databases;
- Setting up the new server environment with the necessary software and configurations;
- Transferring the website files and databases to the new server;
- Updating DNS settings to point to the new server;
- Testing the website on the new server to verify functionalities are working correctly; and

- Providing post-migration support to address issues that may arise.

Additionally, Woodard & Curran will host and maintain the web site for one year.

Deliverables:

- Migrated website

Assumptions:

- SGA will provide necessary administrative access to the current server
- SGA will provide access allowing for DNS updates
- The website may be down for a period of 1 business day to facilitate the migration

2.4 Website Updates

In coordination with SGA, Woodard & Curran will provide updates to the North American Subbasin GSA website (www.nasbgroundwater.org). This website will be the primary tool used for public communication and outreach, and will provide information about SGMA, proposed GSP revisions to address the Recommended Corrective Actions identified in the Department of Water Resources (DWRs) determination letter, and meeting schedules.

Deliverables:

- Updated website materials

Assumptions:

- Appropriate access will be provided to allow updates to the website.

2.5 DMS Needs Assessment

Woodard & Curran will develop a needs assessment for a potential revised DMS, the assessment will involve one coordination meeting between Woodard & Curran, SGA, and others as directed by SGA. The meeting will allow for a conversation on the current DMS, other DMS's, local needs, and potential solutions. A Needs Assessment Memorandum will be developed to outline the desired features of a potential new DMS.

Deliverables:

- Meeting agendas, PowerPoint presentation materials, and minutes

Assumptions:

- Woodard & Curran will be provided access to the DMS, along with underlying datasets.
- The meeting is assumed to be held virtually and up to two hours in length.

TASK 3: PERIODIC EVALUATION

Woodard & Curran will prepare a Periodic Evaluation based on the requirements presented in the California Water Code and the GSP Regulations. DWR guidance will be considered as part of development, but the primary approach is to meet the regulatory requirements, provide value to local groundwater management, and provide a cost-effective document.

This Periodic Evaluation Report will be prepared under this task and may include the following sections:

- **Introduction** – introduces the Periodic Evaluation and the regulatory requirements of the evaluation.
- **Significant New Information** – describes any new information related to the basin setting, hydrogeologic conceptual model, water use, the CoSANA model, and the monitoring network that the GSAs have acquired during the evaluation cycle and whether it warrants changes to any aspect of the GSP. This section also provides an evaluation of the basin setting based on new information or changes in basin water use and an assessment of the GSP's monitoring networks for each applicable sustainability indicator.
- **Progress Towards Sustainability** – evaluates current groundwater conditions for each applicable sustainability indicator relative to the sustainable management criteria established in the GSP, modifications made to sustainable management criteria since the original GSP, and impacts of sustainable management criteria on adjacent basins.
- **Status of Projects and Management Actions** – summarizes the GSA implementation activities related to projects and management actions that took place over the course of the evaluation cycle.
- **GSA Activities** – describes new authorities, if any, the Subbasin's GSAs have gained, established or exercised since the GSP submittal and summarizes what has been implemented to advance groundwater sustainability; discusses the coordination efforts and activities that occurred between the GSAs, hydrologically connected basins, and land use agencies in addition to federal, state, and local agency coordination that was relative to SGMA implementation; and also includes any additional information that helps describe progress made towards achieving the sustainability goal for the basin.
- **Summary of Proposed or Compiled Revisions to Plan Elements** – summarizes the key take-aways from the Periodic Evaluation, including a brief overview of next steps and how the GSAs intend to use this evaluation to continue moving the basin towards their sustainability goal.

It is anticipated that sections will reuse or cross-reference materials in the Annual Reports or the Amended GSP to reduce the level of effort, reduce the review time required by GSA staff, and to improve consistency between the annual reports, Periodic Evaluation, and Amended GSP.

An Administrative Draft NASb Periodic Evaluation will be prepared for GSA review. Comments received will be incorporated into the document to produce a Draft NASb Periodic Evaluation. The Draft NASb Periodic Evaluation will be posted on the North American Subbasin website at www.nasbgroundwater.org for public review. Comments received will be considered and incorporated into the evaluation as appropriate. The Final NASb Periodic Evaluation will be submitted to DWR before January 24, 2027, as required by DWR's determination letter.

Deliverables:

- Administrative Draft NASb Periodic Evaluation
- Draft NASb Periodic Evaluation
- Final NASb Periodic Evaluation

Assumptions:

- One set of comments will be provided from the GSAs on the Administrative Draft to avoid conflicting comments.
- All deliverables are provided electronically

TASK 4: GSP AMENDMENT

Woodard & Curran will prepare an amendment to the existing NASb GSP. It is anticipated that the amendment will address modifications to the chronic lowering of groundwater levels sustainable management criteria, refinements to degraded water quality, inelastic land subsidence, and depletions of interconnected surface water sustainable management criteria, and new data generated during the evaluation cycle. In addition, responses to the Recommended Corrective Actions in the 2023 NASb GSP Determination Letter be incorporated in the update, as appropriate.

4.1 NASb GSP Amendment

Using the analyses, model updates, and other work efforts completed under this contract, each chapter in the 2022 NASb GSP will be evaluated and revised as appropriate. Revisions will take place in the Basin Setting section (including HCM, Groundwater Conditions and Water Budgets), the Sustainable Management Criteria section, the Monitoring Networks section, and Projects and Management Actions section, to incorporate revisions to address DWR's Recommended Corrective Actions, to incorporate modifications desired by the GSAs, and to make the GSP reflective of current conditions and progress on GSP implementation.

Specifically, the groundwater conditions section will incorporate the latest available data to characterize conditions. Updates to the characterization of depletions of interconnected surface water are anticipated to be made based on available guidance from DWR and on the modeling results from Task 7.1. Characterization of GDEs will also be updated, also supported by analysis under Task 7.1. The water budget section will incorporate the latest available modeling results and associated changes to sustainable yield, if warranted. The SMC sections will reflect the technical analyses performed under Task 4.2 to revise SMC to reflect local management needs and to address DWR's recommended corrective actions. The Projects and Management Actions section will update existing projects, adding and removing projects were necessary based on SGA input.

Minor revisions will be made as appropriate in other GSP chapters, including the Agency Information, Plan Area, and Notice and Communications sections to reflect current GSP implementation. Revisions will also be made to reconcile inaccurate or inconsistent figures, tables, and text. And the executive summary will be updated to reflect the modifications made in the body of the document.

Document compilation and review cycles are included in Tasks 4.3, 4.4, and 4.5. Coordination activities associated with this subtask and other subtasks within Task 4 are included in Tasks 1 and 2. All revisions will be tracked to allow for ease of review by SGA, the other GSAs, and stakeholders.

4.2 Technical Analyses

Based on SGA's intent to revise groundwater level sustainable management criteria and DWR's RCAs related to sustainable management criteria for water quality, land subsidence, and interconnected surface water, Woodard & Curran anticipates analyses be conducted to quantify and justify the revisions to these criteria. These analyses are a well impact analysis based on revisions to groundwater level sustainable management criteria; evaluating water quality contaminants of concern and the potential impacts of the current undesirable result definition; and evaluating potential sustainable management criteria for land subsidence outside of using groundwater levels as a proxy.

Revisions to the groundwater level SMC will be explored in coordination with SGA. Analyses will include comparison to SMCs in neighboring subbasins, the ability of current or potential SMCs to allow for anticipated future conjunctive water management in the subbasin, and the ability of current or potential SMC to avoid significant and unreasonable effects to beneficial users or uses.

Revisions to water quality will revisit assumptions associated with the definition of significant and unreasonable effects related to public water systems. Other SMC will also be reconsidered based on modifications to this definition.

Revisions to the SMC for land subsidence will consider potential modifications to incorporate InSAR data or other physical measures of land subsidence. Continued use of groundwater levels as a proxy will also be considered.

It is anticipated analyses related to interconnected surface water will be conducted under Task 7: Modeling Support.

4.3 Draft Amended GSP Compilation & Preparation

Woodard & Curran will prepare a Draft Amended GSP following revisions to the original NASb GSP. Text, figure, table revisions, latest modeling results, and technical analyses conducted will be incorporated into this draft for NASb GSAs' review. All GSP chapter and appendices revisions will be completed in redline strikeout versions and submitted to all Subbasin GSAs.

Deliverables:

- Administrative Draft NASb Amended GSP

Assumptions:

- Native files used in preparation of the previous GSP will be provided by SGA
- One set of comments will be provided from the GSAs on the Administrative Draft to avoid conflicting comments.
- All deliverables are provided electronically

4.4 Respond to GSA Comments on Amended GSP

Once reviewed by the GSAs, comments will be incorporated as appropriate, again in a redline strikeout version. Coordination will occur with GSA as needed to address the comments.

Deliverables:

- Draft NASb Amended GSP

Assumptions:

- All deliverables are provided electronically

4.5 Public Comment & Final GSP Preparation

Woodard & Curran will prepare and post the public notice of intent to adopt the GSP. It is anticipated that this notice will be sent in early 2026. Once the clean public draft version of the Amended NASb GSP has been completed in Task 4.1, the document will be released for a public review period. Following the public review period, all comments received will be tabulated, reviewed, and incorporated as appropriate into the Amended NASb GSP. The amended GSP will then be finalized for adoption.

PowerPoint slides summarizing the Amended GSP process and major modifications to the plan will be developed and shared with the GSAs for their use in adoption hearing. Attendance at adoption hearings is not included in this scope of work. Once adopted, Woodard & Curran will support SGA on submitting the GSP to DWR. In parallel with preparation of the final amended GSP, an updated Elements Guide will be prepared and submitted to DWR along with updates to any modified representative monitoring network and sustainable management criteria.

Deliverables:

- Final adopted Amended NASb GSP
- Public Notice of Intent to Adopt
- Compilation of and response to comments

Assumptions:

- GSAs are responsible for their own individual noticing and conduct of a public hearing prior to adoption.

TASK 5: ANNUAL REPORT

The Water Year (WY) 2024 Annual Report for the North American Subbasin is due to DWR on April 1, 2025. It must include three main sections: General Information, Basin Conditions, and Plan Implementation Progress, as per California regulations. The general approach to the Annual Report will be to retain the structure and materials of previous Annual Reports, updating when necessary to incorporate new information or different approaches for reporting. The following key activities will be completed for the annual report:

- 1. Project Management and Coordination:** Oversight of the report's development, including quality assurance, progress reporting, and coordination among applicable parties (i.e., SGA, GSAs, GEI).
- 2. Data Collection and Analysis:**

- a. *Groundwater Elevation*: Compile recent and update existing data, create contour maps for seasonal highs and lows, and generate hydrographs for monitoring wells.
 - b. *Groundwater Extraction*: Present estimates by sector and methods, along with a map of extraction locations.
 - c. *Surface Water Supply*: Summarize annual surface water use data, including sources and calculation methods.
 - d. *Total Water Use*: Calculate total water use based on groundwater and surface water data.
 - e. *Land Subsidence*: Compile InSAR and local GPS station data and prepare maps showing land surface elevation changes over various periods.
 - f. *Groundwater Quality*: Summarize current water quality conditions, specifically related to constituents of concern defined in the GSP.
 - g. *Change in Groundwater Storage*: Use CoSANA model outputs to estimate storage changes, accompanied by relevant maps and figures.
3. **CoSANA Model Hydrology Extension**: CoSANA model hydrology will be extended through the end of WY 2024 to support the water budget and storage change visualizations.
 4. **GSP Implementation Progress**: Report on the advancement towards interim milestones and management actions, including any new projects.

Overall, Woodard & Curran will lead the report development and coordinating with the Subbasin GSAs to ensure comprehensive data collection and analysis.

The results of the previous activities will be used to develop the WY 2024 Annual Report, including an executive summary that highlights the key contents of the annual report. The following sections will be included, with the outline subject to change:

1. Executive Summary
2. Introduction
3. Hydrologic Conditions
4. Water Supply
5. Groundwater Levels
6. Change in Groundwater Storage
7. GSP Implementation Progress
8. Sustainability Indicators
9. References

A Draft Annual Report will be prepared by February 28, 2025, for SGA and GSA review and comment. Comments will be incorporated into a Final Annual Report which will be distributed electronically (PDF). If

directed by SGA, Woodard & Curran will also upload the Final Annual Report and supporting documentation to the SGMA Portal.

Deliverables:

- Draft WY 2024 Annual Report
- Final WY 2024 Annual Report

Assumptions:

- One set of comments will be provided from the GSAs on the Draft Report
- All deliverables are provided electronically
- Native files used in preparation of previous Annual Reports will be provided by SGA

TASK 6: GROUNDWATER MONITORING

6.1 Water Level Data Collection

Groundwater elevation measurements have been collected by Subbasin GSAs prior to and during the implementation of SGMA-related activities. The GSP states groundwater elevations are measured biannually, during the spring and fall of each calendar year. Woodard & Curran would oversee the collection of groundwater elevation data, which would be performed by Blaine Tech. A Woodard & Curran staff geologist will be present with Blaine Tech during the spring 2025 sampling event, with assistance from GEI, to determine well locations, discuss well access, and collect other information needed for performing future sampling events. The task lead for the Sampling & Other Data Collection task will coordinate with Blaine Tech on sampling activities with as-needed support from the Deputy Project Manager and GSP/Annual Report task lead. Following each sampling event, Blaine Tech will provide Woodard & Curran with water elevation data for all monitoring wells, which will be tabulated and provided to SGA.

Assumptions:

- Data collection activities would take place during the spring and fall of the 2025 calendar year.
- Up to 70 wells would be measured during each event.
- It is assumed each event would occur over two days.

Deliverables:

- Groundwater elevation data for spring 2025 and fall 2025

TASK 7: MODELING SUPPORT

Task 7 includes all work efforts required to update and calibrate the CoSANA model, address DWR's Recommended Corrective Actions, and inform the Subbasin GSAs with additional analyses related to revised sustainable management criteria.

7.1 Interconnected Surface Water and GDE Analyses

In the July 2023 Determination Letter, DWR staff recommended that the GSAs “Consider utilizing the interconnected surface water guidance, as appropriate, when issued by the Department to establish quantifiable minimum thresholds, measurable objectives, and management actions.” On September 24, 2024, DWR released *Techniques for Estimating Interconnected Surface Water Depletion Caused by Groundwater Use*, the Department’s guidance document for establishing sustainable management criteria for the depletions of interconnected surface water sustainability indicator. The guidance presents numerical, analytical, and statistical methods to estimate interconnected surface water depletions and how to apply these methods to estimate the location, quantity, and timing of those depletions. Woodard & Curran will prepare assumptions related to this analysis, perform modeling scenarios, evaluate the estimated depletions, and incorporate the results of the modeling scenarios into the sustainable management criteria for interconnected surface waters.

Additionally, modeling support will be used to further evaluate the presence and conditions of groundwater dependent ecosystems (GDEs) present within the Subbasin. GDEs will be identified and evaluated using the Normalized Difference Vegetation Index (NDVI) to track vegetation health and confirm the likelihood that the vegetation is groundwater-supported to reflect current conditions. This will be completed based on a desktop review of the potential GDEs identified in the GSP and updated to reflect a combination of observed and simulated aquifer conditions. The resulting work under this subtask will then be presented in the Periodic Evaluation and in the Amended NASb GSP’s Groundwater Conditions and sustainable management criteria sections.

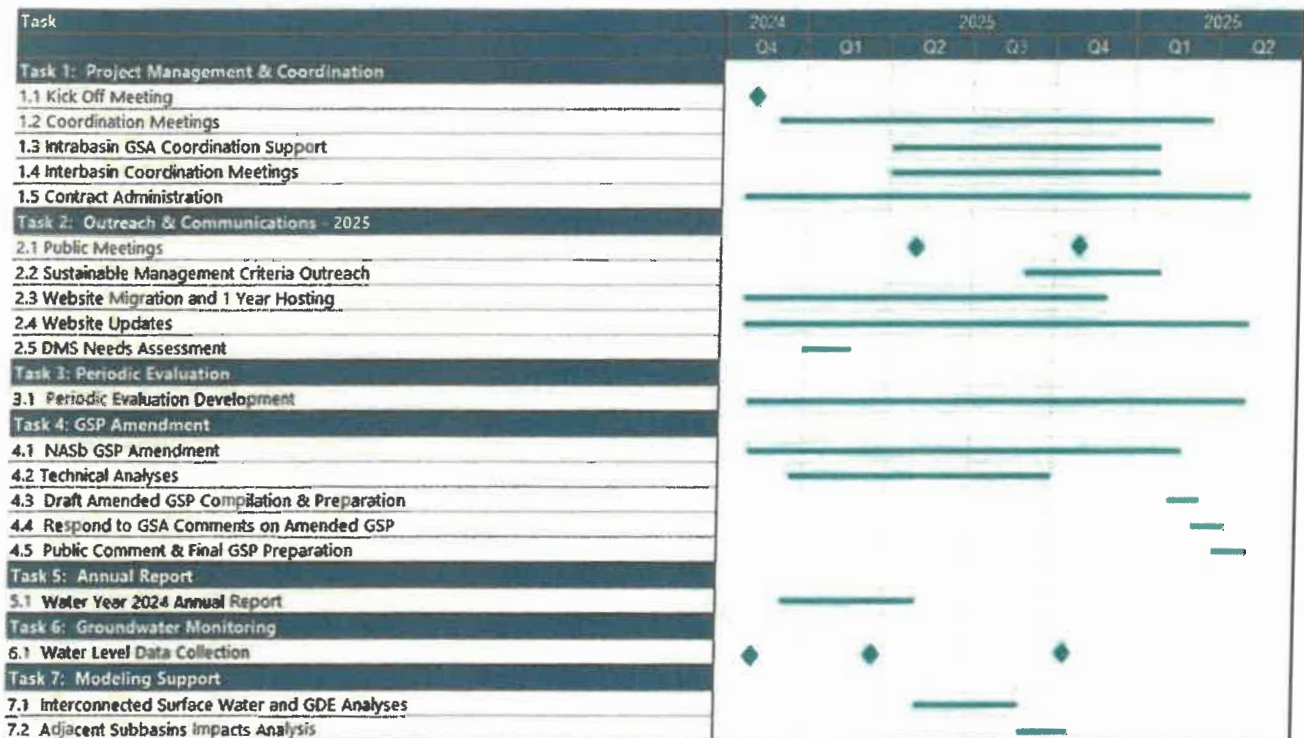
7.2 Adjacent Subbasins Impacts Analysis

This subtask involves additional analysis to evaluate potential impacts of new and existing sustainable management criteria on current and projected groundwater conditions in adjacent basins. Interbasin conditions will be evaluated in the CoSANA model under up to three scenarios. These scenarios may include updated aquifer boundary conditions based on current groundwater levels, proposed SGMA-related conditions from neighboring basin GSPs, impacts of the estimated interconnected surface water depletions, potential impacts as a result of lower groundwater level sustainable management criteria, and future PMA implementation benefits.

SCHEDULE

Project start date: October 21, 2024

Project completion date: April 30, 2026



BUDGET

The work contained in this scope of services will be completed for \$806,395 on a time and materials basis based on the attached rate table.



Client: Sacramento Groundwater Authority

October 1, 2024

Project: Support Services for SGMA Implementation and Other Groundwater Management Activities

Phases	Labor														Outside Services					ODCs		Total
	PA Team		PA Office		PA Office		PA Office		PA Office		PA Office		PA Office		Total Hours	Total Labor Costs (\$)	Material & Supplying	Subcontract	Subcontract Total Cost (\$)	ODCs	Total ODCs (\$)	
	PC	PM	DPM	PG	Junior Engineer	Junior Planner	Modeling Support	DMS	DMS	WG, GWL, Wells	Junior Geologist	Engagement & Outreach	Project Coord									
Task 1: Project Management & Coordination																						
1.1 Kick Off Meeting	2	4	4	6							1		1		18	\$4,065		\$0	\$0		\$0	\$4,065
1.2 Coordination Meetings	16	32	60	60							4		4		176	\$38,568		\$0	\$0		\$0	\$38,568
1.3 Intra-basin GSA Coordination Support	4	18	24	20											66	\$22,128		\$0	\$0		\$0	\$22,128
1.4 Interbasin Coordination Meetings	4	8	16	12									8		48	\$16,184		\$0	\$0		\$0	\$16,184
1.5 Contract Administration		8	54											36	98	\$25,851		\$0	\$0		\$0	\$25,851
Subtotal Task 1	26	70	158	98	0	0	0	0	0	0	5	0	13	36	406	\$178,699	\$0	\$0	\$0	\$0	\$0	\$178,699
Task 2: Outreach & Communications - 2023																						
2.1 Public Meetings	3	8	20	16									10		37	\$10,890		\$0	\$0	\$500	\$500	\$11,390
2.2 Sustainable Management Criteria Outreach	8	8	24	12				4							56	\$18,692		\$0	\$0	\$500	\$500	\$19,192
2.3 Website Migration and 1 Year Hosting			1					6	36						43	\$11,710		\$0	\$0	\$1,000	\$1,000	\$12,710
2.4 Website Updates				12				2	16				8		38	\$11,302		\$0	\$0			\$11,302
2.5 DMS Needs Assessment								8	8						17	\$5,321		\$0	\$0			\$5,321
Subtotal Task 2	11	16	45	28	0	0	4	16	60	0	0	0	18	0	211	\$66,615	\$0	\$0	\$0	\$1,000	\$1,000	\$68,615
Task 3: Periodic Evaluation																						
Periodic Evaluation Development (Proposed Outline)																						
Introduction			1				2								0	\$0		\$0	\$0		\$0	\$0
Significant New Information (Basin Setting, HCM, Water Use, Model, Monitoring Network)	4	8	8	16	36										72	\$20,867		\$0	\$0		\$0	\$20,867
Progress Towards Sustainability		8	12	24	20	30									94	\$25,616		\$0	\$0		\$0	\$25,616
Project and Management Actions		2	6	10	20	20									38	\$10,056		\$0	\$0		\$0	\$10,056
GSA Activities			10	4	16										30	\$7,912		\$0	\$0		\$0	\$7,912
Summary of Proposed or Completed Revisions to Plan Elements			4	8	12										24	\$6,320		\$0	\$0		\$0	\$6,320
Internal Review of Periodic Evaluation	4	16													20	\$7,520		\$0	\$0		\$0	\$7,520
Finalize Periodic Evaluation		2	2	8											24	\$5,614		\$0	\$0		\$0	\$5,614
Subtotal Task 3	8	36	43	70	96	80	0	0	0	0	0	0	0	0	305	\$84,662	\$0	\$0	\$0	\$0	\$0	\$84,662
Task 4: GSP Amendment																						
4.1 NASO GSP Amendment															0	\$0		\$0	\$0		\$0	\$0
GSP Evaluation and Update			32	50	50	30									162	\$44,408		\$0	\$0		\$0	\$44,408
Update Executive Summary	2	2	4	6	2	6									22	\$5,414		\$0	\$0		\$0	\$5,414
Update General Information/Introduction			2	1		2									5	\$1,384		\$0	\$0		\$0	\$1,384
Update Agency Information			2			4									6	\$1,512		\$0	\$0		\$0	\$1,512
Update Description of Plan Area			4			6									10	\$2,592		\$0	\$0		\$0	\$2,592
Update Notice and Communications			6	2		8									16	\$4,280		\$0	\$0		\$0	\$4,280
Update Hydrogeologic Conceptual Model	8	6	4	6	10	2									36	\$11,288		\$0	\$0		\$0	\$11,288
Update Groundwater Conditions		4	6	16	24	8									58	\$15,973		\$0	\$0		\$0	\$15,973
Update Water Budget	4	4	2	6	10	2	16								44	\$13,391		\$0	\$0		\$0	\$13,391
Update Sustainable Goals, Minimum Thresholds, & Measurable Objectives		4	6	12	16	16									54	\$14,507		\$0	\$0		\$0	\$14,507
Update Monitoring Network	6	18	24	40	40	30									158	\$45,328		\$0	\$0		\$0	\$45,328
Update Project & Management Actions	2	1	4		12										20	\$5,260		\$0	\$0		\$0	\$5,260
Update Plan Implementation			12		16										28	\$7,344		\$0	\$0		\$0	\$7,344
Update Interbasin & Intra-basin Coordination		1	2	2	4										9	\$2,496		\$0	\$0		\$0	\$2,496
Update References, Technical Reports, Appendices		2	4	4	4	8									22	\$5,961		\$0	\$0		\$0	\$5,961
4.2 Technical Analyses																						
Groundwater Level SMC Revisions	4	24	24	60	120										232	\$66,208		\$0	\$0		\$0	\$66,208
Water Quality SMC Revisions		16	8	40	60										124	\$35,600		\$0	\$0		\$0	\$35,600
Land Subsidence SMC	2	12	6	16	30										66	\$19,408		\$0	\$0		\$0	\$19,408
4.3 Draft Amended GSP Compilation & Preparation	8	8	4	8	4	12									44	\$13,325		\$0	\$0		\$0	\$13,325
4.4 Respond to GSA Comments on Amended GSP	2	8	12	16	6	20									66	\$18,810		\$0	\$0		\$0	\$18,810
4.5 Public Comment & Final GSP Preparation	2	4	8	12	4	20									62	\$15,587		\$0	\$0		\$0	\$15,587
Subtotal Task 4	40	112	173	401	583	330	16	0	0	0	0	0	0	0	1,244	\$351,176	\$0	\$0	\$0	\$0	\$0	\$351,176
Task 5: Annual Report																						
5.1 Water Year 2024 Annual Report	18	18	24	32	30	40	12								6	\$51,748		\$0	\$0		\$0	\$51,748
Subtotal Task 5	18	18	24	32	30	40	12	0	0	0	0	0	0	0	6	\$51,748	\$0	\$0	\$0	\$0	\$0	\$51,748
Task 6: Groundwater Monitoring																						
6.1 Water Level Data Collection			2	4											30	\$7,604	\$11,700	\$11,700	\$11,700	\$100	\$100	\$19,604
Subtotal Task 6	0	0	2	4	0	0	0	0	0	0	0	0	0	0	30	\$7,604	\$11,700	\$11,700	\$11,700	\$100	\$100	\$19,604
Task 7: Modeling Support																						
7.1 Interconnected Surface Water and GDL Analyses	26	8	2	8			180								224	\$72,198		\$0	\$0		\$0	\$72,198
7.2 Adjacent Subbasin Impacts Analysis	5	1	2	6			80								95	\$30,141		\$0	\$0		\$0	\$30,141
Subtotal Task 7	31	9	4	14	0	0	260	0	0	0	0	0	0	0	319	\$102,339	\$0	\$0	\$0	\$0	\$0	\$102,339
Total	123	131	490	627	480	530	260	16	0	0	0	0	0	0	1,593	\$484,285	\$11,700	\$11,700	\$11,700	\$1,000	\$1,000	\$508,685

Support Services for Sustainable Groundwater Management Act (SGMA) Implementation and Other Groundwater Management Activities

Scope of Work

October 1, 2024

TASK 1: PROJECT MANAGEMENT & COORDINATION

Task 1 focuses on the administrative and managerial efforts required to execute the project. This task includes general project activities internal to the GSP development team; project management meetings, budgeting, contract management, agency coordination, and project reporting.

1.1 Kick-Off Meeting

Upon Notice to Proceed from the Sacramento Groundwater Authority (SGA), the Project Manager will convene a kick-off meeting with SGA, North American Subbasin (NASb) Groundwater Sustainability Agencies (GSAs), and key Woodard & Curran staff. The meeting will review the roles and responsibilities, schedule, and deliverables. An internal roster and communication preferences will be outlined. A PowerPoint slide deck will be prepared and presented, containing an initial schedule of internal coordination meetings will be provided, key technical milestones as well as a high-level plan for the suite of meetings outlined in Task 2.

Deliverables:

- Kick-off meeting roster, agenda, PowerPoint slides

1.2 Coordination Meetings

Woodard & Curran will prepare for and attend bi-weekly (every two weeks) meetings with SGA. The purpose of these meetings will be to communicate progress, receive feedback and information, coordinate the work effort, and troubleshoot challenges. These meetings will be 1-hour in length and conducted virtually. An estimated total of 24 coordination meetings will be scheduled over the course of GSP evaluation, revision/amendment, and adoption. Discussion topics and a summary of key issues and decisions will be developed for each meeting.

On an as-needed basis limited to the budgeted hours, Woodard & Curran will coordinate with DWR to facilitate discussions around proposed modifications and amendments to the NASb GSP to address the Recommended Corrective Actions, to obtain feedback as required to inform decisions, and to generally solicit input as to acceptability on revised GSP chapters.

Deliverables:

- Bi-weekly coordination meeting materials: agenda and, if relevant, presentation slides

Assumptions:

- All meetings will be held virtually and be one hour in length.
- At least one member of the Woodard & Curran team will attend every meeting, with additional Woodard & Curran team members attending at the discretion of the Project Manager.
- 12 "as needed" meetings may occur outside the scheduled bi-weekly meetings. These meetings include those with SGA to discuss project-related items with up to two Woodard & Curran staff in attendance.

1.3 Intrabasin GSA Coordination Support

Woodard & Curran will support SGA with intrabasin coordination activities resulting between the Subbasin's GSAs. These support activities may include but are not limited to: SGMA implementation progress updates, upcoming meeting topics or information on previous meeting discussions, technical/regulatory guidance, and/or check-in meetings. It is assumed check-in meetings with intrabasin GSAs, if needed, would occur up to four times during the project timeline, may include one or more GSA, and will last no more than one hour.

Deliverables:

- Meeting agendas

1.4 Interbasin Coordination Meetings

Woodard & Curran will hold up to four coordination meetings with the four neighboring basins' GSAs to facilitate discussions around proposed modifications and amendments to the NASb GSP and how these modifications may impact the neighboring basins. It is assumed coordination meetings will be held individually by basin and be one hour in length.

Deliverables:

- Meeting agendas

1.5 Contract Administration

Subtask 1.5 includes monthly invoicing and progress reporting, general communications with SGA, and other actions required to complete the scope of work identified in the project contract.

Deliverables:

- Monthly invoices and progress reports

TASK 2: OUTREACH & COMMUNICATIONS

2.1 Public Meetings

Woodard & Curran will host and provide technical-related support for up to two meetings for the general public. It is anticipated that information prepared for these meetings will be related to updates on the amended GSP, Periodic Evaluation, and/or Water Year 2024 Annual Report.

Deliverables:

- Meeting agendas, PowerPoint presentation materials, and minutes

Assumptions:

- Each meeting will be up to two hours in length.
- Attendance is anticipated to be virtual but may also be in-person depending on SGA preference, meeting topics, and/or level of interest from the public and stakeholders in the Subbasin. If held in-person, SGA will be responsible for the meeting venue.

2.2 Sustainable Management Criteria Outreach

Given the potential changes in sustainable management criteria, this task provides targeted outreach and engagement related to potential modifications of sustainable management criteria, which may include meetings with regulatory agencies, NGOs, and other relevant stakeholder groups. It is assumed up to four meetings will be held with these entities.

Deliverables:

- Meeting agendas, PowerPoint presentation materials, and minutes

Assumptions:

- All meetings will be up to two hours in length, held virtually.

2.3 Website Migration and 1 Year Hosting

Woodard & Curran will migrate the existing NASb website to a new server, which includes the following activities:

- Conducting a backup of the current website, including files and databases;
- Setting up the new server environment with the necessary software and configurations;
- Transferring the website files and databases to the new server;
- Updating DNS settings to point to the new server;
- Testing the website on the new server to verify functionalities are working correctly; and

- Providing post-migration support to address issues that may arise.

Additionally, Woodard & Curran will host and maintain the web site for one year.

Deliverables:

- Migrated website

Assumptions:

- SGA will provide necessary administrative access to the current server
- SGA will provide access allowing for DNS updates
- The website may be down for a period of 1 business day to facilitate the migration

2.4 Website Updates

In coordination with SGA, Woodard & Curran will provide updates to the North American Subbasin GSA website (www.nasbgroundwater.org). This website will be the primary tool used for public communication and outreach, and will provide information about SGMA, proposed GSP revisions to address the Recommended Corrective Actions identified in the Department of Water Resources (DWRs) determination letter, and meeting schedules.

Deliverables:

- Updated website materials

Assumptions:

- Appropriate access will be provided to allow updates to the website.

2.5 DMS Needs Assessment

Woodard & Curran will develop a needs assessment for a potential revised DMS, the assessment will involve one coordination meeting between Woodard & Curran, SGA, and others as directed by SGA. The meeting will allow for a conversation on the current DMS, other DMS's, local needs, and potential solutions. A Needs Assessment Memorandum will be developed to outline the desired features of a potential new DMS.

Deliverables:

- Meeting agendas, PowerPoint presentation materials, and minutes

Assumptions:

- Woodard & Curran will be provided access to the DMS, along with underlying datasets.
- The meeting is assumed to be held virtually and up to two hours in length.

TASK 3: PERIODIC EVALUATION

Woodard & Curran will prepare a Periodic Evaluation based on the requirements presented in the California Water Code and the GSP Regulations. DWR guidance will be considered as part of development, but the primary approach is to meet the regulatory requirements, provide value to local groundwater management, and provide a cost-effective document.

This Periodic Evaluation Report will be prepared under this task and may include the following sections:

- **Introduction** – introduces the Periodic Evaluation and the regulatory requirements of the evaluation.
- **Significant New Information** – describes any new information related to the basin setting, hydrogeologic conceptual model, water use, the CoSANA model, and the monitoring network that the GSAs have acquired during the evaluation cycle and whether it warrants changes to any aspect of the GSP. This section also provides an evaluation of the basin setting based on new information or changes in basin water use and an assessment of the GSP's monitoring networks for each applicable sustainability indicator.
- **Progress Towards Sustainability** – evaluates current groundwater conditions for each applicable sustainability indicator relative to the sustainable management criteria established in the GSP, modifications made to sustainable management criteria since the original GSP, and impacts of sustainable management criteria on adjacent basins.
- **Status of Projects and Management Actions** – summarizes the GSA implementation activities related to projects and management actions that took place over the course of the evaluation cycle.
- **GSA Activities** – describes new authorities, if any, the Subbasin's GSAs have gained, established or exercised since the GSP submittal and summarizes what has been implemented to advance groundwater sustainability; discusses the coordination efforts and activities that occurred between the GSAs, hydrologically connected basins, and land use agencies in addition to federal, state, and local agency coordination that was relative to SGMA implementation; and also includes any additional information that helps describe progress made towards achieving the sustainability goal for the basin.
- **Summary of Proposed or Compiled Revisions to Plan Elements** – summarizes the key take-aways from the Periodic Evaluation, including a brief overview of next steps and how the GSAs intend to use this evaluation to continue moving the basin towards their sustainability goal.

It is anticipated that sections will reuse or cross-reference materials in the Annual Reports or the Amended GSP to reduce the level of effort, reduce the review time required by GSA staff, and to improve consistency between the annual reports, Periodic Evaluation, and Amended GSP.

An Administrative Draft NASb Periodic Evaluation will be prepared for GSA review. Comments received will be incorporated into the document to produce a Draft NASb Periodic Evaluation. The Draft NASb Periodic Evaluation will be posted on the North American Subbasin website at www.nasbgroundwater.org for public review. Comments received will be considered and incorporated into the evaluation as appropriate. The Final NASb Periodic Evaluation will be submitted to DWR before January 24, 2027, as required by DWR's determination letter.

Deliverables:

- Administrative Draft NASb Periodic Evaluation
- Draft NASb Periodic Evaluation
- Final NASb Periodic Evaluation

Assumptions:

- One set of comments will be provided from the GSAs on the Administrative Draft to avoid conflicting comments.
- All deliverables are provided electronically

TASK 4: GSP AMENDMENT

Woodard & Curran will prepare an amendment to the existing NASb GSP. It is anticipated that the amendment will address modifications to the chronic lowering of groundwater levels sustainable management criteria, refinements to degraded water quality, inelastic land subsidence, and depletions of interconnected surface water sustainable management criteria, and new data generated during the evaluation cycle. In addition, responses to the Recommended Corrective Actions in the 2023 NASb GSP Determination Letter be incorporated in the update, as appropriate.

4.1 NASb GSP Amendment

Using the analyses, model updates, and other work efforts completed under this contract, each chapter in the 2022 NASb GSP will be evaluated and revised as appropriate. Revisions will take place in the Basin Setting section (including HCM, Groundwater Conditions and Water Budgets), the Sustainable Management Criteria section, the Monitoring Networks section, and Projects and Management Actions section, to incorporate revisions to address DWR's Recommended Corrective Actions, to incorporate modifications desired by the GSAs, and to make the GSP reflective of current conditions and progress on GSP implementation.

Specifically, the groundwater conditions section will incorporate the latest available data to characterize conditions. Updates to the characterization of depletions of interconnected surface water are anticipated to be made based on available guidance from DWR and on the modeling results from Task 7.1. Characterization of GDEs will also be updated, also supported by analysis under Task 7.1. The water budget section will incorporate the latest available modeling results and associated changes to sustainable yield, if warranted. The SMC sections will reflect the technical analyses performed under Task 4.2 to revise SMC to reflect local management needs and to address DWR's recommended corrective actions. The Projects and Management Actions section will update existing projects, adding and removing projects were necessary based on SGA input.

Minor revisions will be made as appropriate in other GSP chapters, including the Agency Information, Plan Area, and Notice and Communications sections to reflect current GSP implementation. Revisions will also be made to reconcile inaccurate or inconsistent figures, tables, and text. And the executive summary will be updated to reflect the modifications made in the body of the document.

Document compilation and review cycles are included in Tasks 4.3, 4.4, and 4.5. Coordination activities associated with this subtask and other subtasks within Task 4 are included in Tasks 1 and 2. All revisions will be tracked to allow for ease of review by SGA, the other GSAs, and stakeholders.

4.2 Technical Analyses

Based on SGA's intent to revise groundwater level sustainable management criteria and DWR's RCAs related to sustainable management criteria for water quality, land subsidence, and interconnected surface water, Woodard & Curran anticipates analyses be conducted to quantify and justify the revisions to these criteria. These analyses are a well impact analysis based on revisions to groundwater level sustainable management criteria; evaluating water quality contaminants of concern and the potential impacts of the current undesirable result definition; and evaluating potential sustainable management criteria for land subsidence outside of using groundwater levels as a proxy.

Revisions to the groundwater level SMC will be explored in coordination with SGA. Analyses will include comparison to SMCs in neighboring subbasins, the ability of current or potential SMCs to allow for anticipated future conjunctive water management in the subbasin, and the ability of current or potential SMC to avoid significant and unreasonable effects to beneficial users or uses.

Revisions to water quality will revisit assumptions associated with the definition of significant and unreasonable effects related to public water systems. Other SMC will also be reconsidered based on modifications to this definition.

Revisions to the SMC for land subsidence will consider potential modifications to incorporate InSAR data or other physical measures of land subsidence. Continued use of groundwater levels as a proxy will also be considered.

It is anticipated analyses related to interconnected surface water will be conducted under Task 7: Modeling Support.

4.3 Draft Amended GSP Compilation & Preparation

Woodard & Curran will prepare a Draft Amended GSP following revisions to the original NASb GSP. Text, figure, table revisions, latest modeling results, and technical analyses conducted will be incorporated into this draft for NASb GSAs' review. All GSP chapter and appendices revisions will be completed in redline strikeout versions and submitted to all Subbasin GSAs.

Deliverables:

- Administrative Draft NASb Amended GSP

Assumptions:

- Native files used in preparation of the previous GSP will be provided by SGA
- One set of comments will be provided from the GSAs on the Administrative Draft to avoid conflicting comments.
- All deliverables are provided electronically

4.4 Respond to GSA Comments on Amended GSP

Once reviewed by the GSAs, comments will be incorporated as appropriate, again in a redline strikeout version. Coordination will occur with GSA as needed to address the comments.

Deliverables:

- Draft NASb Amended GSP

Assumptions:

- All deliverables are provided electronically

4.5 Public Comment & Final GSP Preparation

Woodard & Curran will prepare and post the public notice of intent to adopt the GSP. It is anticipated that this notice will be sent in early 2026. Once the clean public draft version of the Amended NASb GSP has been completed in Task 4.1, the document will be released for a public review period. Following the public review period, all comments received will be tabulated, reviewed, and incorporated as appropriate into the Amended NASb GSP. The amended GSP will then be finalized for adoption.

PowerPoint slides summarizing the Amended GSP process and major modifications to the plan will be developed and shared with the GSAs for their use in adoption hearing. Attendance at adoption hearings is not included in this scope of work. Once adopted, Woodard & Curran will support SGA on submitting the GSP to DWR. In parallel with preparation of the final amended GSP, an updated Elements Guide will be prepared and submitted to DWR along with updates to any modified representative monitoring network and sustainable management criteria.

Deliverables:

- Final adopted Amended NASb GSP
- Public Notice of Intent to Adopt
- Compilation of and response to comments

Assumptions:

- GSAs are responsible for their own individual noticing and conduct of a public hearing prior to adoption.

TASK 5: ANNUAL REPORT

The Water Year (WY) 2024 Annual Report for the North American Subbasin is due to DWR on April 1, 2025. It must include three main sections: General Information, Basin Conditions, and Plan Implementation Progress, as per California regulations. The general approach to the Annual Report will be to retain the structure and materials of previous Annual Reports, updating when necessary to incorporate new information or different approaches for reporting. The following key activities will be completed for the annual report:

- 1. Project Management and Coordination:** Oversight of the report's development, including quality assurance, progress reporting, and coordination among applicable parties (i.e., SGA, GSAs, GEI).
- 2. Data Collection and Analysis:**
 - a. Groundwater Elevation:* Compile recent and update existing data, create contour maps for seasonal highs and lows, and generate hydrographs for monitoring wells.

- b. *Groundwater Extraction*: Present estimates by sector and methods, along with a map of extraction locations.
 - c. *Surface Water Supply*: Summarize annual surface water use data, including sources and calculation methods.
 - d. *Total Water Use*: Calculate total water use based on groundwater and surface water data.
 - e. *Land Subsidence*: Compile InSAR and local GPS station data and prepare maps showing land surface elevation changes over various periods.
 - f. *Groundwater Quality*: Summarize current water quality conditions, specifically related to constituents of concern defined in the GSP.
 - g. *Change in Groundwater Storage*: Use CoSANA model outputs to estimate storage changes, accompanied by relevant maps and figures.
- 3. CoSANA Model Hydrology Extension:** CoSANA model hydrology will be extended through the end of WY 2024 to support the water budget and storage change visualizations.
- 4. GSP Implementation Progress:** Report on the advancement towards interim milestones and management actions, including any new projects.

Overall, Woodard & Curran will lead the report development and coordinating with the Subbasin GSAs to ensure comprehensive data collection and analysis.

The results of the previous activities will be used to develop the WY 2024 Annual Report, including an executive summary that highlights the key contents of the annual report. The following sections will be included, with the outline subject to change:

1. Executive Summary
2. Introduction
3. Hydrologic Conditions
4. Water Supply
5. Groundwater Levels
6. Change in Groundwater Storage
7. GSP Implementation Progress
8. Sustainability Indicators
9. References

A Draft Annual Report will be prepared by February 28, 2025, for SGA and GSA review and comment. Comments will be incorporated into a Final Annual Report which will be distributed electronically (PDF). If directed by SGA, Woodard & Curran will also upload the Final Annual Report and supporting documentation to the SGMA Portal.

Deliverables:

- Draft WY 2024 Annual Report
- Final WY 2024 Annual Report

Assumptions:

- One set of comments will be provided from the GSAs on the Draft Report
- All deliverables are provided electronically
- Native files used in preparation of previous Annual Reports will be provided by SGA

TASK 6: GROUNDWATER MONITORING

6.1 Water Level Data Collection

Groundwater elevation measurements have been collected by Subbasin GSAs prior to and during the implementation of SGMA-related activities. The GSP states groundwater elevations are measured biannually, during the spring and fall of each calendar year. Woodard & Curran would oversee the collection of groundwater elevation data, which would be performed by Blaine Tech. A Woodard & Curran staff geologist will be present with Blaine Tech during the spring 2025 sampling event, with assistance from GEI, to determine well locations, discuss well access, and collect other information needed for performing future sampling events. The task lead for the Sampling & Other Data Collection task will coordinate with Blaine Tech on sampling activities with as-needed support from the Deputy Project Manager and GSP/Annual Report task lead. Following each sampling event, Blaine Tech will provide Woodard & Curran with water elevation data for all monitoring wells, which will be tabulated and provided to SGA.

Assumptions:

- Data collection activities would take place during the spring and fall of the 2025 calendar year.
- Up to 70 wells would be measured during each event.
- It is assumed each event would occur over two days.

Deliverables:

- Groundwater elevation data for spring 2025 and fall 2025

TASK 7: MODELING SUPPORT

Task 7 includes all work efforts required to update and calibrate the CoSANA model, address DWR's Recommended Corrective Actions, and inform the Subbasin GSAs with additional analyses related to revised sustainable management criteria.

7.1 Interconnected Surface Water and GDE Analyses

In the July 2023 Determination Letter, DWR staff recommended that the GSAs "Consider utilizing the interconnected surface water guidance, as appropriate, when issued by the Department to establish quantifiable minimum thresholds, measurable objectives, and management actions." On September 24, 2024, DWR released *Techniques for Estimating Interconnected Surface Water Depletion Caused by Groundwater Use*, the Department's guidance document for establishing sustainable management criteria for the depletions of interconnected surface water sustainability indicator. The guidance presents numerical,

analytical, and statistical methods to estimate interconnected surface water depletions and how to apply these methods to estimate the location, quantity, and timing of those depletions. Woodard & Curran will prepare assumptions related to this analysis, perform modeling scenarios, evaluate the estimated depletions, and incorporate the results of the modeling scenarios into the sustainable management criteria for interconnected surface waters.

Additionally, modeling support will be used to further evaluate the presence and conditions of groundwater dependent ecosystems (GDEs) present within the Subbasin. GDEs will be identified and evaluated using the Normalized Difference Vegetation Index (NDVI) to track vegetation health and confirm the likelihood that the vegetation is groundwater-supported to reflect current conditions. This will be completed based on a desktop review of the potential GDEs identified in the GSP and updated to reflect a combination of observed and simulated aquifer conditions. The resulting work under this subtask will then be presented in the Periodic Evaluation and in the Amended NASb GSP's Groundwater Conditions and sustainable management criteria sections.

7.2 Adjacent Subbasins Impacts Analysis

This subtask involves additional analysis to evaluate potential impacts of new and existing sustainable management criteria on current and projected groundwater conditions in adjacent basins. Interbasin conditions will be evaluated in the CoSANA model under up to three scenarios. These scenarios may include updated aquifer boundary conditions based on current groundwater levels, proposed SGMA-related conditions from neighboring basin GSPs, impacts of the estimated interconnected surface water depletions, potential impacts as a result of lower groundwater level sustainable management criteria, and future PMA implementation benefits.

SCHEDULE

Project start date: October 21, 2024

Project completion date: April 30, 2026

Task	2024	2025				2025	
	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Task 1: Project Management & Coordination							
1.1 Kick Off Meeting	◆						
1.2 Coordination Meetings							
1.3 Intrabasin GSA Coordination Support							
1.4 Interbasin Coordination Meetings							
1.5 Contract Administration							
Task 2: Outreach & Communications - 2025							
2.1 Public Meetings			◆		◆		
2.2 Sustainable Management Criteria Outreach							
2.3 Website Migration and 1 Year Hosting							
2.4 Website Updates							
2.5 DMS Needs Assessment							
Task 3: Periodic Evaluation							
3.1 Periodic Evaluation Development							
Task 4: GSP Amendment							
4.1 NASb GSP Amendment							
4.2 Technical Analyses							
4.3 Draft Amended GSP Compilation & Preparation							
4.4 Respond to GSA Comments on Amended GSP							
4.5 Public Comment & Final GSP Preparation							
Task 5: Annual Report							
5.1 Water Year 2024 Annual Report							
Task 6: Groundwater Monitoring							
6.1 Water Level Data Collection	◆	◆			◆		
Task 7: Modeling Support							
7.1 Interconnected Surface Water and GDE Analyses							
7.2 Adjacent Subbasins Impacts Analysis							

BUDGET

The work contained in this scope of services will be completed for \$806,395 on a time and materials basis based on the attached rate table.

Support Services for Sustainable Groundwater Management Act (SGMA) Implementation and Other Groundwater Management Activities – Water Quality Monitoring

Scope of Work

June 2025

Woodard & Curran is currently under contract to perform support service for SGMA implementation and other groundwater management activities in the North American Subbasin. Phase 6 will be incorporated into the existing project contract, as previously amended through Change Order #1, through Change Order #2.

PHASE 6: WATER YEAR 2025 WATER QUALITY MONITORING

6.1 2025 Water Quality Sampling

Woodard & Curran will perform one water quality monitoring event including 27 monitoring wells. Woodard & Curran will oversee Blaine Tech, a subcontractor, who will conduct all sampling activities. Sampling will be conducted using Blaine Tech's standard monitoring procedures, which are available upon request. Samples will be delivered to and analyzed by Pace Analytical. Samples will be analyzed for constituent consistent with the Fall 2025 Sampling Schedule, as summarized below:

- 27 monitoring wells will be sampled consistent with the Fall 2025 Sampling Schedule
- 27 samples will be analyzed for TDS (Method SM2540C)
- 12 samples will be analyzed for Nitrate (Method EPA 300.0)
- 25 samples will be analyzed for Arsenic, Boron, Iron, and Manganese (Method EPA 6010)
- 25 samples will be analyzed for Hexavalent Chromium (Method EPA 7916)

Assumptions:

- Appropriate access agreements are in place at each site
- Site and well conditions allow for sampling
- SGA will provide a method of disposal of purge water at no cost to Woodard & Curran
- Sampling activities will occur in September 2025
- Standard turnaround time will be used for sample analysis (10 business days)

Deliverables:

- Monitoring event field notes
- Laboratory analytical reports

6.2 Water Quality Technical Memorandum

Following water quality sampling activities, Woodard & Curran will compile laboratory reports and prepare tables presenting constituent data. This data will be incorporated into a brief Technical Memorandum that will detail the scope of sampling activities performed, analytical results, conclusions, and/or recommendations related to observed conditions and trends.

Deliverables:

- Water Quality Technical Memorandum

TENTATIVE SCHEDULE

- September 1st – Monitoring event begins
- September 5th – Monitoring events ends, samples are delivered to Pace Analytical
- September 8th – Woodard & Curran will provide field notes to SGA
- September 22nd – Laboratory analytical reports will be provided to Woodard & Curran
- September 22nd – Woodard & Curran begins WY 2025 Water Quality Technical Memorandum
- October 6th – Woodard & Curran discusses water quality analysis results with SGA and provides a Draft copy of the Memorandum for SGA's and/or the NASb GSAs' review and comment
- October 31st – Woodard & Curran finalizes WY 2025 Water Quality Technical Memorandum, which will be included in the WY 2025 Annual Report as an appendix

BUDGET

Phase 6: WY 2025 WQ Monitoring	Total Labor Hours	Total Labor Costs	Blaine Tech	Pace Analytical	Sub Consultant Total Cost	Total Fee
6.1: 2025 Water Quality Sampling	30	\$8,570	\$17,500	\$3,500	\$21,000	\$29,570
6.2: Water Quality Technical Memorandum	46	\$13,490	\$0	\$0	\$0	\$13,490
TOTAL	76	\$22,060	\$17,500	\$3,500	\$21,000	\$43,060

WATER YEAR 2025 SAMPLING SCHEDULE

Well ID	COC						
	TDS	Nitrate (as N)	As	B	Cr ⁶⁺	Fe	Mn
AB-1 Shallow	X	X	X	X	X	X	X
AB-2 Deep	X		X	X	X	X	X
AB-2 Middle	X		X	X	X	X	X
AB-2 Shallow	X	X	X	X	X	X	X
AB-3 Middle	X		X	X	X	X	X
AB-3 Shallow	X	X	X	X	X	X	X
Cemetery (IRLP)	X	X	X	X	X	X	X
MW 1-1	X		X	X	X	X	X
MW 1-3	X		X	X	X	X	X
MW 1-4	X		X	X	X	X	X
MW 2-2	X		X	X	X	X	X
MW 2-3	X		X	X	X	X	X
MW1-2	X		X	X	X	X	X
NCMWD-Supply	X						
Roseview Park - 315	X	X	X	X	X	X	X
SGA_MW02	X	X	X	X	X	X	X
SGA_MW05	X	X	X	X	X	X	X
SGA-MW01	X	X	X	X	X	X	X
SSWD-Supply	X						
SUT-P1	X	X	X	X	X	X	X
SUT-P2	X		X	X	X	X	X
SUT-P3	X		X	X	X	X	X
SVMW West 1-A	X	X	X	X	X	X	X
WPMW-11A	X	X	X	X	X	X	X
WPMW-11B	X		X	X	X	X	X
WPMW-12A	X	X	X	X	X	X	X
WPMW-12B	X		X	X	X	X	X

Client: Sacramento Groundwater Authority

October 1, 2024

Project: Support Services for SGMA Implementation and Other Groundwater Management Activities

Phases	Labor														Outside Services				ODCs		Total
	Ali Taghavi	Jim Blanke	Katie Cole	Art Machado	Nicole Koerth	Max McNally	Jingnan Zhou	Jeanna Long	Javier Li Guan	Jim Strandberg	Anisa Krieg	Katie Evans	Project Assistant	Total Hours	Total Labor Costs (1)	Blaine Tech	Subtotal	Sub Consultant Total Cost (2)	ODCs	Total ODCs (3)	Total Fee
	PIC	PM	DPM	PG	Junior Engineer	Junior Planner	Modeling Support	DMS	DMS	WQ, GWL, Wells	Junior Geologist	Engagement & Outreach	Project Coord.			Monitoring & Sampling			Travel Mileage		
Task 1: Project Management & Coordination																					
1.1 Kick Off Meeting	2	4	4	6						1		1		18	\$6,086		\$0	\$0		\$0	\$6,086
1.2 Coordination Meetings	16	32	60	60						4		4		176	\$58,568		\$0	\$0		\$0	\$58,568
1.3 Intrabasin GSA Coordination Support	4	18	24	20										66	\$22,128		\$0	\$0		\$0	\$22,128
1.4 Interbasin Coordination Meetings	4	8	16	12								8		48	\$16,184		\$0	\$0		\$0	\$16,184
1.5 Contract Administration		8	54										36	98	\$25,851		\$0	\$0		\$0	\$25,851
Subtotal Task 1:	26	70	158	98	0	0	0	0	0	5	0	13	36	406	\$128,817	\$0	\$0	\$0	\$0	\$0	\$128,817
Task 2: Outreach & Communications - 2025																					
2.1 Public Meetings	3	8	20	16								10		57	\$19,030		\$0	\$0	\$500	\$500	\$19,530
2.2 Sustainable Management Criteria Outreach	8	8	24	12			4							56	\$18,692		\$0	\$500	\$500	\$19,192	
2.3 Website Migration and 1 Year Hosting			1					6	36					43	\$11,710		\$0	\$0	\$1,000	\$1,000	\$12,710
2.4 Website Updates				12				2	16			8		38	\$11,302		\$0	\$0		\$0	\$11,302
2.5 DMS Needs Assessment			1					8	8					17	\$5,321		\$0	\$0		\$0	\$5,321
Subtotal Task 2:	11	16	46	40	0	0	4	16	60	0	0	18	0	211	\$66,055	\$0	\$0	\$0	\$2,000	\$2,000	\$68,055
Task 3: Periodic Evaluation																					
Periodic Evaluation Development (Proposed Outline)														0	\$0		\$0	\$0		\$0	\$0
Introduction			1			2								3	\$756		\$0	\$0		\$0	\$756
Significant New Information (Basin Setting, HCM, Water Use, Model, Monitoring Network)	4	8	8	16	36									72	\$20,867		\$0	\$0		\$0	\$20,867
Progress Towards Sustainability		8	12	24	20	30								94	\$25,616		\$0	\$0		\$0	\$25,616
Projects and Management Actions		2	6	10		20								38	\$10,056		\$0	\$0		\$0	\$10,056
GSA Activities			10	4		16								30	\$7,912		\$0	\$0		\$0	\$7,912
Summary of Proposed or Completed Revisions to Plan Elements			4	8		12								24	\$6,320		\$0	\$0		\$0	\$6,320
Internal Review of Periodic Evaluation	4	16												20	\$7,520		\$0	\$0		\$0	\$7,520
Finalize Periodic Evaluation		2	2	8									12	24	\$5,614		\$0	\$0		\$0	\$5,614
Subtotal Task 3:	8	36	43	70	56	80	0	0	0	0	0	0	12	305	\$84,662	\$0	\$0	\$0	\$0	\$0	\$84,662
Task 4: GSP Amendment																					
4.1 NASb GSP Amendment			32	50	50	30								0	\$0		\$0	\$0		\$0	\$0
GSP Evaluation and Update														162	\$44,408		\$0	\$0		\$0	\$44,408
Update Executive Summary	2	2	4	6	2	6								22	\$6,414		\$0	\$0		\$0	\$6,414
Update General Information/Introduction			2	1		2								5	\$1,384		\$0	\$0		\$0	\$1,384
Update Agency Information			2			4								6	\$1,512		\$0	\$0		\$0	\$1,512
Update Description of Plan Area			4			6								10	\$2,592		\$0	\$0		\$0	\$2,592
Update Notice and Communications			6	2		8								16	\$4,280		\$0	\$0		\$0	\$4,280
Update Hydrogeologic Conceptual Model	8	6	4	6	10	2								36	\$11,288		\$0	\$0		\$0	\$11,288
Update Groundwater Conditions		4	6	16	24	8								58	\$15,973		\$0	\$0		\$0	\$15,973
Update Water Budget	4	4	2	6	10	2	16							44	\$13,391		\$0	\$0		\$0	\$13,391
Update Sustainable Goals, Minimum Thresholds, & Measurable Objectives		4	6	12	16	16								54	\$14,507		\$0	\$0		\$0	\$14,507
Update Monitoring Network	6	18	24	40	40	30								158	\$45,328		\$0	\$0		\$0	\$45,328
Update Projects & Management Actions	2	1	1	4		12								20	\$5,260		\$0	\$0		\$0	\$5,260
Update Plan Implementation			12			16								28	\$7,344		\$0	\$0		\$0	\$7,344
Update Interbasin & Intrabasin Coordination		1	2	2		4								9	\$2,496		\$0	\$0		\$0	\$2,496
Update References, Technical Reports, Appendices		2	4	4	4	8								22	\$5,981		\$0	\$0		\$0	\$5,981
4.2 Technical Analyses														0	\$0		\$0	\$0		\$0	\$0
Groundwater Level SMC Revisions	4	24	24	60	120									232	\$66,208		\$0	\$0		\$0	\$66,208
Water Quality SMC Impacts		16	8	40	60									124	\$35,600		\$0	\$0		\$0	\$35,600
Land Subsidence SMC	2	12	6	16	30									66	\$19,488		\$0	\$0		\$0	\$19,488
4.3 Draft Amended GSP Compilation & Preparation	8	8	4	8	4	12								44	\$13,325		\$0	\$0		\$0	\$13,325
4.4 Respond to GSA Comments on Amended GSP	2	8	12	16	8	20								66	\$18,810		\$0	\$0		\$0	\$18,810
4.5 Public Comment & Final GSP Preparation	2	4	8	12	4	20							12	62	\$15,587		\$0	\$0		\$0	\$15,587
Subtotal Task 4:	40	114	173	301	382	206	16	0	0	0		0	12	1244	\$351,176	\$0	\$0	\$0	\$0	\$0	\$351,176
Task 5: Annual Report																					
5.1 Water Year 2024 Annual Report	18	18	24	32	30	40	12						6	180	\$51,743		\$0	\$0		\$0	\$51,743
Subtotal Task 5:	18	18	24	32	30	40	12	0	0	0		0	6	180	\$51,743	\$0	\$0	\$0	\$0	\$0	\$51,743
Task 6: Groundwater Monitoring																					
6.1 Water Level Data Collection			2	4						4	20			30	\$7,604	\$11,700	\$11,700	\$11,700	\$300	\$300	\$19,604
Subtotal Task 6:	0	0	2	4	0	0	0	0	0	4	20	0	0	30	\$7,604	\$11,700	\$11,700	\$11,700	\$300	\$300	\$19,604
Task 7: Modeling Support																					
7.1 Interconnected Surface Water and GDE Analyses	26	8	2	8			180							224	\$72,198		\$0	\$0		\$0	\$72,198
7.2 Adjacent Subbasins Impacts Analysis	6	1	2	6		0	80							95	\$30,141		\$0	\$0		\$0	\$30,141
Subtotal Task 7:	32	9	4	14	0	0	260	0	0	0	0	0	0	319	\$102,339	\$0	\$0	\$0	\$0	\$0	\$102,339
TOTAL	135	263	450	559	468	326	292	16	60	9	20	31	66	2695	\$792,395	\$11,700	\$11,700	\$11,700	\$2,300	\$2,300	\$806,395

CHANGE ORDER #1 FOR SGA CONSULTING AGREEMENT

In reference to Consulting Agreement executed October 25, 2024, between the Sacramento Groundwater Authority ("SGA") and Woodard & Curran, Inc. ("Consultant"), this Change Order #1 modifies the Consulting Agreement and Exhibit A, as follows:

1. **Change in Consultant's Compensation:**

Consultant's fee is increased \$453,514, from \$352,881 to a not-to-exceed amount of \$806,395.

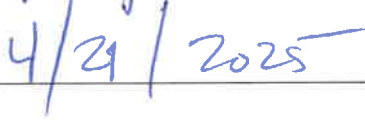
All other terms and conditions of the Consulting Agreement between October 25, 2024, remain unchanged.

Sacramento Groundwater Authority (SGA)



James Peifer, Executive Director

Date



4/29/2025

Woodard & Curran, Inc. (Consultant)



Ali Taghavi, Senior Principal

Date



4/28/2025

CHANGE ORDER #2025-02 FOR SGA CONSULTING AGREEMENT

In reference to Consulting Agreement executed October 25, 2024, between the Sacramento Groundwater Authority (“SGA”) and Woodard & Curran, Inc. (“Consultant”), this Change Order #2025-02 modifies the Consulting Agreement and Exhibit A, as follows:

1. **Change in Consultant’s Compensation:**

Consultant’s fee is increased \$43,060, from \$806,395 to a not-to-exceed amount of \$849,455.

All other terms and conditions of the Consulting Agreement between October 25, 2024, remain unchanged.

Sacramento Groundwater Authority (SGA)

Woodard & Curran, Inc. (Consultant)

James Peifer, Executive Director

Ali Taghavi, Senior Principal

Date

Date

Topic: Sacramento Regional Water Bank and Water Accounting System Updates
Type: Old Business
Item For: Information
Purpose: 2025 SGA Strategic Priorities

	Trevor Joseph,		Trevor Joseph,
SUBMITTED BY:	Manager of Technical Services	PRESENTER:	Manager of Technical Services

EXECUTIVE SUMMARY

This is an information item for the Board of Directors to receive a status update from Trevor Joseph, Manager of Technical Services on the Sacramento Regional Water Bank project and SGA's Water Accounting Framework.

STAFF RECOMMENDED ACTION

None. This item is for information/discussion only.

BACKGROUND

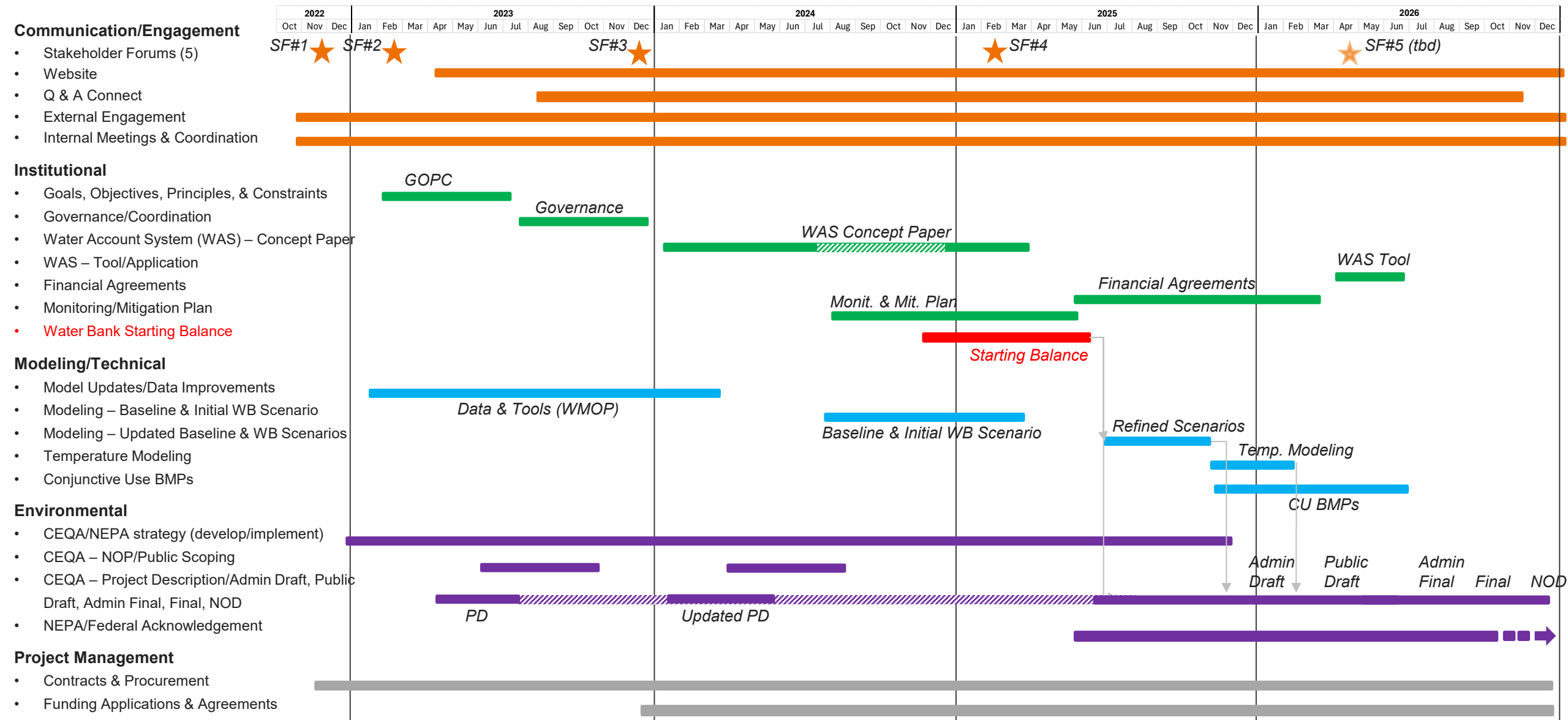
A status update will be provided on the development of the Water Bank project. Multiple Water Bank tasks and activities have now been completed, and are in progress, or are pending. A presentation will be provided on tasks and activities including the recently completed Water Accounting System (WAS) concept paper, Monitoring Plan, Water Bank Starting Balance Modeling, Communication and Engagement, CEQA Status, Financial Agreements, Conjunctive Use Best Management Practices, and project funding.

ATTACHMENT

Attachment 1 - Sacramento Regional Water Bank schedule

Water Bank Project— Tasks/Activities/Deliverables

Subject to change



Water Accounting System

GROUNDWATER BANKING AND RECHARGE

NEWS

SAC REGIONAL WATER BANK

WATER BANKING

RWA Releases Water Accounting System for the Sacramento Regional Water Bank

3 days ago

0 Comments

New framework enhances transparency and accountability, helping to build confidence in groundwater banking and long-term sustainability

The complete WAS framework is available here.

The Regional Water Authority (RWA), representing nearly two dozen water providers in the Sacramento region, has released the Water Accounting System (WAS) framework for the Sacramento Regional Water Bank (Water Bank).

The Water Bank is a network of groundwater wells, pumps, and pipelines that enable local water providers to withdraw and replenish underground water reserves. It's estimated that the region's aquifers can store twice the volume of water as Folsom Reservoir. The Water Bank is crucial for adapting the region's water system to climate change, which is expected to reduce snowpack and cause more extreme droughts and floods.

The Water Accounting System provides a structured, transparent method for tracking water deposited into and withdrawn from the Water Bank, including losses and water intentionally left in the basin to support long-term groundwater sustainability. Developed by RWA and participating agencies in coordination with Groundwater Sustainability Agencies (GSAs) and other partners, the WAS aligns with state and federal regulations and supports basin-wide coordination under the Sustainable Groundwater Management Act (SGMA).

"The Water Accounting System builds confidence in groundwater recharge by providing a clear and consistent way to track how and when water is stored," said RWA Executive Director Jim Peifer. "That's especially important for in-lieu recharge—a foundational strategy of the Water Bank—where surface water is used in place of pumping to allow groundwater levels to recover. The system enhances transparency and supports consistent, reliable tracking of in-lieu recharge to manage it effectively over time."

The WAS encompasses a detailed set of fundamentals and components designed to manage water banking activities responsibly and effectively. Fundamentals include, for example, that recharge (deposits) must be made before recovery (withdrawals).

SACRAMENTO REGIONAL WATER BANK
Water Accounting System

A Framework for Transparent and Sustainable Groundwater Banking

The Water Accounting System (WAS) is a structured approach for tracking how water moves into and out of the Sacramento Regional Water Bank (Water Bank). It provides specific justification and detail as to how participating water agencies will transparently manage and account for Water Bank recharge, recovery, and storage activities.

Developed by the Regional Water Authority (RWA) and participating water agencies in coordination with Groundwater Sustainability Agencies (GSAs) and other partners, the WAS supports basin-wide coordination and regulatory compliance under the Sustainable Groundwater Management Act (SGMA).

The Water Bank builds on the region's long-standing successful conjunctive use program, which predominantly uses in-lieu recharge—the combined management of both surface water and groundwater use, resulting in the replenishment of groundwater supplies within the aquifer. The Water Bank is an expansion of this program, now incorporating requirements of the SGMA, providing a more robust process for defining an operational baseline and losses, and providing for the inclusion of all banking activities, both in the North and South American Groundwater Subbasins.

The Water Bank has been listed in both subbasins Groundwater Sustainability Plans (GSPs) as a Project and Management Action, which will aid in the ability of both subbasins to maintain groundwater sustainability in the future.

Key Functions and Benefits of the Water Accounting System:

- TRACKS** recharge, recovery, storage, releases, and losses
- DEFINES** roles, responsibilities, and standardized processes
- FACILITATES** effective adaptive management
- ALIGNS** with selected GSPs and SGMA requirements
- PROVIDES** transparent, reliable records
- SUPPORTS** compliance with state and federal mandates

Support for In-Lieu Recharge

In-lieu recharge requires accurate tracking to distinguish between normal water use and banked water, otherwise referred to as an operational baseline. In addition, the WAS defines:

- Recharge and recovery
- Same-basin outflows and banking losses
- Foreign surface water
- Storage rights and accounting protocols

SGMA Integration and Coordination with GSAs

The WAS aligns with local GSPs and supports SGMA compliance by incorporating:

- Operational baselines consistent with GSP water budgets
- Defined exceptions for recharge and loss
- Coordination with GSPs to optimize Water Banking operations
- An adaptive framework and dispute resolution process

Click to read the fact sheet on the Water Accounting System.

Topic: Sustainable Groundwater Management Grant Update
Type: New Business
Item For: Information
Purpose: General – Status Update

SUBMITTED BY: Raiyna Villaseñor,
Senior Project Manager

PRESENTER: Raiyna Villaseñor,
Senior Project Manager

EXECUTIVE SUMMARY

This is an information item to brief the Board of Directors on the status of the North American Subbasin (NASb) Sustainable Groundwater Management (SGM) Round II Grant with the California Department of Water Resources (DWR).

STAFF RECOMMENDED ACTION

None. This item is for information only.

BACKGROUND

Ms. Villaseñor will provide a brief update on the status of the NASb SGM Round II Grant with the DWR. Ongoing work to implement the components of the grant are critical to SGA and other NASb Groundwater Sustainability Agencies which supports ongoing requirements of SGMA.

SGA staff have collected Spring 2025 water levels and Ms. Villaseñor will provide a brief update on a few representative monitoring sites and their respective water levels within the SGA area.

ATTACHMENTS

Attachment 1- PowerPoint Presentation

Sacramento Groundwater Authority

Item 5. North American Subbasin Department of Water Resources Sustainable Groundwater Management Grant Round 2 Update and Spring 2025 Hydrographs

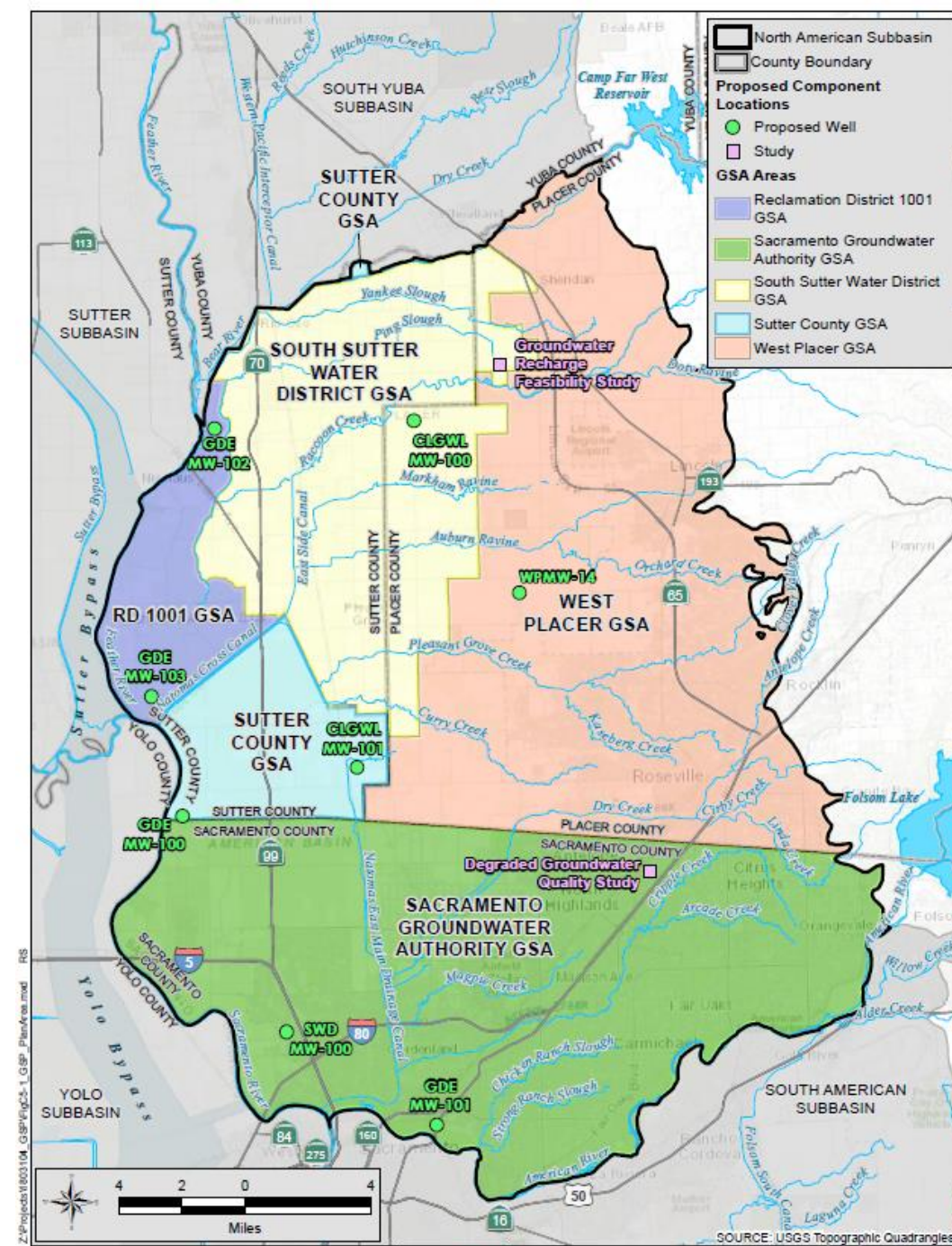
Presented by: Raiyna Villaseñor, Senior Project Manager
& Trevor Joseph, Manager of Technical Services
June 12, 2025

California Department of Water Resources (DWR) SGM Round 2 Grant Update

NASb Grant Proposed Components

Advancing NASb SGM Component Status Update

1. Grant Administration
2. Groundwater Recharge Feasibility Study
3. Groundwater Quality Degradation Study
4. Groundwater Monitoring Wells Construction
 - Groundwater Dependent Ecosystems (GDE) (4)
 - Chronic Lower of Groundwater Levels (CLGWL) (1)
 - Surface Water Depletion (SWD) (1)
5. Groundwater Monitoring Well/~~Emergency Supply Well~~
 - Domestic ~~and Emergency Supply~~ (1)
6. GSP Update and Annual Reporting
7. CoSANA Model Upgrade and Enhancements



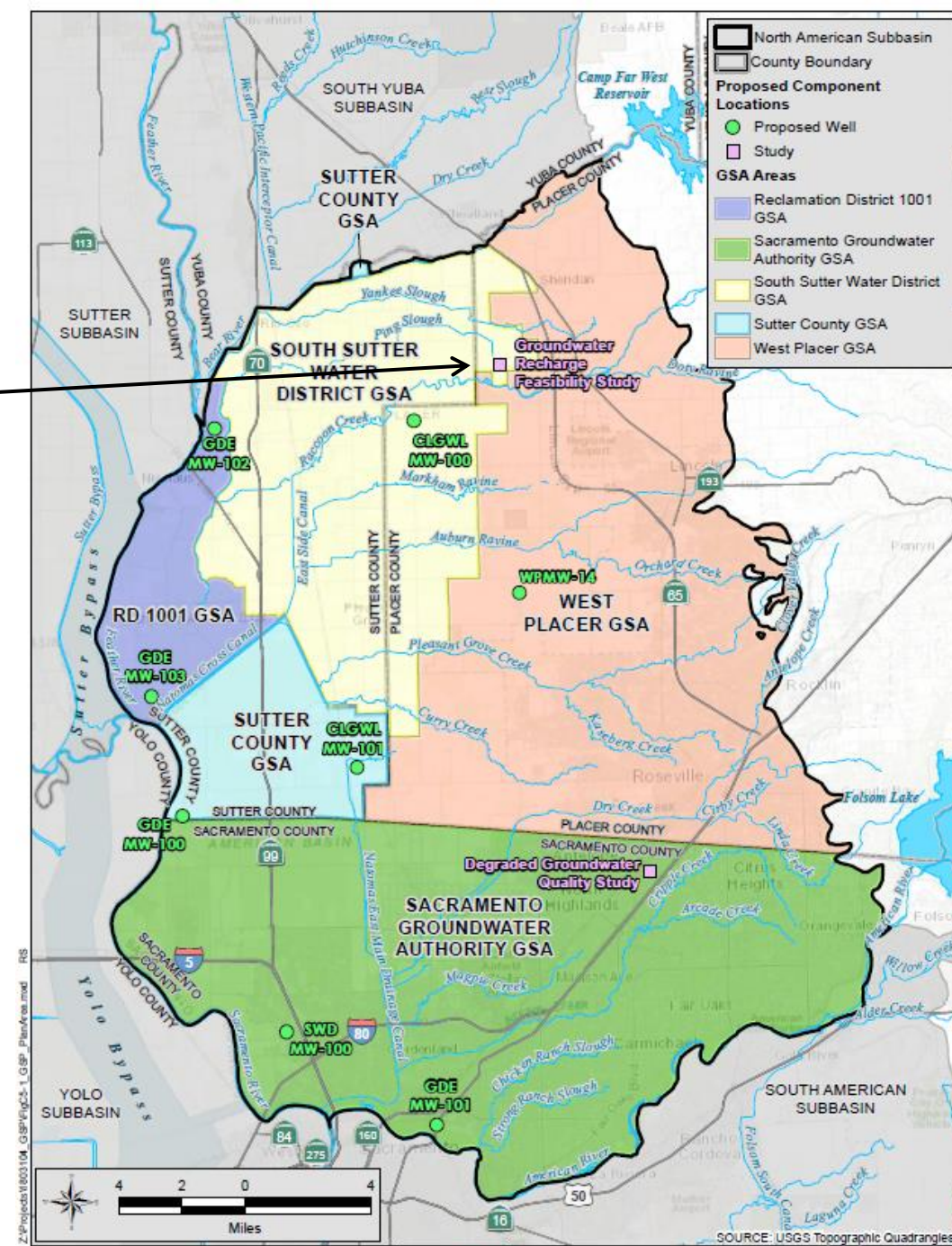
Exact locations of proposed components may vary

NASb Grant Proposed Components

Advancing NASb SGM Component Status Update

2. Groundwater Recharge Feasibility Study

- Task 1: Recharge Basin Investigation Planning - **Completed**
- Task 2: Recharge Basin Investigation – **Completed**
- ~~Task 3: Water Conveyance Assessment~~ – *proposing to terminate*
- ~~Task 4: Preliminary Design Drawings~~ – *proposing to terminate*
- ~~Task 5: Temporary Diversion Permit Application~~ – *proposing to terminate*



Exact locations of proposed components may vary

Component 2 – Groundwater Recharge Feasibility Study

Figure 6: tTEM Survey Lines and Field Numbers

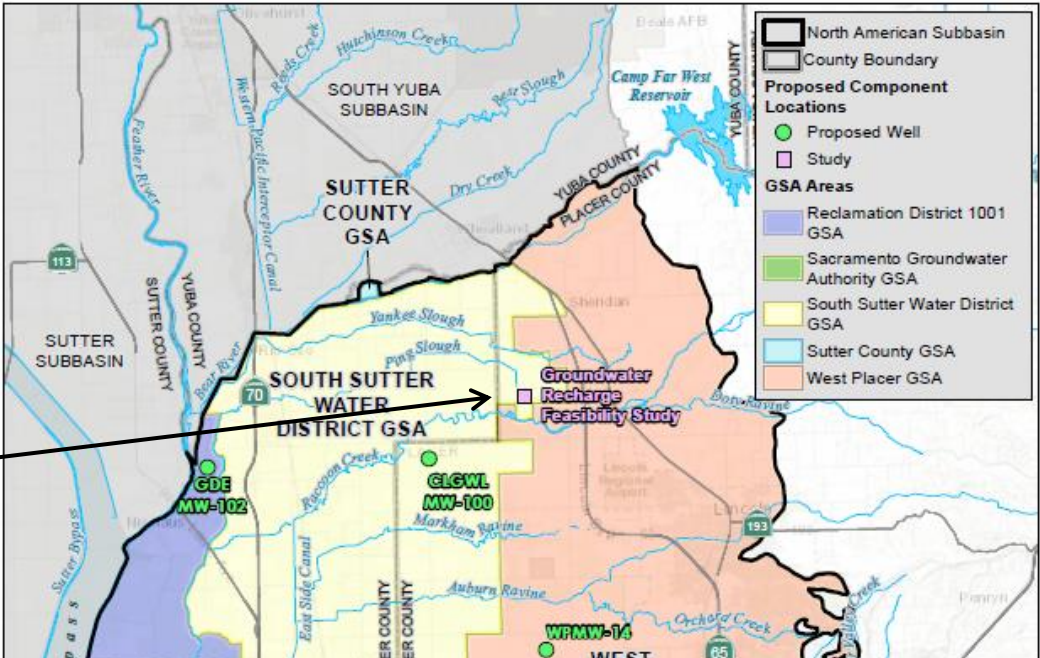
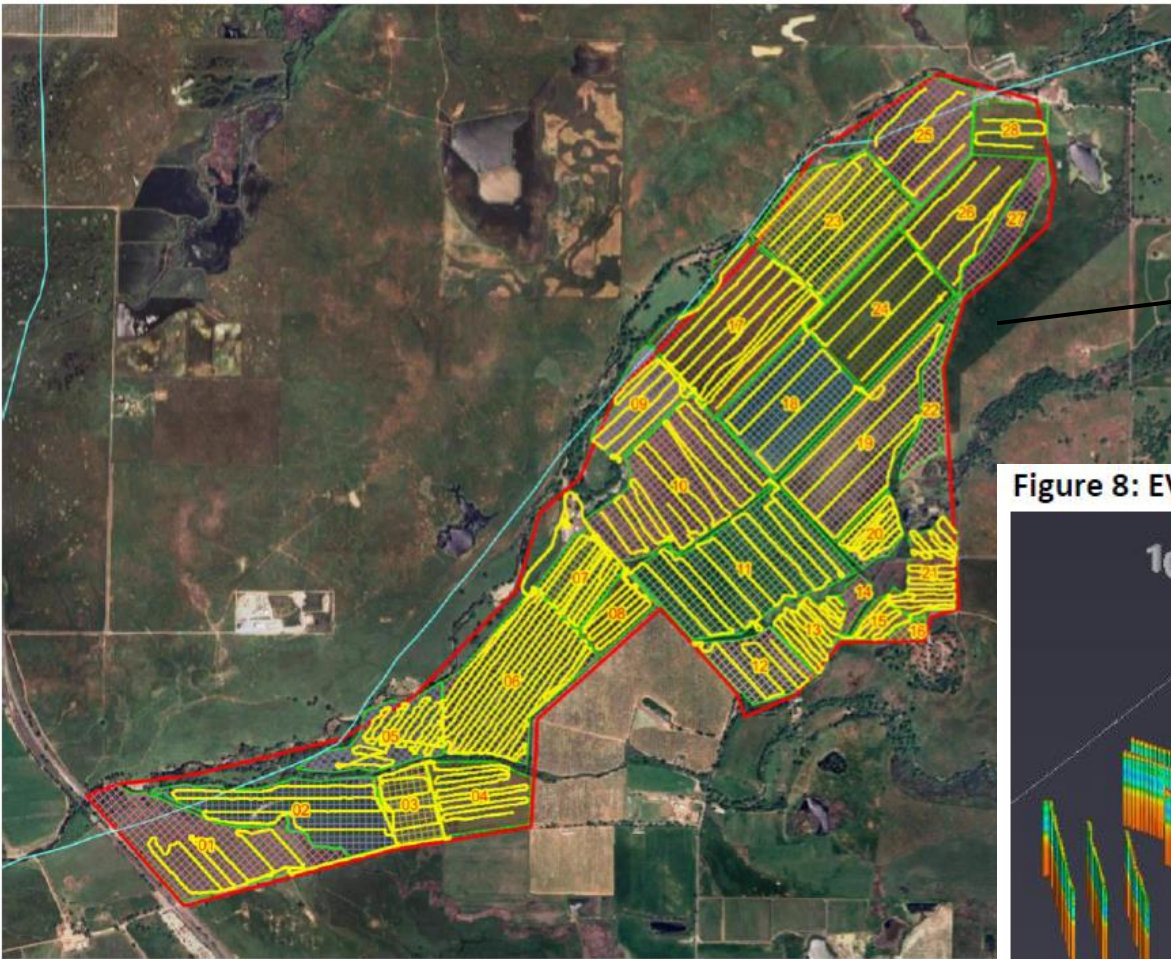
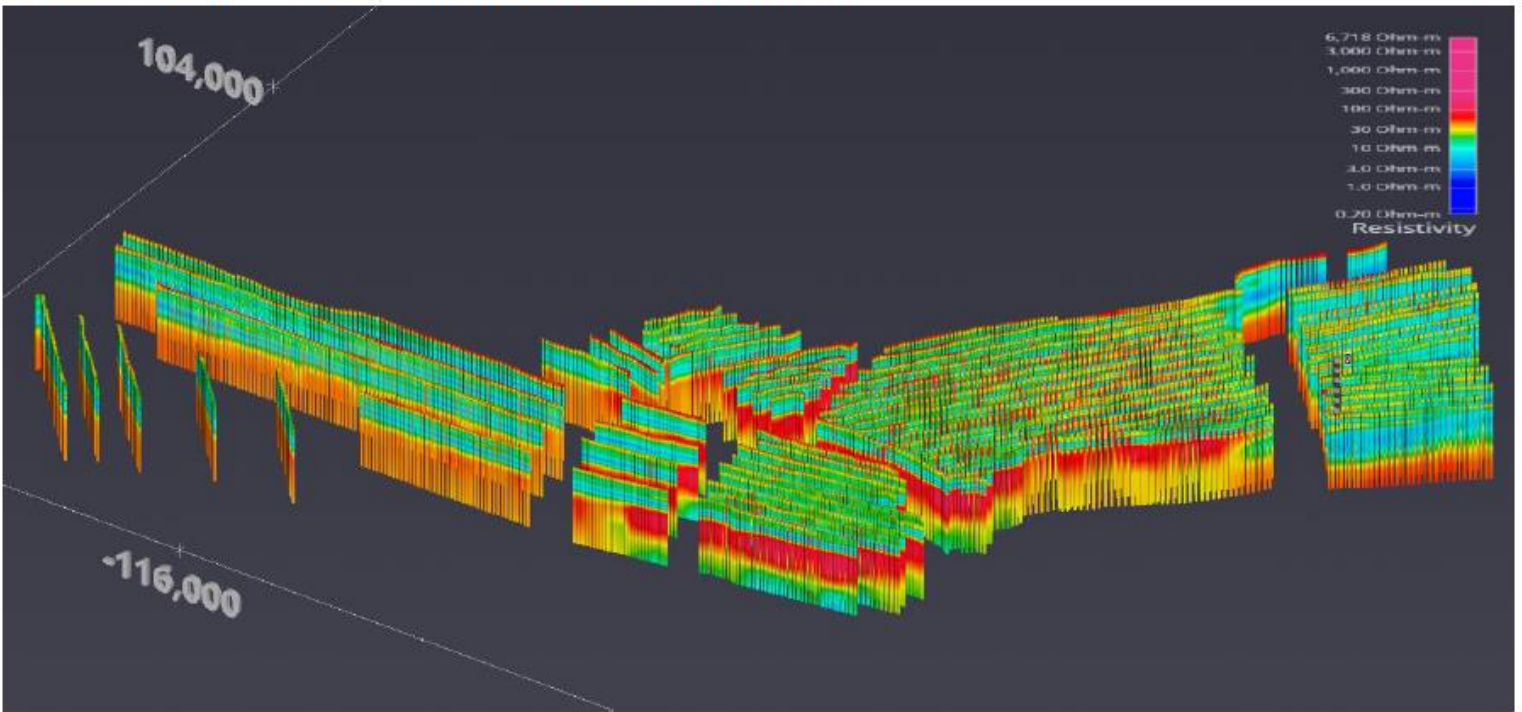


Figure 8: EVS Model Western Portion (Fields 1 through 8)

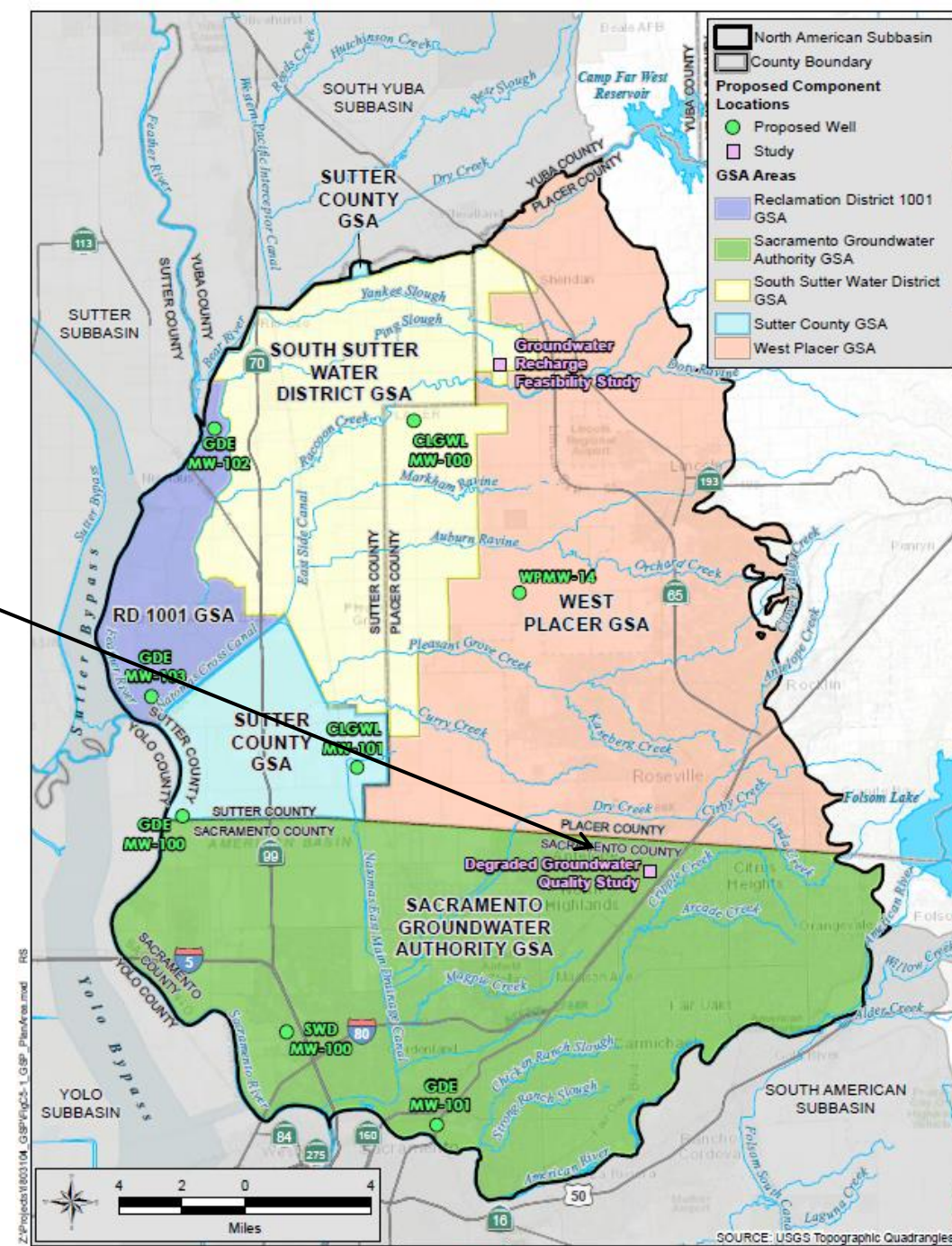


NASb Grant Proposed Components

Advancing NASb SGM Component Status Update

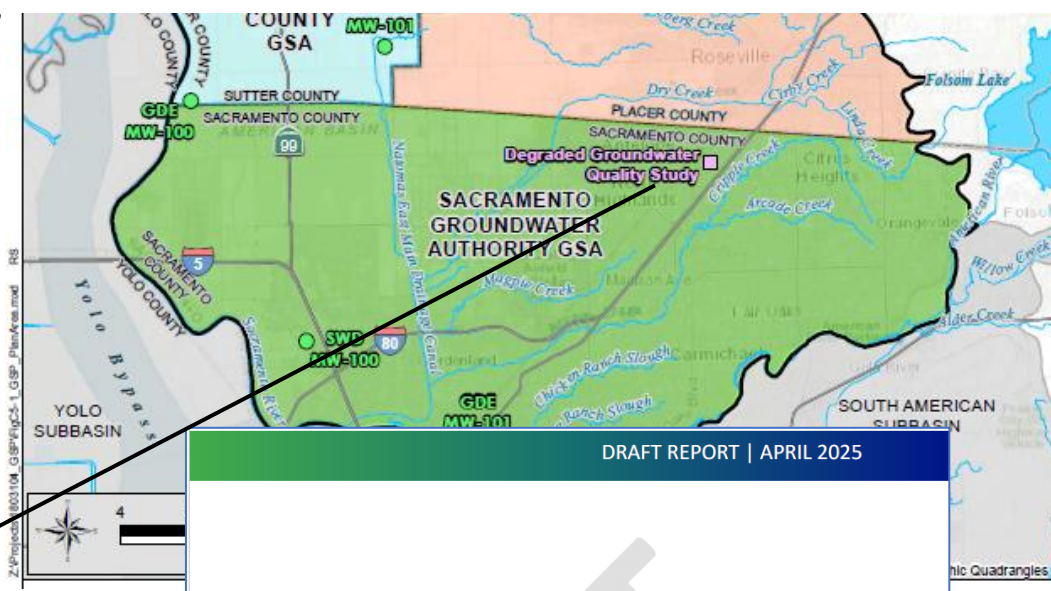
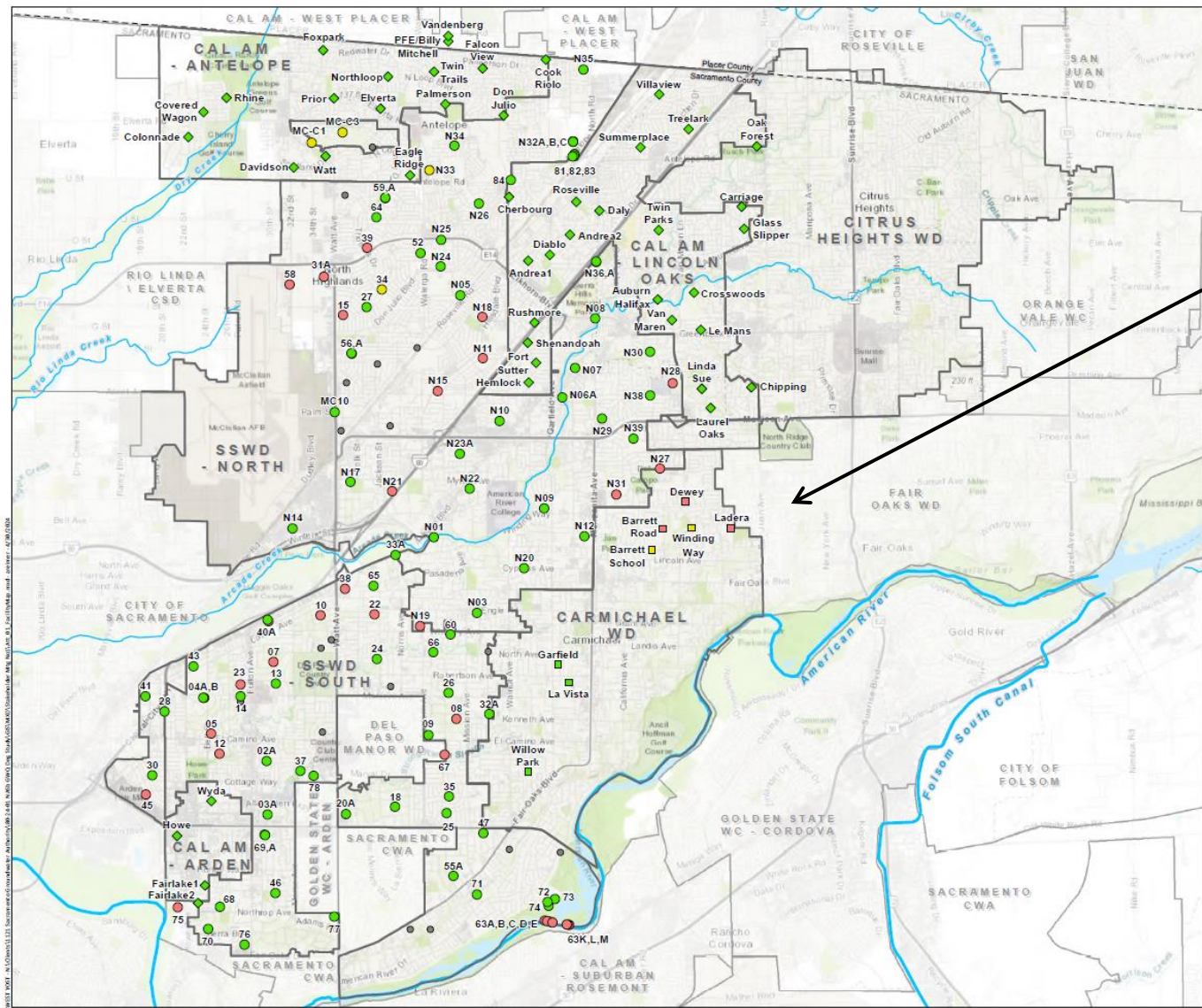
3. Groundwater Quality Degradation Study

- Task 1: Review Existing Studies - proposing to amend
- Task 2: ~~Groundwater Model Forecast~~ – proposing to amend to Production Well Threat Assessment



Exact locations of proposed components may vary

Component 3 –Groundwater Quality Degradation Study



DRAFT REPORT | APRIL 2025

North American Subbasin Groundwater Quality Degradation Study

PREPARED FOR
Sacramento Groundwater Authority

SGA

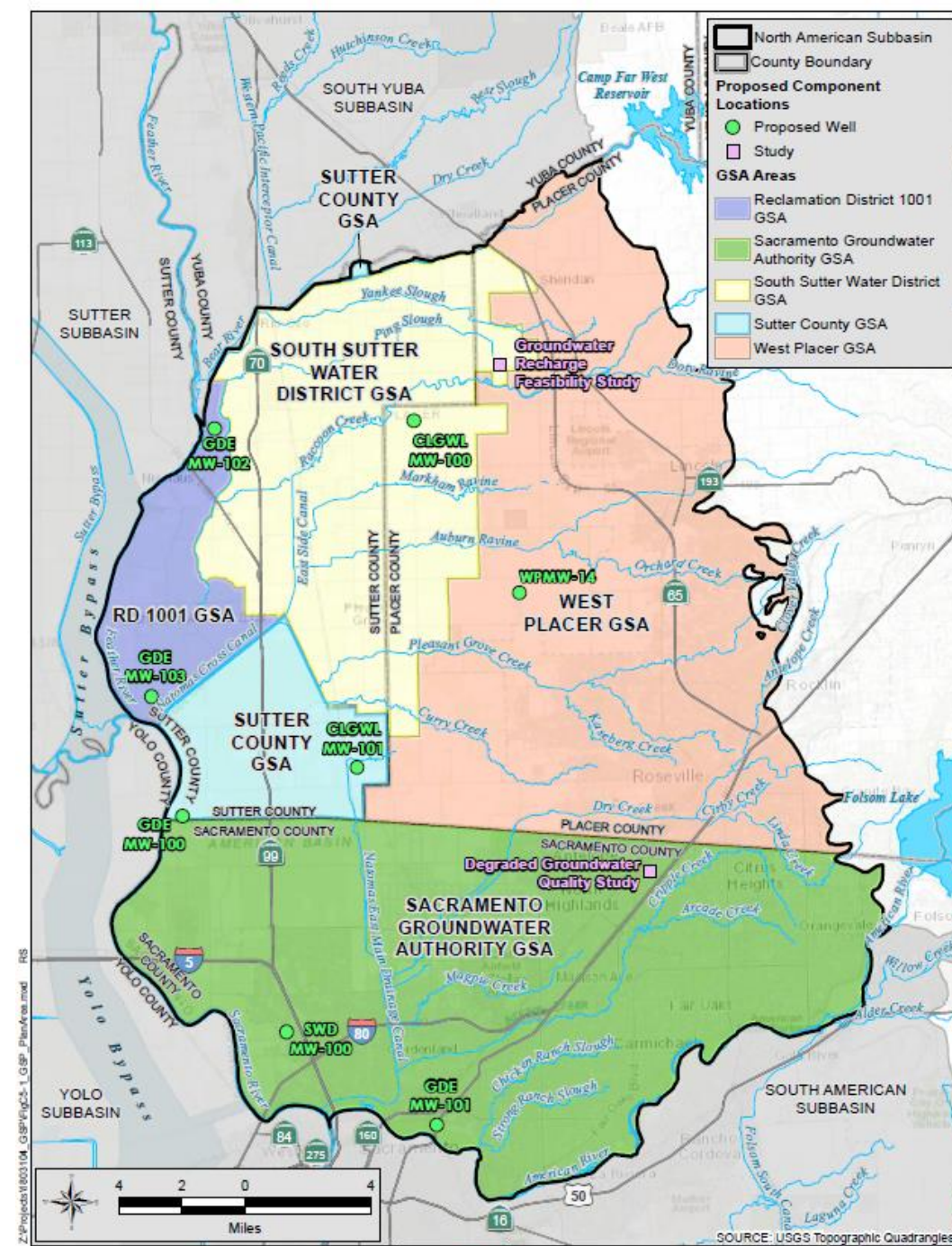
PREPARED BY
WEST YOST
Water. Engineered.

NASb Grant Proposed Components

Advancing NASb SGM Component Status Update

4. Groundwater Monitoring Wells Construction

- Seven proposed monitoring well throughout the Subbasin (NASb)
- Two of the seven access agreements finalized – few close to finalizing



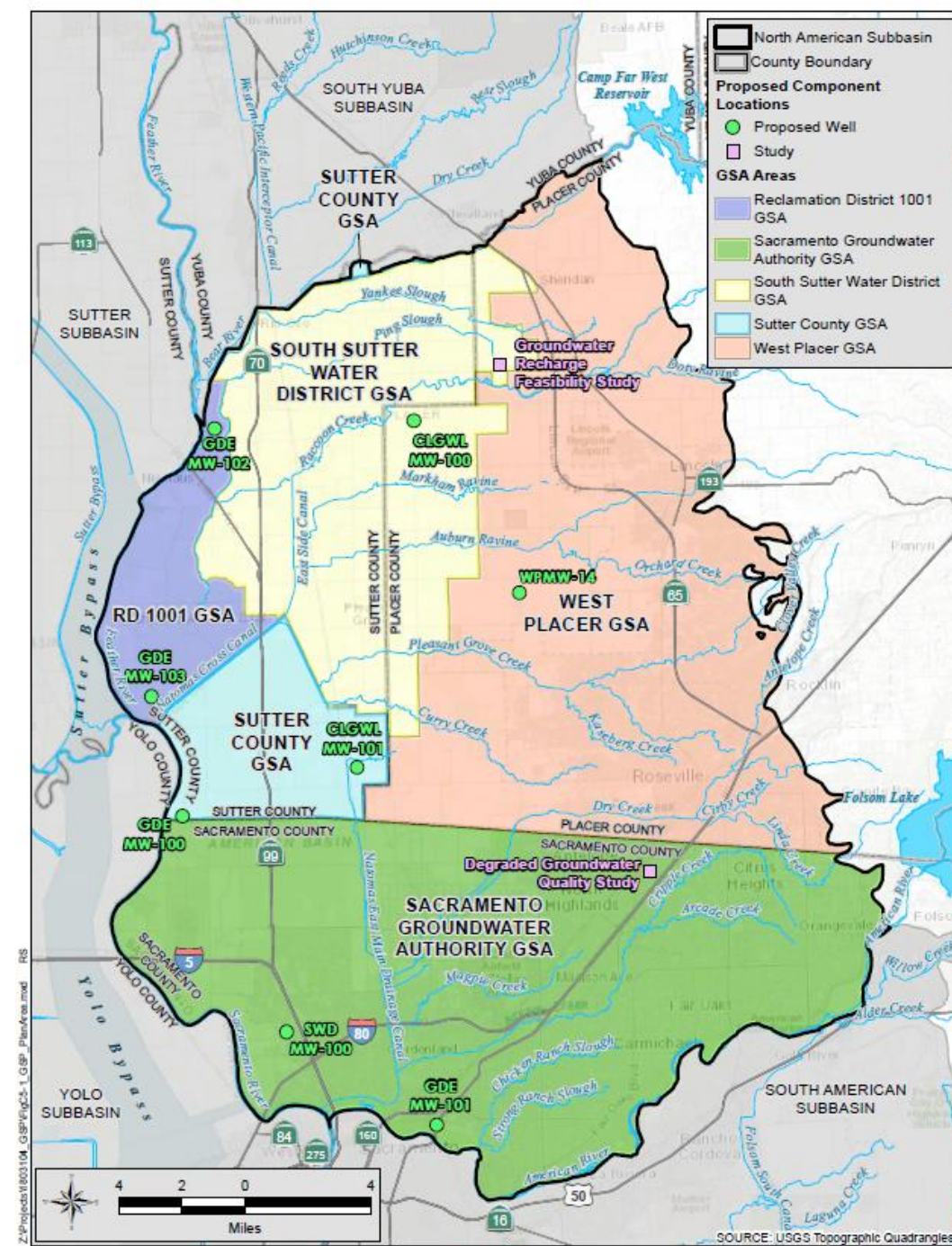
Exact locations of proposed components may vary

NASb Grant Proposed Components

Advancing NASb SGM Component Status Update

5. Groundwater Monitoring Well/~~Emergency Supply Well~~

- One proposed monitoring well located on the Placer Conservation Authority (PCA) land in West Placer GSA area (WPMW-14)
- Removal of Emergency Supply Well



Exact locations of proposed components may vary

NASb Grant Proposed Components

Advancing NASb SGM Component Status Update

6. GSP Update and Annual Report

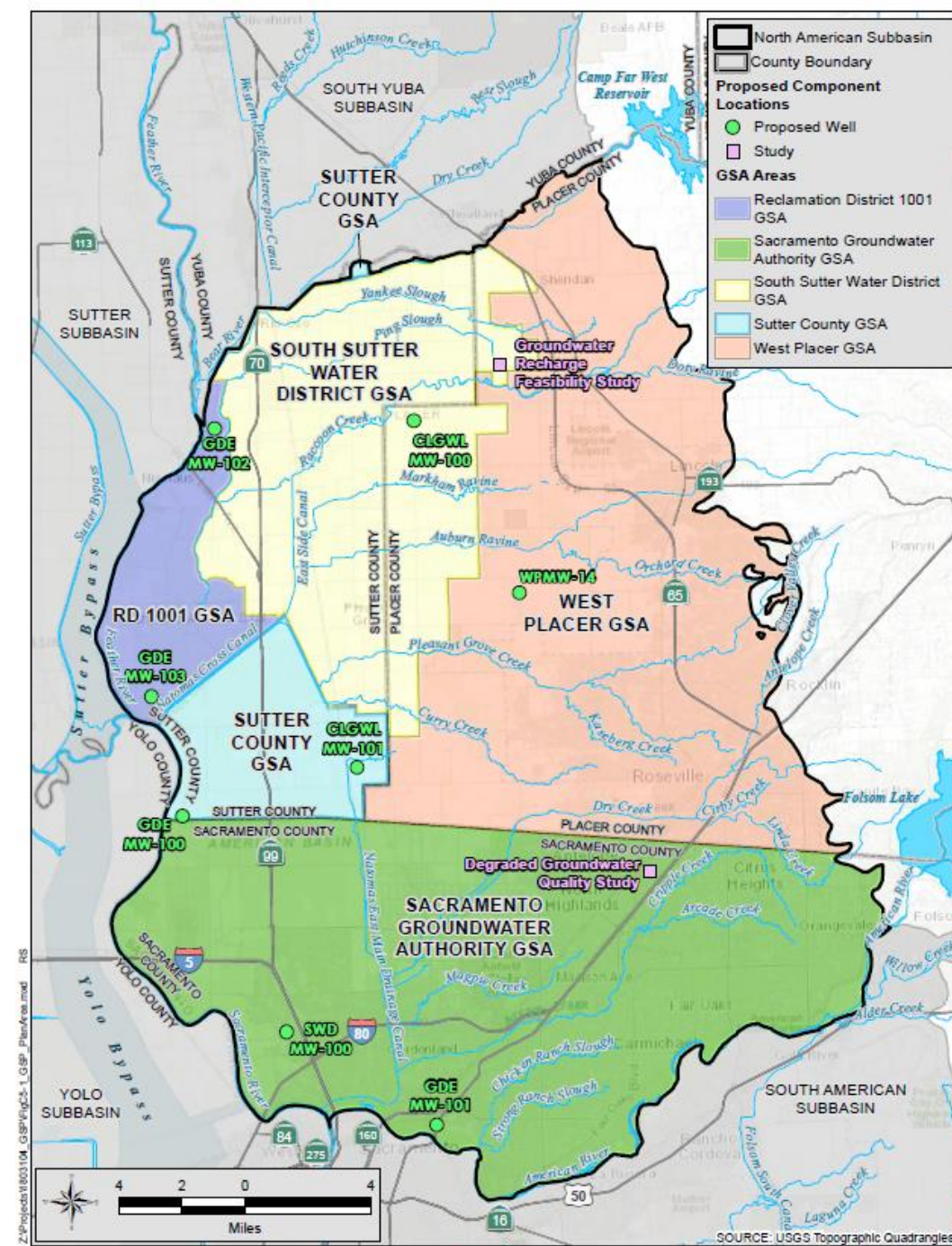
- Task 1: DMS Maintenance – *in progress*
- Task 2: Groundwater Levels and Quality Monitoring – *Groundwater Levels collected for Water Year (WY) 2022, 2023, and 2024 **completed**, Water Quality Analysis for WY2023 **completed**, work on WY 2025 Water Quality Analysis to kick-off shortly*
- Task 3: Prepare Annual Reports (WYs 2022, 2023, 2024, and 2025) – *WYs 2022, 2023 and 2024 **completed**, work on WY 2025 to begin around October 2025*
- Task 4: Develop and Implement Well Permit/Construction Practices – *in progress*
- Task 5: Domestic/Shallow Well Data Collection and Communication – *in progress*
- Task 6: Groundwater Dependent Ecosystem (GDE) Assessment Program – *effort part of task 7*
- Task 7: Prepare GSP Update – *in progress*

NASb Grant Proposed Components

Advancing NASb SGM Component Status Update

7. CoSANA Model Upgrade and Enhancements

- Task 1: Data Gap Analysis and Enhancement to Integrated Water Resources Model – *in progress*
- Task 2: Calibration and Refinement of Integrated Water Resources Model - *in progress*
- Task 3: Update Model Baseline Conditions and Perform Sustainability Scenarios - *in progress*



Exact locations of proposed components may vary

Component 7 - CoSANA Model Upgrade and Enhancements

The **C**osumnes-**S**outh **A**merican-**N**orth **A**merican (CoSANA) model is a regional integrated water resources model.

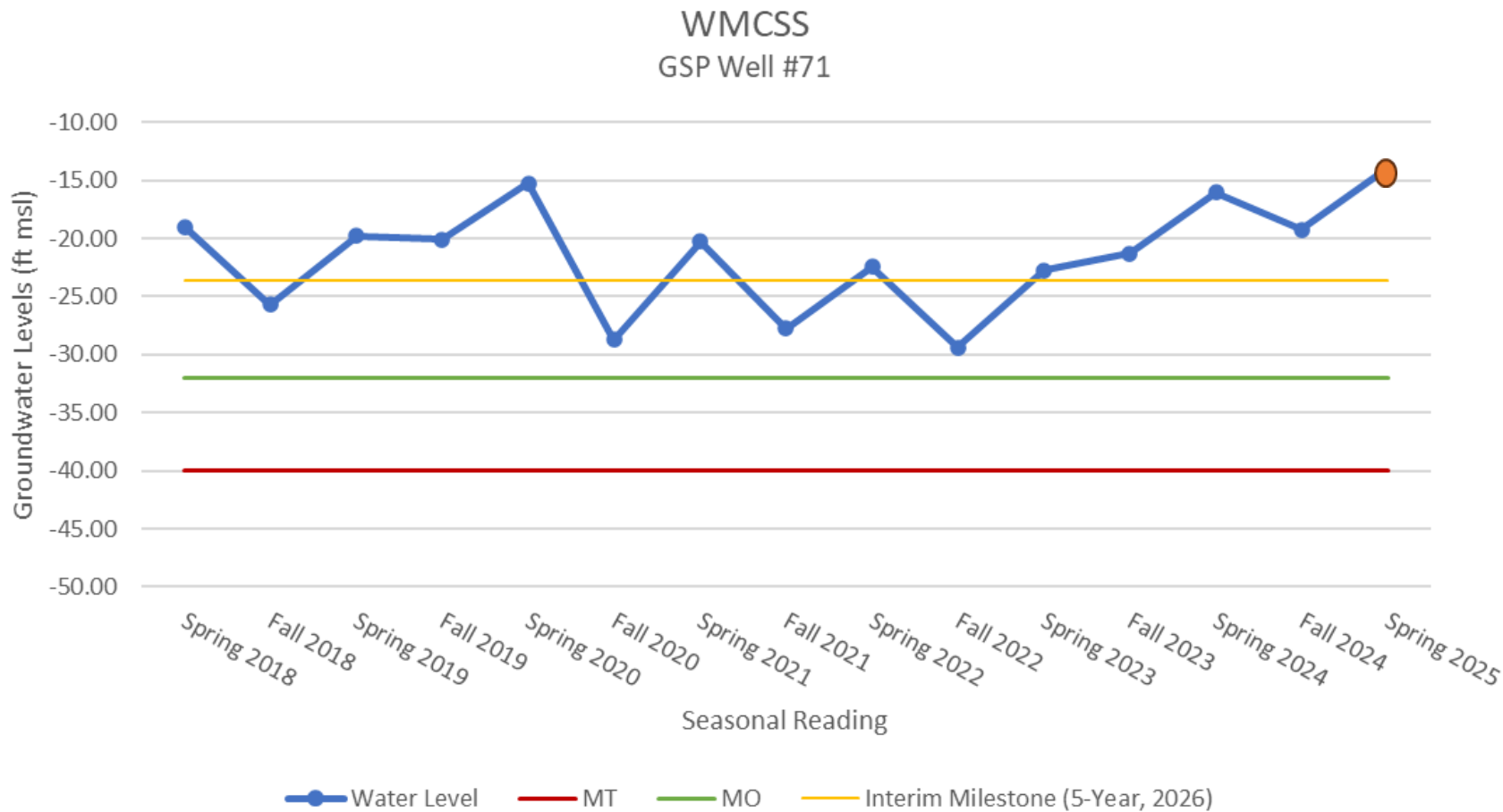
- Time-series data collection, development and model updates:
 - o Climate change hydrology updates
 - o Managed wetlands and riparian vegetation updates
 - o Land use updates
 - o Upgrade model boundary conditions
 - o Upgrade simulation of wastewater collection network
 - o Upgrade return flows data for urban and agricultural water districts and other large parcels not served by water agencies
 - o Update hydrology data, as needed
 - o Improve inflows to tributary streams
 - o Update surface water delivery and stream flow data, as needed
 - o Update municipal groundwater production and remediation extraction rates
- Spatial data collection, analysis and updates:
 - o Update soils data using Soil Survey Geographic Database (SSURGO)
 - o Analyze and utilize available Airborne ElectroMagnetic (AEM) survey data , as needed
 - o Develop and refine stream-stage discharge
 - o Map spatial variation of impervious surfaces
 - o Update spatial location of municipal production and remediation extraction and injection wells

SGA Spring 2025 Hydrographs

WMCSS (Churchill)

● = most recent reading from Spring 2025

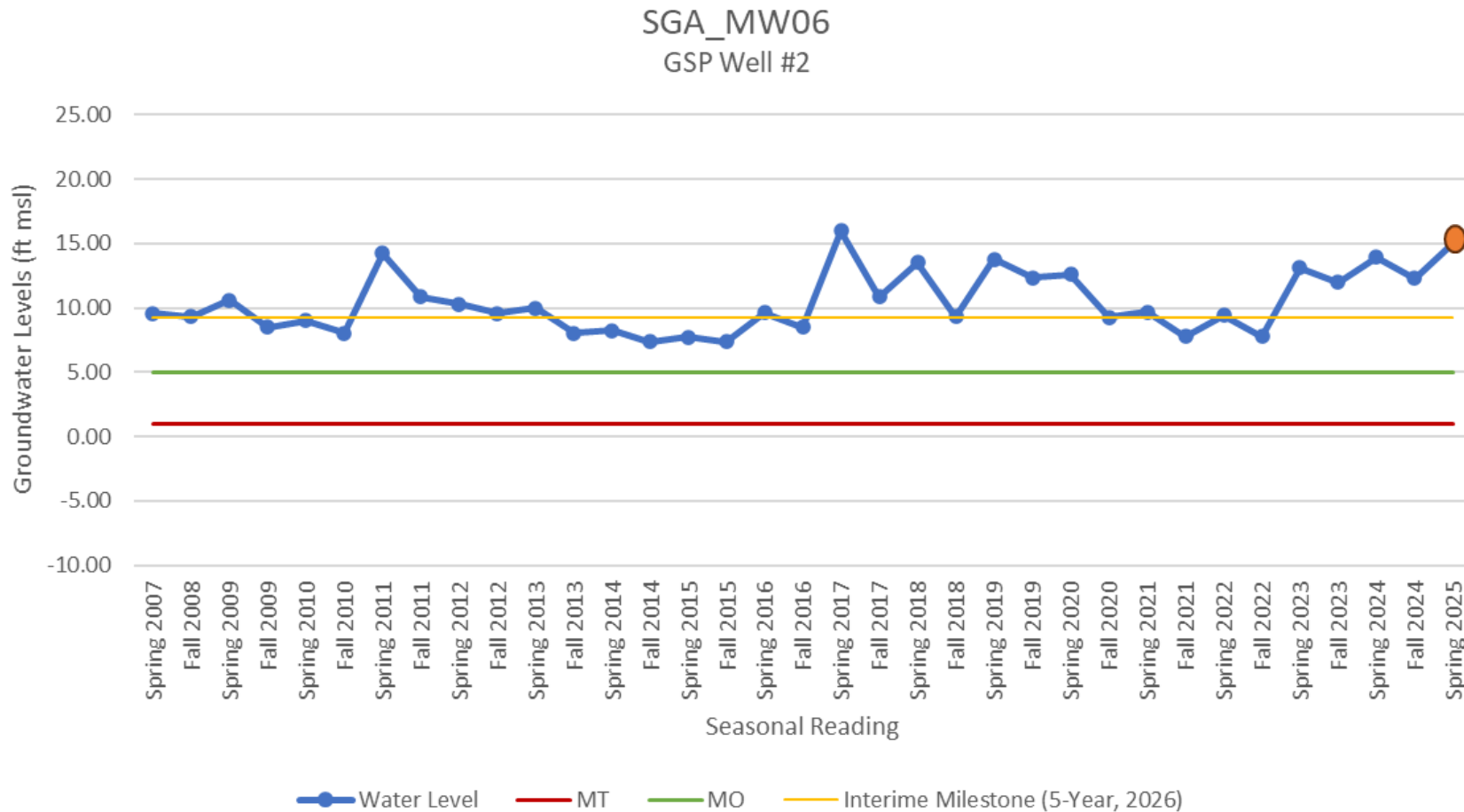
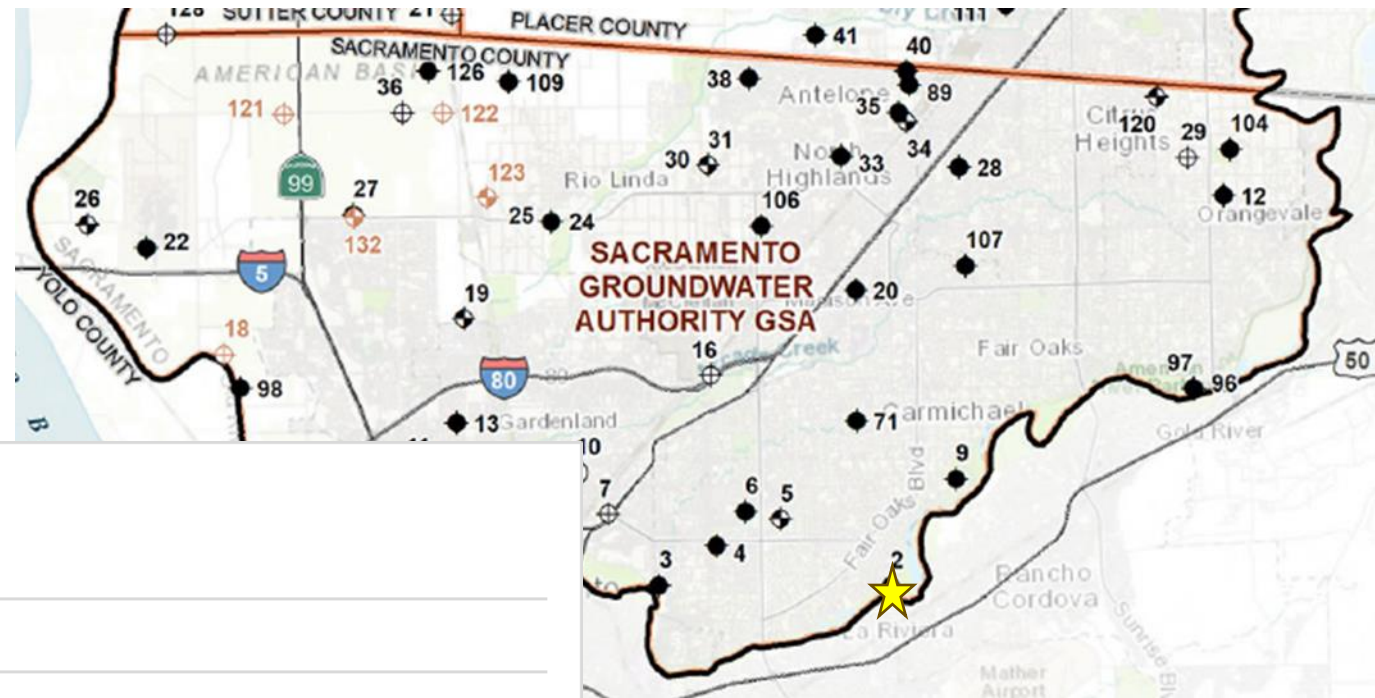
★ = location of well





SGA_MW06

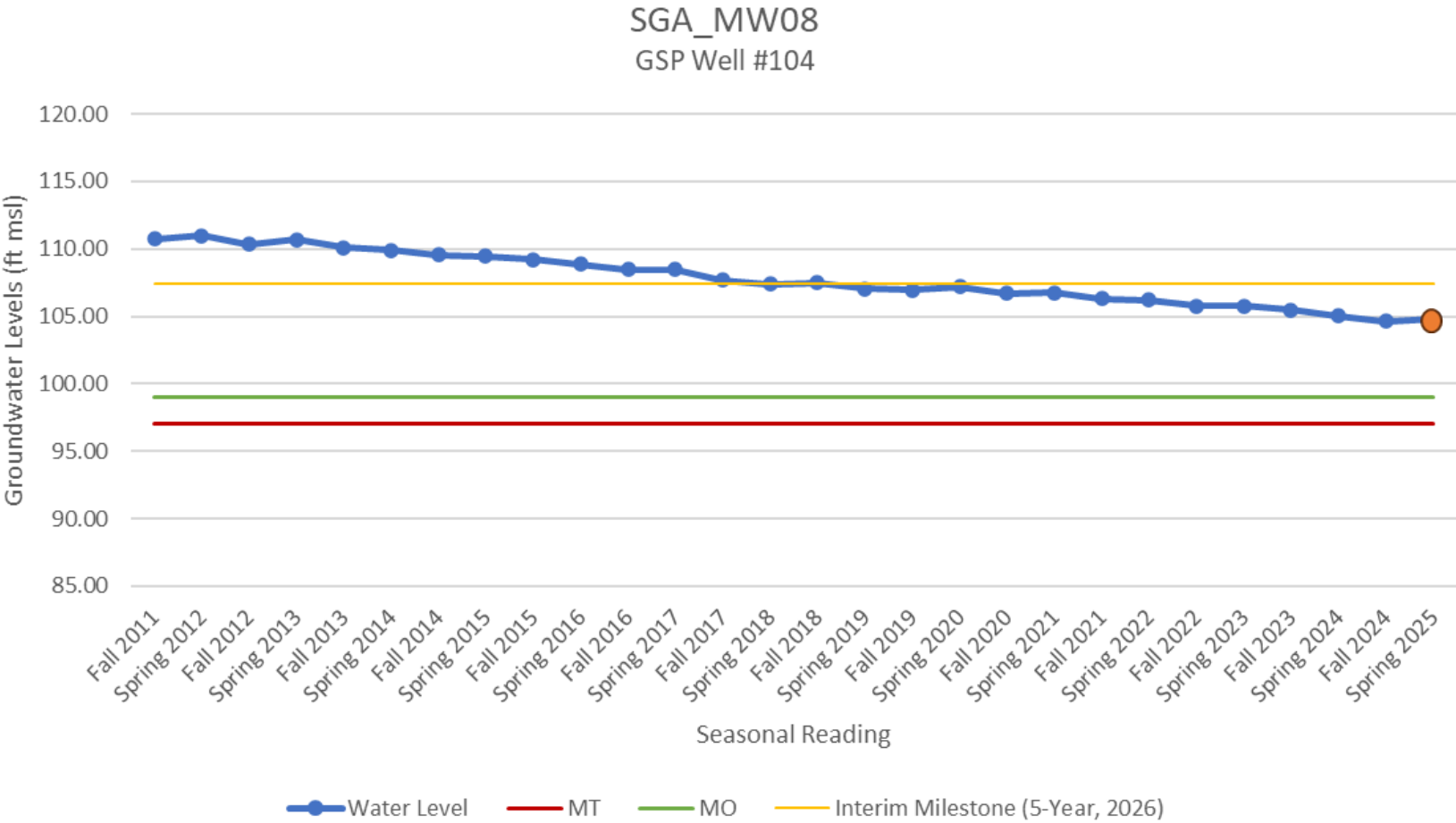
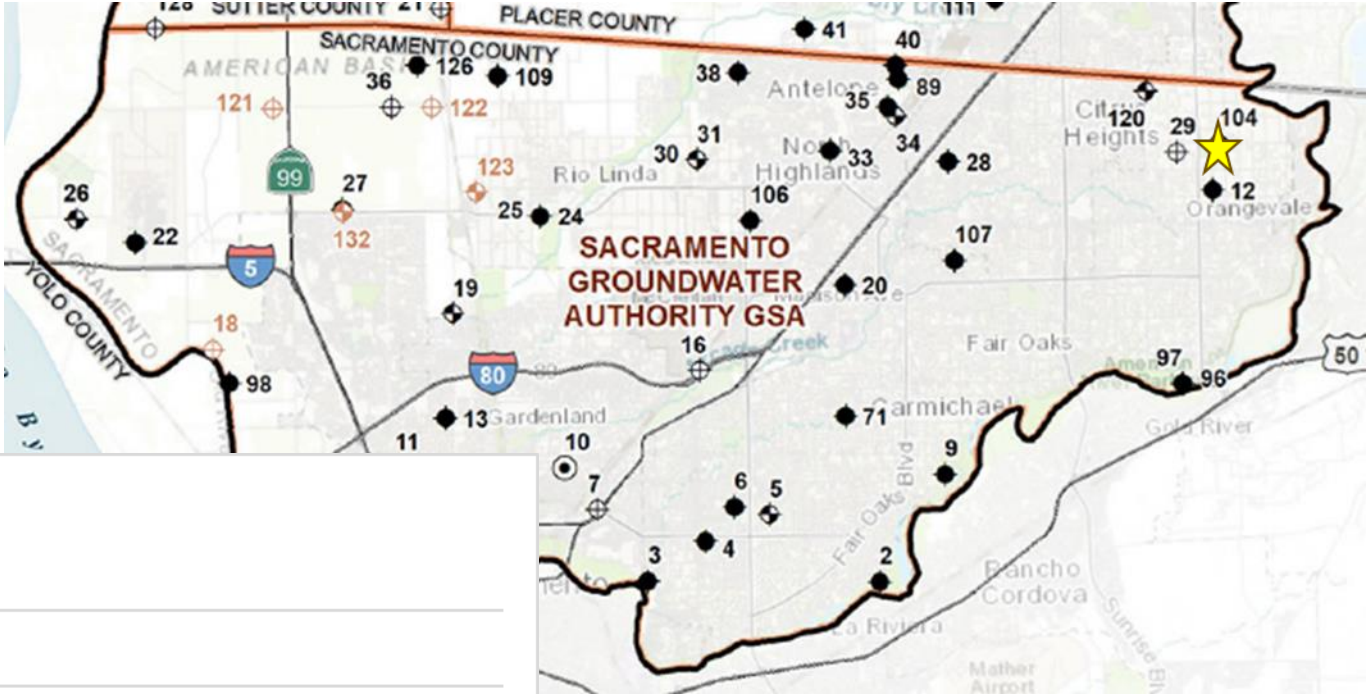
● = most recent reading from Spring 2025

★ = location of well



SGA_MW08

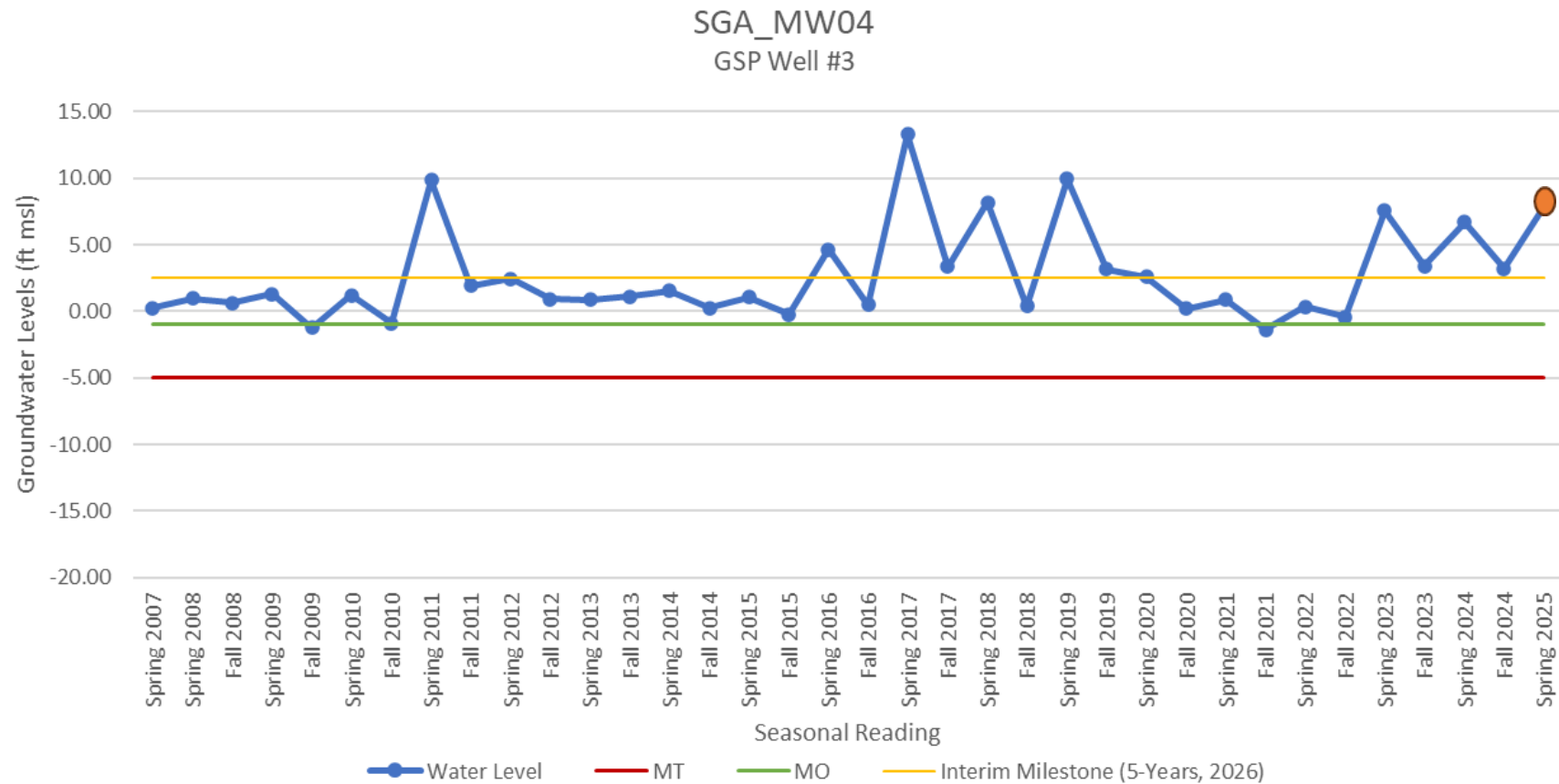
-  = most recent reading from Spring 2025
-  = location of well



SGA_MW04

● = most recent reading from Spring 2025

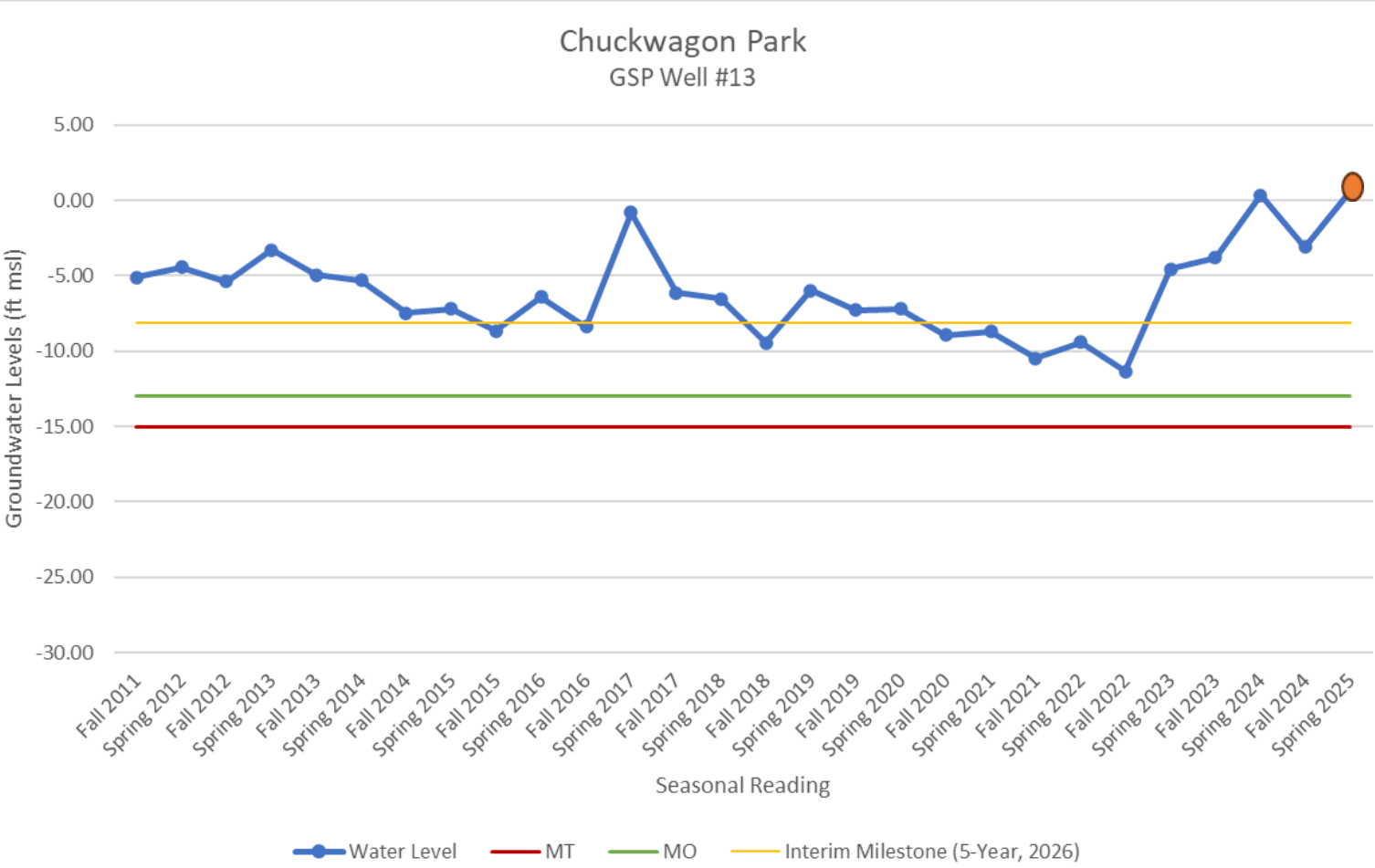
★ = location of well



Chuckwagon Park

● = most recent reading from Spring 2025

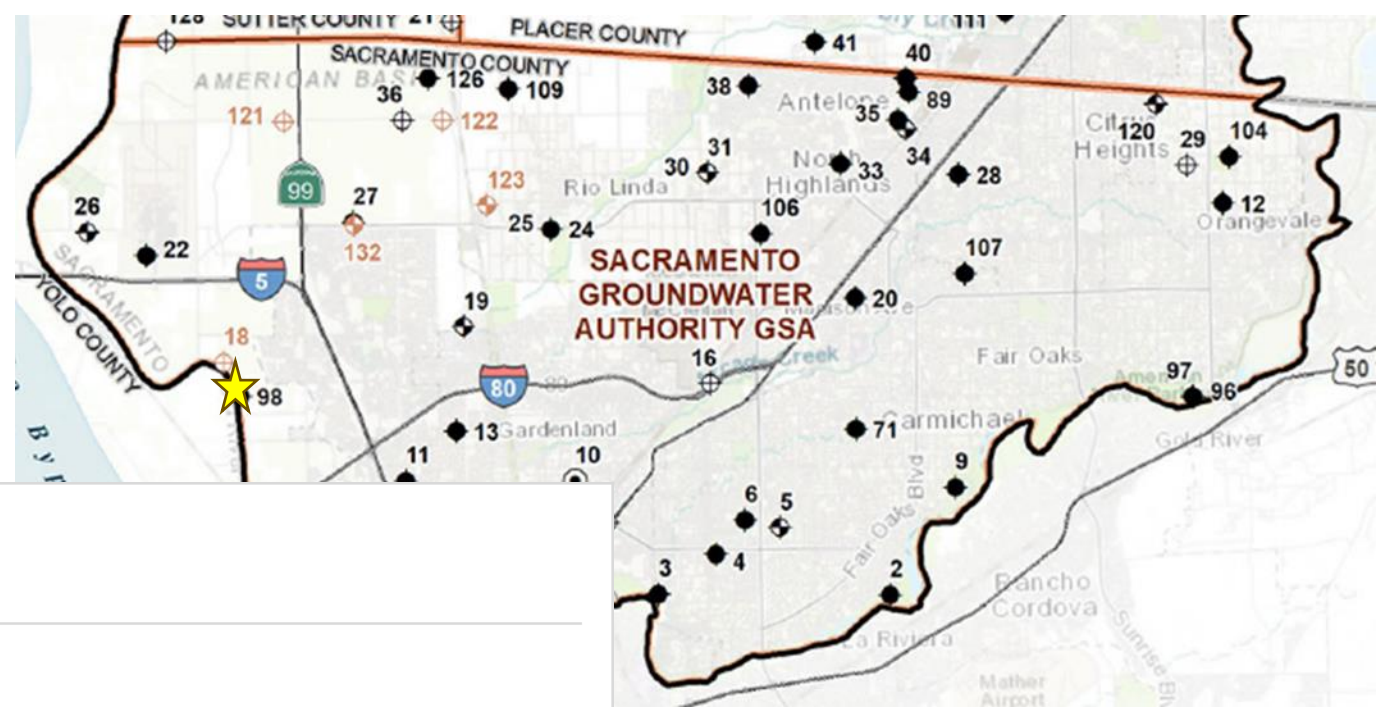
★ = location of well



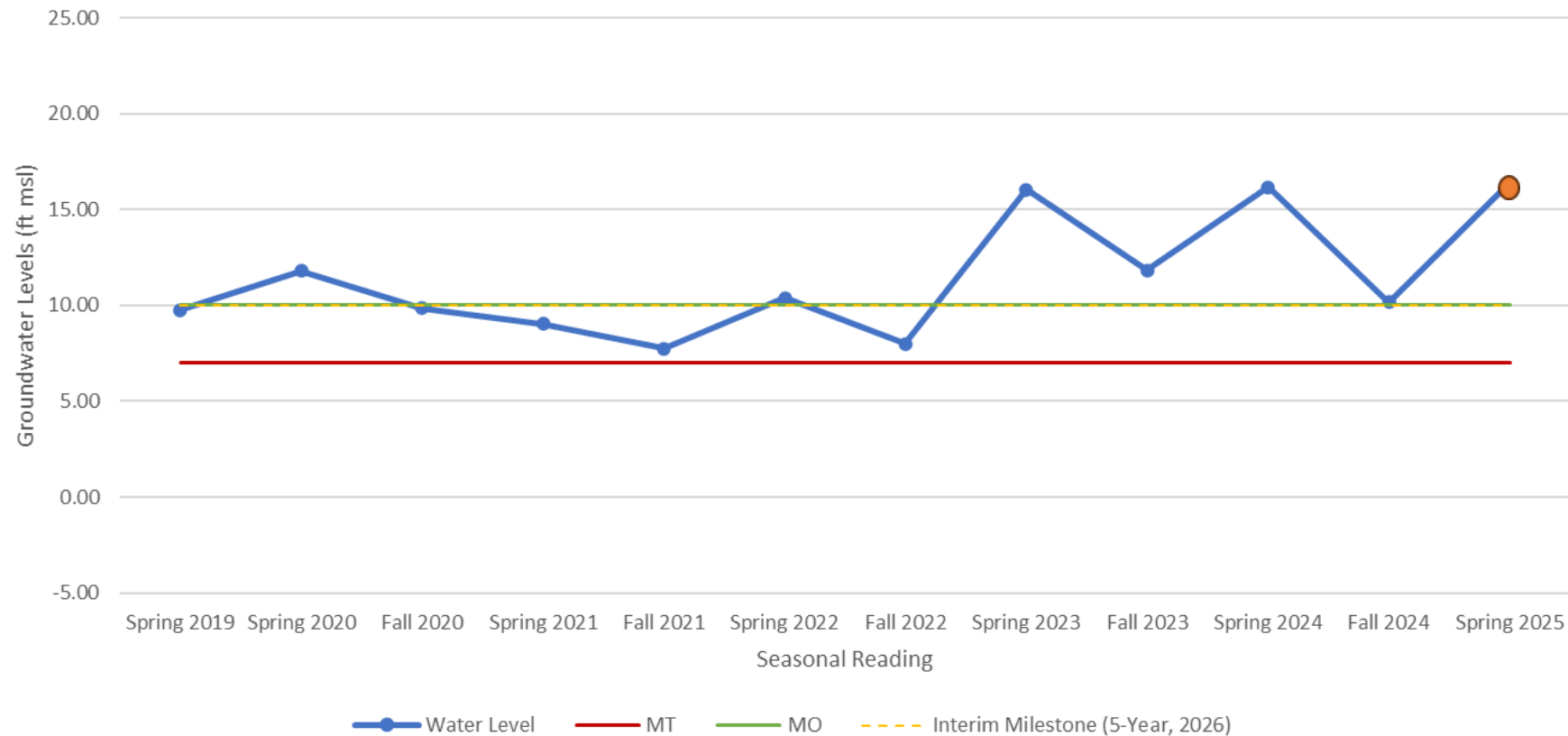
URS1000-700+00C (N28)

● = most recent reading from 9/8/2023

★ = location of well



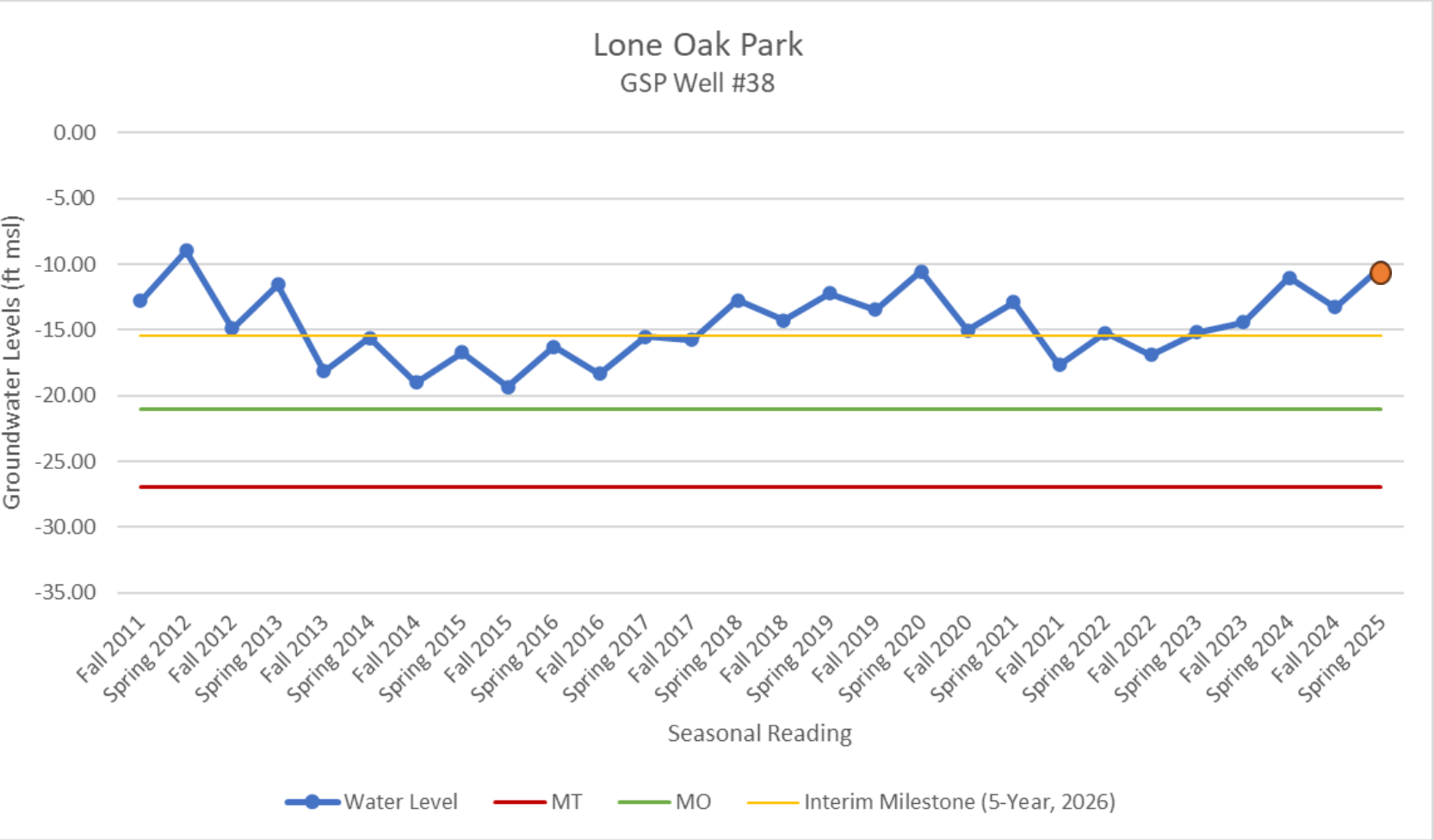
URS71000-700+00C
GSP Well #98



Lone Oak Park

● = most recent reading from Spring 2025

★ = location of well



Topic: Legislative and Regulatory Update
 Type: New Business
 Item For: Information
 Purpose: Routine

SUBMITTED BY:	Ryan Ojakian Manager of Government Relations	PRESENTER:	Ryan Ojakian Manager of Government Relations
---------------	---	------------	---

EXECUTIVE SUMMARY

This is an information item to provide a briefing on important legislative and regulatory updates for the Sacramento Groundwater Authority Board of Directors.

STAFF RECOMMENDED ACTION

None. This item is for information/discussion only.

BACKGROUND

The bill house of origin deadline is June 6, 2025. There are several bills related to groundwater management or quality listed below that have been or will be acted on by that deadline. The bills below are representative of bills that could either set a precedent or directly impact SGA members.

Topic	Bill Number and Author
Groundwater Adjudication	AB 1413 Papan (D- San Mateo) AB 1466 Hart (D- Santa Barbara)
SGMA adjustment	AB 709 Jeff Gonzalez (R- Coachella) AB 929 Connolly (D- San Rafael) AB 1044 Macedo (R- Visalia)
Groundwater Quality	AB 1102 Borner (D- Solano Beach)
Surface Water Groundwater interaction	AB 1425 Arambula (D- Fresno)
Water Quality	AB 794 Gabriel (D- Encino) SB 454 McNerney (D- Stockton) SB 466 Caballero (D- Merced) SB 601 Allen (D- Santa Monica) SB 682 Allen (D- Santa Monica)

The State Budget is in significant flux with a \$12 billion budget deficit. There is a statutory deadline to pass a balanced budget by June 15th. Since a constitutional change passed by the voters in 2012, that restricts legislators' pay if the deadline is not made, the June 15th deadline has been made

every year. However, the budget can always be amended past that deadline and in most years significant changes have been made post deadline. A typical practice has been to “score” a dollar amount for a given category for the June 15th budget with details sorted out after that timeline.

Arguably, the two biggest areas of interest to SGA in the budget debate are how “Cap and Trade” is addressed and how Proposition 4 funds are utilized. The question being will the funds in these areas be used to address the budget deficit or will they go for the purposes originally intended. It is not clear yet when or how those questions will be resolved, but there is an expectation that there will be significant movement before July 18th and the beginning of the Legislative summer recess.

Additionally, there is a long-standing practice of attaching budget trailer bills to the budget process. Sometimes these bills have significant financial implications and other times the bulk of the impact is a policy change. There are several budget trailer bills related to water that the Administration has proposed. Specifically, there is one that extends the DWR periodic review of groundwater basins (bulletin 118) from every 5 years to every 10 years. This has ramifications for on-going SGMA implementation but can largely be viewed as a cost savings measure. The specific language of this proposed trailer bill is attached to this report.

ATTACHMENTS

Attachment 1 – Trailer Bill Reduce Groundwater Bulletin Frequency

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 12924 of the Water Code is amended to read:

12924. (a) The department, in conjunction with other public agencies, shall conduct an investigation of the state's groundwater basins. The department shall identify the state's groundwater basins on the basis of geological and hydrological conditions and consideration of political boundary lines whenever practical. The department shall also investigate existing general patterns of groundwater extraction and groundwater recharge within those basins to the extent necessary to identify basins that are subject to critical conditions of overdraft.

(b) The department may revise the boundaries of groundwater basins identified in subdivision (a) based on its own investigations or information provided by others.

(c) The Notwithstanding Section 10231.5 of the Government Code, the department shall report its findings to the Governor and the Legislature not later than January 1, 2012, and thereafter and, in compliance with Section 9795 of the Government Code, the Legislature in years ending in 5 or 0. five.



Topic: Executive Directors' Report
Type: New Business
Item For: Information
Purpose: General

SUBMITTED BY: Jim Peifer
Executive Director

PRESENTER: Jim Peifer
Executive Director

EXECUTIVE SUMMARY

This is an information item for the Executive Director to provide a briefing on important activities, reports, communications, advocacy, and other updates for the Sacramento Groundwater Authority Board of Directors.

STAFF RECOMMENDED ACTION

None. This item is for information/discussion only.

BACKGROUND

This agenda item is a standing item to provide an opportunity for the Executive Director to report to the Executive Committee on important activities, reports, communications, advocacy, and other updates.

Grandpark Southwest Specific Plan - The County of Sacramento has given Notice of Preparation of a Draft Environmental Impact Report for the Grandpark Southwest Specific Plan. You can find the notice here: https://planning.saccounty.gov/PlansandProjectsIn-Progress/Documents/Grandpark/GrandPark%20Southwest/GPSS%20NOP_5-15-25.pdf

ATTACHMENTS

Attachment 1- Financial reports

Attachment 2 – SGA Grandpark Letter December 4, 2023

SACRAMENTO GROUNDWATER AUTH.

Income Statement

Year-to-Date Performance, March 2025 - 1 month back, Consolidated by department

	<i>9 Months Ended March 31, 2025</i>	<i>Annual Budget</i>	<i>Unused</i>	<i>% Used</i>
REVENUES				
Groundwater Fees Revenue	933,236.00	541,714.00	(391,522.00)	172.3 %
Base Administrative Fee	0.00	391,522.00	391,522.00	
NASB SGMA Grant Revenue	353,107.90	1,624,134.00	1,271,026.10	21.7 %
NASB SGMA Grant Revenue - PT	198,229.12	0.00	(198,229.12)	
Holiday Social	1,511.73	0.00	(1,511.73)	
Cash Discount	598.38	0.00	(598.38)	
Interest on S/T Investments	59,562.91	35,000.00	(24,562.91)	170.2 %
TOTAL REVENUES	1,546,246.04	2,592,370.00	1,046,123.96	59.6 %
Total REVENUE	1,546,246.04	2,592,370.00	1,046,123.96	59.6 %
GROSS PROFIT	1,546,246.04	2,592,370.00	1,046,123.96	59.6 %
OPERATING EXPENDITURES				
Staff Expenses				
General Salaries	435,938.21	583,255.00	147,316.79	74.7 %
Employee Benefits - Health	55,068.97	206,741.00	151,672.03	26.6 %
Employee Benefits - Dental	5,135.50	0.00	(5,135.50)	
Employee Benefits - PERS	46,759.32	0.00	(46,759.32)	
Employee Benefits - Vision	818.86	0.00	(818.86)	
Employee Benefits - Disability	2,699.74	0.00	(2,699.74)	
PERS Side Fund Payment	0.00	52,000.00	52,000.00	
PERS annual lump sum payment	7,502.00	0.00	(7,502.00)	
Worker's Comp Insurance	2,188.57	0.00	(2,188.57)	
Payroll Taxes	27,908.28	46,660.00	18,751.72	59.8 %
Travel / Meals	12,809.53	20,000.00	7,190.47	64.0 %
Professional Development	1,230.00	6,000.00	4,770.00	20.5 %
TOTAL Staff Expenses	598,058.98	914,656.00	316,597.02	65.4 %
Office Expenses				
Rent	30,857.75	37,500.00	6,642.25	82.3 %
Storage Rental	124.00	0.00	(124.00)	
Insurance - Auto & Gen Liab.	35,215.98	26,000.00	(9,215.98)	135.4 %
Insurance - Property	1,517.67	0.00	(1,517.67)	
Office Maintenance	742.50	1,100.00	357.50	67.5 %
Telephone	546.48	5,000.00	4,453.52	10.9 %

	<i>9 Months Ended March 31, 2025</i>	<i>Annual Budget</i>	<i>Unused</i>	<i>% Used</i>
Dues and Subscription	5,218.00	11,500.00	6,282.00	45.4 %
Printing & Supplies	543.89	0.00	(543.89)	
Printing - General	389.06	10,000.00	9,610.94	3.9 %
Office Equipment	1,070.16	2,500.00	1,429.84	42.8 %
Postage	591.20	2,100.00	1,508.80	28.2 %
Postage - Equipment	682.41	0.00	(682.41)	
Meetings	644.38	3,000.00	2,355.62	21.5 %
Events	4,298.86	0.00	(4,298.86)	
Events	534.98	12,000.00	11,465.02	4.5 %
Computer Equipment & Supplies	86.99	0.00	(86.99)	
Computer Software	2,590.58	3,500.00	909.42	74.0 %
Computer Support & Maintenance	10,930.50	17,500.00	6,569.50	62.5 %
TOTAL Office Expenses	96,585.39	131,700.00	35,114.61	73.3 %
Professional Fees				
ADP / Banking Charges	753.76	1,800.00	1,046.24	41.9 %
Banking Fees	789.54	0.00	(789.54)	
Audit Fees	16,450.00	17,500.00	1,050.00	94.0 %
Legal Fees	34,157.00	50,000.00	15,843.00	68.3 %
GASB 68 reporting fee	770.00	0.00	(770.00)	
Consulting Expenses	2,500.00	27,000.00	24,500.00	9.3 %
Actuarial Services	1,050.00	0.00	(1,050.00)	
Human Resources Services	3,066.45	0.00	(3,066.45)	
TOTAL Professional Fees	59,536.75	96,300.00	36,763.25	61.8 %
Consulting - Program Management				
NASB SGMA Grant Expenses	661,812.33	1,462,047.00	800,234.67	45.3 %
NASB SGMA Grant - PT	111,137.75	0.00	(111,137.75)	
TOTAL Consulting Program Management	772,950.08	1,462,047.00	689,096.92	52.9 %
Special Projects Expenses				
2022 GSP Imp - Consulting	6,035.92	0.00	(6,035.92)	
TOTAL Special Projects Expenses	6,035.92	0.00	(6,035.92)	
TOTAL OPERATING EXPENDITURES	1,533,167.12	2,604,703.00	1,071,535.88	58.9 %
OPERATING INCOME (LOSS)	13,078.92	(12,333.00)	(25,411.92)	-106.0 %
NET OPERATING INCOME (LOSS)	13,078.92	(12,333.00)	(25,411.92)	-106.0 %
NET INCOME (LOSS) OF PROGRAM	13,078.92	(12,333.00)	(25,411.92)	-106.0 %



Per California Government Code 6505.5 (e), SGA reports the following unaudited information:

For the period ending March 31, 2025

Cash in checking account:	\$	(11,326)
LAIF Balance:	\$	1,512,844

For the period of January 1 to March 31, 2025

Total cash receipts for the period:	\$	245,694
-------------------------------------	----	---------

Total cash disbursements for the period:	\$	612,852
--	----	---------

California State Treasurer
Fiona Ma, CPA



Local Agency Investment Fund
P.O. Box 942809
Sacramento, CA 94209-0001
(916) 653-3001

April 24, 2025

[LAIF Home](#)
[PMIA Average Monthly Yields](#)

SACRAMENTO GROUNDWATER AUTHORITY

FINANCE MANAGER
2295 GATEWAY OAKS DRIVE
SACRAMENTO, CA 95833

[Tran Type Definitions](#)

Account Number: 90-34-020

March 2025 Statement

Effective Date	Transaction Date	Tran Type	Confirm Number	Web Confirm Number	Authorized Caller	Amount
3/6/2025	3/5/2025	RW	1769265	1729828	THOMAS HOFFART	-150,000.00

Account Summary

Total Deposit:	0.00	Beginning Balance:	1,662,843.95
Total Withdrawal:	-150,000.00	Ending Balance:	1,512,843.95



Sacramento Groundwater Authority
*Managing Groundwater Resources
in Northern Sacramento County*

2295 Gateway Oaks Drive
Suite 100
Sacramento, CA 95833

Tel: (916) 967-7692
Fax: (916) 967-7322
www.sgah2o.org

December 4, 2023

MacKay & Soms
Attention: Mr. Ken Giberson
1025 Creekside Ridge Dr. #150
Roseville CA 95678

Submitted via email kgiberson@msce.com

Re: Grandpark Development Project – Water Supply Planning

Dear Mr. Giberson,

The Sacramento Groundwater Authority (SGA) appreciates the overview you provided of the Grandpark development project (Grandpark) held at the SGA offices on August 28, 2023, and the follow up discussion on October 24, 2023. This overview provided SGA an opportunity to hear directly from Grandpark's consulting team about the efforts that have been undertaken to plan and analyze data and information to obtain a future water supply for Grandpark. During these meetings, SGA was introduced to the consulting team's work related to the topics of groundwater modeling, land use planning (based on the Grandpark Specific Plan) and preliminary water system design. We understand that Grandpark's preferred water supply strategy will utilize groundwater to initially supply project demands. Based on your presentation, it is estimated that 67 percent of Grandpark will develop before surface water is available. After surface water is available, the customers in the development will be served approximately 80 percent surface water and the balance will be groundwater on a long term basis.

At your request, we are providing you this letter with our feedback. Below are questions and information that we believe will be helpful to learn more about Grandpark and the potential affects to the North American groundwater subbasin (NASb) and specifically how Grandpark would be developed consistent with the sustainability of our groundwater supplies. The SGA is one of five Groundwater Sustainability Agencies (GSAs) that overlie the NASb and have responsibility to maintain sustainable groundwater conditions and the sustainable yield of the basin consistent with the requirements identified in the Sustainable Groundwater Management Act (SGMA) and NASb Groundwater Sustainability Plan (GSP). Pursuant to our regional GSP implementation agreement, each GSA is responsible for "Undesirable Results" caused by their individual actions, including land use decisions. For this reason, please see the following questions regarding Grandpark.

1. Based on our discussion and information presented during our meetings, there are multiple possible water supply development scenarios that illustrate Grandpark will rely initially and for approximately the next 20 years solely on groundwater supply from NASb. Most scenarios show a source of surface water supply replacing a portion of, if

California American Water
Carmichael Water District
Citrus Heights Water District
City of Folsom
City of Sacramento
County of Sacramento
Del Paso Manor Water District
Fair Oaks Water District
Golden State Water Company
Natomas Central Mutual Water Company
Orange Vale Water Company
Rio Linda / Elverta Community Water District
Sacramento Suburban Water District
San Juan Water District
Agricultural and Self-Supplied Representative

not most of the demands initially met with groundwater. Please provide analysis and information as to how these scenarios, including the scenario where groundwater supply meets demand at Grandpark buildout without surface water will be addressed. We will be interested in seeing an analysis which demonstrates that Grandpark development without surface water availability in addition to each scenario will be consistent with the NASb GSP and will not create any impacts or limit the ability for the NASb to be operated in accordance with the GSP and without undue burden on the remaining sustainable yield of the basin.

2. Related to item 1, what financial resources and assurance does Grandpark have that surface water supplies will be provided to meet demands for this project? Given that all residences within the proposed project will rely upon surface water as well as groundwater, the funding plan should include equal participation in surface water investment through all phases of development. In addition, what if any conjunctive water management strategies are being planned to limit the use of groundwater? In addition, do the scenarios presented meet the conjunctive use requirements of the conservation element of the Sacramento County General Plan?
3. Although SGMA provides GSAs with certain powers and authorities as it relates to groundwater management, the County of Sacramento is the public agency that approves new development. Any development approval should be in close coordination with the appropriate water purveyor since the water purveyor is the entity that would be subject to enforcement should the groundwater basin experience negative consequences from the Grandpark development.

SGA appreciates your team's willingness to engage with us and discuss this project. If you have any questions or would like to discuss anything presented in this letter further, please contact Trevor Joseph of our office at (916) 990-3035 or tjoseph@rwah2o.org.

Sincerely



James Peifer
Executive Director

Cc: Mr. Trevor Joseph (SGA - Manager of Technical Services)
Mr. Matt Satow (County of Sacramento Department of Water Resources)
Ms. Kerry Schmitz, (County of Sacramento Department of Water Resources)
Mr. Michael Grinstead, (County of Sacramento Department of Water Resources)
Mr. Todd Smith (County of Sacramento Department of Community Development)
Mr. Brett Ewert (City of Sacramento Department of Utilities)
NASb Groundwater Sustainability Agencies (GSAs)
Ms. Kimberly Reese (Reclamation District 1001)
Mr. Hayden Cornwell (South Sutter Water District)
Mr. Guadalupe Rivera (Sutter County)
Ms. Christina Hanson (Placer County)

Topic: Board Directors' Comments
Type: New Business
Item For: Information
Purpose: Routine

SUBMITTED BY: Jim Peifer
Executive Director

PRESENTER: Chris Hunley, SGA Chair

EXECUTIVE SUMMARY

This is an information item to provide an opportunity for the Sacramento Groundwater Authority Board of Directors to report on any updates from their agency, comments, request future agenda items, recommendations, and questions.

STAFF RECOMMENDED ACTION

None. This item is for information only.

BACKGROUND

This agenda item is a standing item to provide an opportunity to report on any updates from their agency, comments, request future agenda items, recommendations, and questions.