

DRAFT Special Meeting of the Northern Delta-Mendota Region Management Committee

Wednesday, July 5, 2023, 2:00 PM

Patterson City Council Chambers, 1 Plaza Circle, Patterson, CA

Northern DM Region Management Committee Members and Alternates Present

Adam Scheuber, Alternate – Del Puerto Water District
Vince Lucchesi, Member – Patterson Irrigation District
Maria Encinas, Member – City of Patterson
Bobby Pierce, Member – West Stanislaus Irrigation District
Lacey McBride, Member – Merced County
Christy McKinnon, Member – Stanislaus County

San Luis & Delta-Mendota Water Authority Representatives Present

John Brodie

Others Present via Zoom

Scott Petersen – San Luis & Delta-Mendota Water Authority
Anona Dutton – EKI Environment & Water, Inc.
Meredith Durant – EKI Environment & Water, Inc.
Leslie Dumas – Woodard & Curran

1. Call to Order/Roll Call

Bobby Pierce/West Stanislaus Irrigation District called the meeting to order at 2:03 PM.

2. Opportunity for Public Comment

No public comment was provided.

3. Committee to Review and Take Action on Consent Calendar, Pierce/Brodie

- a. Minutes for the May 25, 2023 Joint Meeting of the Northern and Central Delta-Mendota Region Management Committees and Central Delta-Mendota GSA
- b. Minutes for the June 14, 2023 Meeting of the Northern Delta-Mendota Region Management Committee
- c. Budget-to-Actual Report (through April 2023)

An updated Budget-to-Actual Report was not available for the meeting. Vince Lucchesi/Patterson Irrigation District provided the motion to approve Items 3a and 3b of the Consent Calendar and Maria Encinas/City of Patterson seconded. The motion was passed unanimously by those present.

4. Committee to Discuss Summary of the SGMA Agenda Item from the June 21, 2023 State Water Resources Control Board Meeting, Brodie

John Brodie/SLDMWA noted the Water Board Meeting Summary Memo prepared by Lauren Layne and included in the packet for this meeting. At this time, the Water Board has tentatively scheduled a probationary hearing for the Delta-Mendota Subbasin in September 2024. The Chowchilla Subbasin, submitted a revised GSP, so that may modify the Water Board's schedule

for conducting probationary hearings. Vince Lucchesi observed that other subbasins with current impacts such as subsidence and loss of domestic wells have been prioritized by DWR.

5. Report of the Northern Delta-Mendota Region Representative to the Coordination Committee, Lucchesi

Vince Lucchesi reviewed discussions during recent Coordination Committee meetings. As noted in the draft Memorandum of Agreement (MOA), a cost allocation based upon participation is being considered by the Committee. Under the existing Coordination Agreement, the coordinated expenditures are allocated with a 1/6 share to each of the 6 GSP groups. Each previous participant is evaluating its future participation and associated cost allocation. John Brodie noted that, depending upon the various entity decisions, the future Coordination Committee may have between 5 and 9 members, with costs allocated equally among the members. Maria Encinas noted a document recently issued by the Nature Conservancy which concluded that across the State, GSAs formed under SGMA tend to be comprised of irrigation districts and water districts, with relatively less participation by municipalities. There was some discussion at a recent Subbasin Coordination Committee meeting about municipalities within the Subbasin potentially sharing a seat on the future Coordination Committee.

Vince Lucchesi also noted that in response to comments from DWR, the Subbasin is revising the sustainable management criteria (SMC) identified in the GSP for subsidence to be in the form of an annual rate, not a total amount.

6. Review of the Existing Northern Delta-Mendota SGMA Services Activity Agreement, Pierce/Brodie

John Brodie noted the existing Northern Delta-Mendota SGMA Services Activity Agreement and the two Amendments are included in the meeting packet.

7. Review of the Existing Northern Management Committee Cost Share, Pierce/Brodie

Bobby Pierce and John Brodie noted that based upon the current Coordination Committee cost allocation formula and consultant proposal for revision of the GSP at an estimated budget of \$1.5 million, the cost to the Northern Management Committee could be 1/8 of \$1.5 million or \$187,500. The members noted that over the past three years, the Northern Management Committee has included \$100K in its annual budget to develop a reserve dedicated to preparation of the 5-Year GSP Update. John Brodie reported that the current Northern Management Committee reserve balance in the SLDMWA Fund 64 is \$300K, with a reserve balance of \$400K expected at the beginning of the next fiscal year (March 2024).

8. Committee to Consider Northern Delta-Mendota Region Representation on Subbasin Coordination Committee Under New Memorandum of Agreement and Confirm Existing Northern Delta-Mendota Region Management Committee Cost-Share (Fund 64), Brodie

In response to a request for guidance from Vince Lucchesi as the representative, the Committee members expressed their interest in continuing participation in the Coordination Committee. The new MOA and cost-share will become effective when the new GSP is adopted by the 23 GSAs. It was noted that preparation of future Annual Reports is not included in the Fund 63 budget augmentation request (Item 9). The number of future Coordination Committee members, and thus the associated per seat cost-share is not yet known.

Vince Lucchesi provided the motion for the Northern Region Management Committee to direct its representative on the Subbasin Coordination Committee to approve the new MOA and cost-share plan, with the option to reconsider if the Northern Region cost-share is projected to be

larger than 1/6. Lacey McBride/Merced County seconded. The motion was passed unanimously by those present.

9. **Committee to Consider Directing the Northern Delta-Mendota Representative to the Subbasin Coordination Committee to Recommend Approval of a Consultant to Prepare a Single GSP for the Delta-Mendota-Subbasin, and Approve a \$1.5 Million Budget Augmentation to the Coordinated Budget (Fund 63) to Fund Consultant's Work, Brodie**

John Brodie reported that only one consultant proposal was received in response to the Request for Proposal issued by the Subbasin Coordination Committee. The Committee discussed options for payment of its share of the GSP revision cost, noting that the reserve funds have been accumulated in Fund 64, and the GSP revision costs will be expended from Fund 63 (Coordinated). The Committee members expressed interest in using the accumulated reserve funds for their share of the GSP costs, and continuing to reserve funds for future preparation of a 5-year GSP Update.

Vince Lucchesi provided the motion for the Northern Region Management Committee to direct its representative to the Coordination Committee to approve the consultant proposal and approve a \$1.5 Million augmentation to Fund 63. Maria Encinas/City of Patterson seconded. The motion was passed unanimously by those present.

10. **Committee to Discuss 2023 GSP Implementation**
- a. **GSP Implementation Tracking Tool Progress, Dutton**
 - b. **Summer 2023 Water Quality Sampling, Dutton**

Anona Dutton/EKI noted that the GSAs are now both implementing the current GSP, while developing an updated single GSP for the Subbasin. She requested that the GSAs collect samples from their representative monitoring wells for analysis of both total dissolved solids and nitrate. This represents a change from the monitoring program proposed in the 2022 Amended GSP, in order to address concerns from the Department of Water Resources.

11. **Committee to Discuss Potential Additional Funding Opportunities**

John Brodie noted that an updated list of Potential Funding Opportunities was inadvertently omitted from the meeting packet, but the updated list is available to in-person meeting participants.

12. **Next Steps**

- SLDMWA will revise its internal schedule for future preparation of Budget-to-Actual reports to accommodate the Northern Region Management Committee meeting schedule.
- SLDMWA will evaluate potential mechanisms for use/transfer of previously reserved funds in Fund 64.
- SLDMWA will circulate the updated draft Memorandum of Agreement.
- This summer, the GSAs should plan to sample their assigned representative monitoring wells for total dissolved solids and nitrate.

13. **Reports Pursuant to Government Code 54954.2(a)(3)**

No topics were discussed under this item.

14. Future Meetings

a. Northern Region Management Committee

- i. Wednesday, August 2, 2023 at 2:00 PM at Patterson City Hall
- ii. Wednesday, September 6, 2023 at 2:00 PM at Patterson City Hall
- iii. Future meetings at 2:00 PM on first Wednesday of each month

b. Delta-Mendota Subbasin Coordination Committee

- i. Monday, July 10, 2023 at 1:00 PM – Grassland Water District
- ii. Monday, July 24, 2023 at 1:00 PM
- iii. Monday, August 14, 2023 at 1:00 PM
- iv. Additional Coordination Committee meetings may be scheduled

15. ADJOURNMENT

Vince Lucchesi adjourned the meeting at 3:10 PM.

SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
MARCH 1, 2023 - FEBRUARY 29, 2024
SUSTAINABLE GROUNDWATER MANAGEMENT ACT SERVICES AGREEMENT
ACTIVITY AGREEMENTS BUDGET TO ACTUAL
NORTHERN DELTA-MENDOTA REGION (FUND 64)

Report Period 3/1/23 - 5/31/23
SGMA 7/27/23

EXPENDITURES	Annual Budget	Paid/ Expense	Amount Remaining	% of Amt Remaining	Expenses Through
<u>Legal:</u>					
Baker Manock & Jensen	\$ 25,800	\$ 7,459	\$ 18,341	71%	4/4/23
<u>Other Professional Services:</u>					
Contracts	\$ 419,830		\$ 419,830	100%	
<u>Other:</u>					
Executive Director	\$ 394	\$ -	\$ 394	100%	
General Counsel	\$ 5,652	\$ -	\$ 5,652	100%	
Water Policy Director	\$ 8,236	\$ 675	\$ 7,561	92%	5/31/23
Water Resources Program Manager	\$ 70,200	\$ 9,673	\$ 60,527	86%	5/31/23
Accounting	\$ 2,808	\$ 49	\$ 2,759	98%	5/31/23
Hydrotech 3	\$ 23,712	\$ 3,441	\$ 20,271	85%	5/31/23
License & Continuing Education	\$ 250		\$ 250	100%	
Conferences & Training	\$ 1,250		\$ 1,250	100%	
Travel/Mileage	\$ 2,500		\$ 2,500	100%	
Group Meetings	\$ 500		\$ 500	100%	
Telephone	\$ 1,250		\$ 1,250	100%	
Total Expenditures	\$ 562,382	\$ 21,297	\$ 541,085	96%	

SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
MARCH 1, 2023 - FEBRUARY 29, 2024
SUSTAINABLE GROUNDWATER MANAGEMENT ACT SERVICES AGREEMENT
ACTIVITY AGREEMENTS BUDGET TO ACTUAL
CENTRAL DELTA-MENDOTA REGION (FUND 65)

Report Period 3/1/23 - 5/31/23

SGMA 7/27/23

EXPENDITURES	Annual Budget	Paid/ Expense	Amount Remaining	% of Amt Remaining	Expenses Through
<u>Legal:</u>					
Baker Manock & Jensen	\$ 25,800	\$ 9,661	\$ 16,139	63%	
<u>Other Professional Services:</u>					
Contracts	\$ 419,830		\$ 419,830	100%	
<u>Other:</u>					
Executive Director	\$ 394	\$ -	\$ 394	100%	
General Counsel	\$ 5,652	\$ -	\$ 5,652	100%	
Water Policy Director	\$ 8,236	\$ 675	\$ 7,561	92%	4/30/23
Water Resources Program Manager	\$ 70,200	\$ 10,065	\$ 60,135	86%	4/30/23
Accounting	\$ 2,808	\$ 49	\$ 2,759	98%	3/31/23
Hydrotech 3.	\$ 23,712	\$ 3,441	\$ 20,271	85%	4/30/23
License & Continuing Education	\$ 250		\$ 250	100%	
Conferences & Training	\$ 1,250		\$ 1,250	100%	
Travel/Mileage	\$ 2,500		\$ 2,500	100%	
Group Meetings	\$ 500		\$ 500	100%	
Telephone	\$ 1,250		\$ 1,250	100%	
Total Expenditures	\$ 562,382	\$ 23,891	\$ 538,491	96%	

SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
MARCH 1, 2023 - FEBRUARY 29, 2024
SGMA ACTIVITIES - COORDINATED COST-SHARE AGREEMENT
ACTIVITY AGREEMENTS BUDGET TO ACTUAL
COORDINATED (FUND 63)

Report Period 3/1/23 - 5/31/23

Coordination Meeting 7/10/23

EXPENDITURES	Annual Budget	Paid/ Expense	Amount Remaining	% of Amt Remaining	Expenses Through
<u>Legal:</u>					
Baker Manock & Jensen	\$ 30,960	\$ 9,525	\$ 21,436	69%	
<u>Other Professional Services:</u>					
GSP Implementation Contracts					
Coordinated Annual Reports Activities (Common Chapter, Water Level Contouring)	\$ 146,093		\$ 146,093	100%	
DMS Hosting, Augmentation and Support	\$ 11,367		\$ 11,367	100%	
Staff Augmentation Support (EKI)	\$ 65,000		\$ 65,000	100%	
DAC Outreach and Coordination	\$ 30,000		\$ 30,000	100%	
SGMA Implementation Grant Round 1 SPA (A9)	\$ 75,560		\$ 75,560	100%	
SGMA Implementation Grant Round 2 SPA (B0)	\$ 75,560		\$ 75,560	100%	
<u>Other:</u>					
Executive Director	\$ 2,364	\$ -	\$ 2,364	100%	
General Counsel	\$ 4,082	\$ -	\$ 4,082	100%	
Water Policy Director	\$ 7,100	\$ 5,135	\$ 1,965	28%	5/31/23
Water Resources Program Manager	\$ 62,400	\$ 15,551	\$ 46,849	75%	5/31/23
Accounting	\$ 2,916	\$ 250	\$ 2,666	91%	5/31/23
License & Continuing Education	\$ 500		\$ 500	100%	
Conferences & Training	\$ 1,000		\$ 1,000	100%	
Travel/Mileage	\$ 2,500		\$ 2,500	100%	
Group Meetings	\$ 1,000		\$ 1,000	100%	
Telephone	\$ 500		\$ 500	100%	
Software	\$ 780		\$ 780	100%	
Equipment and Tools	\$ 5,650		\$ 5,650	100%	
Total Expenditures	\$ 525,332	\$ 30,460	\$ 494,872	94%	

	A	B	C	D	E	F
1	Grant Summary Report					
2	IRWM Proposition 1 Round 1			Through FY 2022	FY 2023	FY 2024
3		Grant Amount	Amount Paid			
4	Administration	\$ 10,000.00	\$ 9,000.00	\$ 9,000.00		
5	City of Huron	\$ 650,000.00	\$ 649,974.57	\$ 649,974.57		
6	NVRRWP-Turlock	\$ 45,000.00	\$ 45,000.00	\$ 45,000.00		
7	WSID Pumping Plant	\$ 809,264.00	\$ 728,337.60		\$ 728,337.60	
8	Orestimba Creek	\$ 809,264.00	\$ 404,632.00	\$ 404,632.00		
9	Broadview Aquifer	\$ 809,263.00	\$ 286,000.00	\$ 122,800.45	\$ 157,019.96	\$ 6,179.59
10	Total	\$ 3,132,791.00	\$ 2,122,944.17			
11						
12		Amount Remaining				
13	Administration	\$ 1,000.00	\$ -			
14	City of Huron	\$ 25.43	\$ -			
15	NVRRP-Turlock	\$ -	\$ -			
16	WSID Pumping Plant	\$ 80,926.40	\$ -			
17	Orestimba Creek	\$ 404,632.00	\$ -			
18	Broadview Aquifer	\$ 523,263.00	\$ -			
19	Total	\$ 1,009,846.83	\$ -			
20						
21	SGMA Implementation Round 1					
22	Amount Paid	Grant Amount	Amount Paid			
23	C1-LB Creek R&R	\$ 2,000,000.00	\$ -			
24	C2-Floodwater Capture	\$ 1,000,000.00	\$ -			
25	C3-Chowchilla Bypass Recharge	\$ 1,000,000.00	\$ -			
26	C4-WSID Lateral Reconstruction	\$ 228,030.00	\$ -			
27	C5-North Valley RRWP	\$ 272,270.00	\$ -			
28	C6-Farmers Water Bank	\$ 791,300.00	\$ 17,967.90	\$ 17,967.90	\$ -	
29	C7-LBC Res. Ops.	\$ 600,000.00	\$ -			
30	C8-Data Gaps & Monitoring	\$ 929,400.00	\$ -			
31	C9-GSP Revisions & Updates	\$ 561,500.00	\$ 252,170.43	\$ 252,170.43	\$ -	
32	C10-Public Outreach	\$ 172,500.00	\$ 91,095.85	\$ 91,095.85	\$ -	
33	C11-Studies & Investigations	\$ 45,000.00	\$ -			
34	Total	\$ 7,600,000.00	\$ 361,234.18	\$ 361,234.18	\$ -	\$ -
35						
36		Amount Remaining				
37	C1-LB Creek R&R	\$ 2,000,000.00	\$ -			
38	C2-Floodwater Capture	\$ 1,000,000.00	\$ -			
39	C3-Chowchilla Bypass Recharge	\$ 1,000,000.00	\$ -			
40	C4-WSID Lateral Reconstruction	\$ 228,030.00	\$ -			
41	C5-orth Val RRWP	\$ 272,270.00	\$ -			
42	C6-Farmers Water Bank	\$ 773,332.10	\$ -			
43	C7-LBC Res. Ops.	\$ 600,000.00	\$ -			
44	C8-Data Gaps and Monitoring	\$ 929,400.00	\$ -			
45	C9-GSP Revisions & Updates	\$ 309,329.57	\$ -			
46	C10-Public Outreach	\$ 81,404.15	\$ -			
47	C11-Studies & Invest	\$ 45,000.00	\$ -			
48	Total	\$ 7,238,765.82	\$ -			

Individual GSP Summary						
GSP Group	Component #	Budget Category	Grant Amount	Invoice Amount	Invoice #	Balance
Aliso WD	C 3	C: Implementation	\$ 1,000,000.00			\$ 1,000,000.00
Aliso WD	C 8	C: Implementation	\$ 134,400.00			\$ 134,400.00
Aliso WD	C 9	B: Env., Eng., Design	\$ 50,000.00	\$ 33,634.97	Through 3	\$ 16,365.03
Aliso WD	C 11	B: Env., Eng., Design	\$ 45,000.00			\$ 45,000.00
Subtotal			\$ 1,229,400.00	\$ 33,634.97		\$ 1,195,765.03
Farmers WD	C 6	B: Env., Eng., Design	\$ 125,000.00	\$ 38,346.65	Through 3	\$ 86,653.35
Farmers WD	C 6	C: Implementation	\$ 616,000.00	\$ 9,936.25	Through 3	\$ 606,063.75
Farmers WD	C 6	D: Monitoring	\$ 50,000.00	\$ -		\$ 50,000.00
Farmers WD	C 8	C: Implementation	\$ 50,000.00	\$ -		\$ 50,000.00
Farmers WD	C 8	D: Monitoring	\$ 25,000.00	\$ -		\$ 25,000.00
Farmers WD	C 9	B: Env., Eng., Design	\$ 125,000.00	\$ 64,843.42	Through 3	\$ 60,156.58
Farmers WD	C 9	E: Outreach	\$ 50,000.00	\$ -		\$ 50,000.00
Farmers WD	C 10	E: Outreach	\$ 40,000.00	\$ 37,109.06	Through 3	\$ 2,890.94
Subtotal			\$ 1,081,000.00	\$ 150,235.38		\$ 930,764.62
Fresno County	C 8	B: Env., Eng., Design	\$ 10,000.00	\$ 2,805.00		\$ 7,195.00
Fresno County	C 8	C: Implementation	\$ 70,000.00	\$ -		\$ 70,000.00
Fresno County	C 9	B: Env., Eng., Design	\$ 124,000.00	\$ 63,587.24	Through 3	\$ 60,412.76
Fresno County	C 9	E: Outreach	\$ 50,000.00	\$ -		\$ 50,000.00
Fresno County	C 10	E: Outreach	\$ 25,000.00	\$ 36,451.42	Through 3	\$ (11,451.42)
Subtotal			\$ 279,000.00	\$ 102,843.66		\$ 176,156.34
Grasslands WD	C 2	B: Env., Eng., Design	\$ 200,000.00			\$ 200,000.00
Grasslands WD	C 2	C: Implementation	\$ 800,000.00			\$ 800,000.00
Grasslands WD	C 9	B: Env., Eng., Design	\$ 112,500.00	\$ 91,652.84	Through 3	\$ 20,847.16
Grasslands WD	C 10	E: Outreach	\$ 25,000.00	\$ 16,132.81	Through 3	\$ 8,867.19
Subtotal			\$ 1,137,500.00	\$ 107,785.65		\$ 1,029,714.35
Northern & Central	C 1	C: Implementation	\$ 1,000,000.00			\$ 1,000,000.00
Northern & Central	C 4	B: Env., Eng., Design	\$ 228,030.00			\$ 228,030.00
Northern & Central	C 5	C: Implementation	\$ 272,000.00			\$ 272,000.00
Northern & Central	C 7	C: Implementation	\$ 300,000.00			\$ 300,000.00
Subtotal			\$ 1,800,030.00	\$ -		\$ 1,800,030.00
SJREC	C 1	C: Implementation	\$ 1,000,000.00			\$ 1,000,000.00
SJREC	C 7	C: Implementation	\$ 300,000.00			\$ 300,000.00
SJREC	C 9	B: Env., Eng., Design	\$ 50,000.00	\$ 30,017.00	Through 3	\$ 19,983.00
SJREC	C 10	E: Outreach	\$ 82,500.00	\$ 28,575.81	Through 3	\$ 53,924.19
Subtotal			\$ 1,432,500.00	\$ 58,592.81		\$ 1,373,907.19
Subbasin	C 8	B: Env., Eng., Design	\$ 98,400.00			\$ 98,400.00
Subbasin	C 8	C: Implementation	\$ 229,200.00			\$ 229,200.00
Subbasin	C 8	D: Monitoring	\$ 216,800.00			\$ 216,800.00
Subbasin	C 8	E: Outreach	\$ 95,600.00			\$ 95,600.00
Subbasin	C9	B: Env., Eng., Design		\$ 18,585.10	Through 1	
Subbasin	C9	E: Outreach				
Subbasin	C10	E: Outreach		\$ 64,531.24	Through 1	
Subtotal			\$ 640,000.00	\$ 83,116.34		\$ 556,883.66
Total			\$ 7,599,430.00	\$ 453,092.47		\$ 7,146,337.53

SLDMWA-EKI ENVIRONMENT & WATER, INC.

AGREEMENT FOR PROFESSIONAL SERVICES

TASK ORDER F24-AA63-007

**Completing the Response to the Inadequate Determination Issued by
The California Department of Water Resources for the
Delta-Mendota Subbasin Groundwater Sustainability Plans**

Detailed Scope of Work

TASK 1 – Data Compilation, Review, and Analysis

EKI will compile and review relevant documents files, data, and information necessary to develop an accepted response to the inadequate determination. This task includes compilation and review of data from the Subbasin’s Data Management System pertaining to groundwater levels, groundwater quality, and land subsidence; review and analysis of key parts of the revised Common chapter including the SMC and Water Budget sections; and, development of a summary of data that will be used as part of the response to DWR’s Inadequate Determination.

TASK 2 – Describe Current Groundwater Conditions

EKI will develop an updated subbasin-wide groundwater conditions assessment (GCA) consistent with the requirements of 23-CCR § 354.16 and the Periodic Evaluation (as currently understood for 23-CCR § 356.4)

Subtask 2.A: Develop Updated Assessment of Basin Groundwater Conditions

This task includes review of data compiled in Task 1 and submitted with the Subbasin’s Annual Reports to assess the Subbasin’s performance against revised SMCs, and the evaluation of progress in the implementation of projects and management actions.

Subtask 2.B: Prepare Updated Descriptions of Projects and Management Actions Planning, Implementation, and Benefits

This task includes the compilation and summarization of available information for projects and management actions identified in the revised subbasin GSPs, and consultation with GSAs in the development and refinement of a tiered implementation plan for an updated list of projects and management actions.

Subtask 2.C: Conduct Quantitative Projection of Projects and Management Action Benefits

This task includes use of the model (Task 4) to analyze quantitative effects of a specific group of projects and management actions on current and projected groundwater conditions. This analysis will demonstrate how projects and management actions contribute to achieving sustainability in the subbasin by 2040.

TASK 3 – Subbasin Monitoring Network

This task will include EKI conducting a review and analysis of all existing monitoring networks and protocols, identification of areas needing improvement (both spatially and procedurally), and develop recommended revision to the network in Coordination with the Coordination Committee and Technical Working Group

Task 4 – Analysis of New Information

This task includes building from recently completed efforts to refine and complete the technical analyses related to the SMCs, water budget, and other key GSP elements based on feedback from State Water Resources Control Board staff and/or DWR staff.

Subtask 4.A: Further Analysis and Potential Revisions to SMCs

This task includes completion of SMC updates for all applicable sustainability indicators, with the new information consistent with the GSP data roadmap developed under Task 1. SMCs will be applied at the specific sites in the refined representative monitoring network and used to support the groundwater conditions assessment, analyses of impacts to beneficial uses and users and other sustainability indicators, and other efforts.

Subtask 4.B: Further Analysis and Update to the Subbasin-wide Water Budget

This task includes summarizing preliminary water budget results at the subbasin scale for representative time periods and for water budget components articulated in 23-CCR § 354.18 for each principal aquifer. This task also includes development of an estimate of long-term sustainable yield for each principal aquifer.

Task 5 – Revision of Plan Elements

This task includes summarization of information included in the six revised GSPs and Common Chapter, summarization of outcomes and revisions resulting from other tasks in this scope of work, and preparation of a single, updated GSP that will be submitted to the State Water Resources Control Board for review and approval.

Subtask 5.A: Revision of Plan Area and Basin Setting Chapters

This task includes the use of relevant information from Tasks 1-4, Subbasin Annual Reports, and any new information gathered to update and revise the Plan Area Chapter. This task also includes revising the Basin Setting Chapter to include updates and edits to the Hydrogeologic Conceptual Model and Groundwater Conditions assessments. This task will also include a clear explanation and justification for the calculation of change in storage and discuss how continued loss of storage and groundwater elevation declines will affect domestic drinking water wells or other beneficial uses and users of groundwater.

Subtask 5.B: Revision of Water Budget and Sustainable Yield Sections

This task includes a comprehensive discussion Sustainable Yield estimation as conducted under

Task 4 and an evaluation of historical overdraft. This discussion will include GSAs plans for overdraft mitigation and sustainable management of the Subbasin.

Subtask 5.C: Revision of Sustainable Management Criteria Chapter

This task includes expanding on work conducted in Tasks 2-4 and include corresponding appendices on SMC development in the Subbasin.

Subtask 5.D: Revision of Projects and Management Actions and Plan Implementation Chapters

This task will include information from the revised Common Chapter and six GSPs updated to demonstrate the Subbasin's consistent management under the single GSP and adopted Memorandum of Agreement. This task will also include a detailed implementation schedule of the prioritized projects and management actions, monitoring network refinements, and plans to address data gaps.

Subtask 5.E: Revision of Executive Summary and Introduction Chapter

This task includes the revision of Introduction based on recent data and updates to the Subbasin's governance structure under a single GSP and reports on stakeholder outreach and engagement activities. This task will also include development of the Executive Summary with the objective of providing an abstract of key information through concise and simple language.

Task 6 – Description of Other Information

This task includes additional required items for the periodic evaluation not covered elsewhere: a description of relevant GSP implementation actions taken by GSAs; a summary of coordination with GSAs and land-use entities both inter and intra basin; a description of enforcement or legal actions taken by GSAs to achieve sustainability; and, a description of proposed or completed GSP amendments.

Task 7 – Project Management and Coordination

This task includes facilitating coordination efforts during the course of completing the project and technical project management. This task includes preparation for and participation in Coordination Committee and Technical Working Group meetings, meetings with outside parties including the State Water Resources Control Board and DWR, and from adjacent hydrologically connected basins.

Online Document Accessibility: Consultant will provide electronic copies of documents and materials designated for public access on the Authority's public website consistent with Web Content Accessibility Guidelines (WCAG) 2 Level AA Conformance and/or current state and federal standards for accessibility. If Consultant has any question as to whether a deliverable is subject to these requirements, Consultant shall confirm with the Authority whether the deliverable is anticipated to be posted to the Authority website. Consultant may reference the California Department of Technology's Web Accessibility Assessment Checklist at [SIMM 25 IT Accessibility Resource Guide \(ca.gov\)](https://www.cdtech.ca.gov/Portals/0/SIMM_25_IT_Accessibility_Resource_Guide_(ca.gov)) to help Consultant comply with State and WCAG standards and

requirements. Consultant should ensure documents and materials created for the Authority are compatible with most major Internet browsers, including Chrome, Firefox, and Safari. The Authority reserves the right to return to Consultant for correction any deliverable that is required to be website accessible, and that the Authority determines not be compliance, in accordance with these standards. Any such modification shall be done at Consultant’s cost and without further charge to the Authority.

Payment: All properly invoice amounts shall be paid not more than sixty (60) days after delivery of an invoice. Disputed invoices shall be returned to Consultant within ten (10) working days of receipt.

Additional Agreement Provision: EKI will adhere to the following contract provision, now being added into all SGMA-related Professional Services Agreements:

This is a “Not to Exceed” Task Order. EKI will not exceed its submitted budget estimate for the scope of work and tasks as detailed below without prior approval from SLDMWA. EKI may request to amend the submitted budget of \$1,401,052.00 prior to the end of the fiscal year. If such a request is made, EKI agrees to reimburse reasonable expenses incurred by SLDMWA in preparation of the Task Order Budget Amendment, including but not limited to: staff time, legal review, and scheduling and conducting special meetings, and consultations with Local Project Sponsors and GSAs.

Basis of Payment: Time and materials

Budget Maximum: Not to exceed \$1,401,052.00

Estimate of Time Schedule: July 24, 2023 – February 29, 2024

SLDMWA Project Lead: John Brodie, john.brodie@sldmwa.org

Consultant Project Lead: Anona Dutton, adutton@ekiconsult.com

Special Instructions: (1) All invoices should be sent to Project Lead John Brodie and Felicia Luna felicia.luna@sldmwa.org pursuant to Article 6 of Exhibit B to the Agreement; (2) All invoices shall reference: “**Task Order F24-AA63-007**”



MEMORANDUM

TO: Northern Delta-Mendota Region Management Committee Members and Alternates

FROM: John Brodie, Water Resources Program Manager

DATE: August 2, 2023

RE: Overview of Pros and Cons for Employing a Single Subbasin-wide Model for the Subbasin GSP and Groundwater Management Decisions

BACKGROUND

As a part of the effort to achieve approved status for a single Delta-Mendota Subbasin GSP, the Coordination Committee has been discussing the utility and efficacy of the CVHM2-SJB Groundwater model. It was requested by the Northern Region representative to the Coordination Committee that staff provide a memo for the Northern Region Management Committee that gives a high-level overview of the benefits and challenges for using the model for the Subbasin.

ISSUES FOR DECISION

There is no issue for decision. As requested, this memo is provided as information and background.

RECOMMENDATION

Staff makes no recommendation at this time.

ANALYSIS

The decision to use the CVHM2-SJB model is both easy and complex. For easy, previous attempts to apply a model using different methods across six GSP groups failed twice. Notably, the first deficiency identified by DWR spelled out inconsistency in the data and methodologies used for water budget revisions, and that the GSPs relied on separate water budgets and used a variety of modeling approaches.

Using the CVHM2-SJB model addresses that deficiency. It's a DWR-approved model. Subbasin GSAs worked with USBR and USGS to provide better data and assumptions to improve and update the model, which is currently undergoing peer review and should be available for use in revising the GSP to meet SWRCB approval. Using the model, the estimated basin-wide water budgets generally align with those previously submitted with the Common Chapter.

There are some discrepancies and potential areas of concern. First, data availability. Some GSAs have substantial data to inform the model, while other GSAs have minimal data. Sub-regions in the water budget don't always match GSA or basin boundaries. Though the model is calibrated to industry standards, simulation accuracy in groundwater levels varies within the basin.

While overall the model aligns with water budgets in the Common Chapter, water budget components for GSAs and aquifer-specific budgets can differ significantly due to different assumptions from the different GSPs. For example, the model allocates groundwater pumping at approximately 55%/45% for the upper and lower aquifer respectively. The Common Chapter assumes approximately 90%/10% upper to lower aquifer. Also, a comparison of the WY 2019 Annual Report reported water use and modeled surface water delivery reveals a potential underestimation of surface water supply in the model.

While the model may be a good starting point to get the Subbasin's GSP to approved status, more data may be needed before it is a useful groundwater management tool in all Delta-Mendota Subbasin GSAs.

BUDGET

Some work has already been done on the model to fine tune it to the Delta-Mendota Subbasin. However, more work is likely needed before it can be an effective management tool. There is grant funding available through the USBR WaterSMART Applied Science Grant Program, which has a mid-October deadline.

SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
July 5, 2023
Northern Delta-Mendota Region Management Committee
Fund 64 Draft Cost Share Split Example
Single GSP Preparation Costs

	GSA Acreage to Allocate Costs	% of Northern Region Acreage	TOTAL SGMA
			\$ 212,500
DIVISION 1			
1. Banta-Carbona ID		0.00000%	\$ -
2. City of Tracy		0.00000%	\$ -
3. Del Puerto Water District (DPWD 52,570 ac + Oak Flat 4,503 ac)	57,073	35.61387%	\$ 68,380
3A. Del Puerto (92% of DPWD GSA Cost)			\$ 23,537
3B. Oak Flat (8% of DPWD GSA Cost)			\$ 2,047
4. Patterson Irrigation District (PID 13,067 ac + Twin Oaks 2,629 ac)	15,696	9.79439%	\$ 25,584
5. Byron Bethany Irrigation District (2020 absorbed West Side ID)		0.00000%	\$ -
6. West Side Irrigation District		0.00000%	\$ -
7. West Stanislaus ID (WSID 21,299 ac + Grayson/Westley 246 ac)	21,545	13.44420%	\$ 31,634
Total Division 1	94,314	58.8525%	\$ 125,598
DIVISION 2			
1. Panoche Water District		0.00000%	\$ -
2. San Luis Water District		0.00000%	\$ -
3. Westlands Water District (1)		0.00000%	\$ -
4. Charleston Drainage District		0.00000%	\$ -
5. Panoche Drainage District		0.00000%	\$ -
6. Pleasant Valley		0.00000%	\$ -
Total Division 2	0	0.00000%	\$ -
DIVISION 3			
1. Central California Irrigation District**		0.00000%	\$ -
2. Firebaugh Canal Water District**		0.00000%	\$ -
3. Grassland Water District		0.00000%	\$ -
4. HMRD #2131**		0.00000%	\$ -
5. Columbia Canal Company (Friend Member)**		0.00000%	\$ -
6. Camp 13 Drainers		0.00000%	\$ -
Total Division 3	0	0.00000%	\$ -
DIVISION 4			
1. San Benito County Water District			\$ -
2. Valley Water District (2)			\$ -
Total Division 4	0	0.00000%	\$ -
DIVISION 5			
1. Broadview Water District		0.00000%	\$ -
2. Eagle Field Water District	0	0.00000%	\$ -
3. Fresno Slough WD** -withdrew 8/31/11	0	0.00000%	\$ -
4. James Irrigation District**		0.00000%	\$ -
5. Laguna Water District		0.00000%	\$ -
6. Mercy Springs Water District	0	0.00000%	\$ -
7. Oro Loma Water District	0	0.00000%	\$ -
8. Pacheco Water District	0	0.00000%	\$ -
9. Reclamation District 1606**		0.00000%	\$ -
10. Tranquillity ID** -withdrew 8/31/11	0	0.00000%	\$ -
11. Turner Island Water District	0	0.00000%	\$ -
Total Division 5	0	0.00000%	\$ -
OTHER			
1. Northwestern Delta Mendota Subbasin GSA (Stan. Cty 56,766 ac + Merced Cty 3,035 ac)	59,801	37.31615%	\$ 71,202
1a. Merced County (5% of Northwestern DM GSA Cost)			\$ 785
1b. Stanislaus County (95% of Northwestern DM GSA Cost)			\$ 14,916
2. City of Patterson GSA	6,140	3.83139%	\$ 15,701
3. Fresno County	0	0.00000%	\$ -
4. Merced County	0	0.00000%	\$ -
5. Santa Nella County Water District	0	0.00000%	\$ -
6. Widren GSA	0	0.00000%	\$ -
Total Other	65,941	41.14755%	\$ 86,902
	160,255	100.00%	\$ 212,500

	Equal Split between # of GSAs	
\$ 165,750	5	\$ 46,750
	%	
\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
\$ 59,030	20.00000%	\$ 9,350
\$ 16,234	20.00000%	\$ 9,350
\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
\$ 22,284	20.00000%	\$ 9,350
\$ 97,548	60.00000%	\$ 28,050
\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
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\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
\$ 61,852	20.00000%	\$ 9,350
\$ 6,351	20.00000%	\$ 9,350
\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
\$ -	0.00000%	\$ -
\$ 68,202	40.00000%	\$ 18,700
\$ 165,750	100.00%	\$ 46,750

Table 1: Northern & Central Delta-Mendota GSP Implementation Commitments - in Text of Groundwater Sustainability Plan

Task	Activity	Related	GSP Deadline	GSP Reference ^(a)	Status as Reported in WY2022 Annual Report	Comments	Status of Activities ^(b)
1	Update/refine monitoring network as new wells are constructed and well construction information is obtained						
1a	Well Census and Inventory project	--	2025	--	Completed in February 2022	Reconciliation of Well Census and Inventory information with update to SGMA monitoring network remains to be done.	Additional changes to NCDM representative monitoring network (RMN) will be necessary because additional wells were removed from the RMN.
1b	Video log 14 wells that are missing well construction information	--	2025	NCDM GSP Section 7.2.5.1.6	N/A	Identified as an optional task in Well Census and Inventory project scope but not performed.	--
1c	Determine if video-logged wells are appropriate to add to the [SGMA] monitoring network	1a	2025	CC Section 4.2.8; NCDM GSP Sections 5.3.8 and 7.2.5.1.6	N/A	--	--
2	Establish ISW SMC as a rate or volume of surface water depletions						
2a	Install five additional ICSW monitoring wells adjacent to the San Joaquin River	--	2025	CC Section 4.2.8; NCDM GSP Section 5.3.8	N/A	\$929,400 awarded to Subbasin in SGMA Round 1 Implementation Grant for data gap filling efforts, including installation of at least one (1) and up to four (4) ICSW monitoring wells in the NCDM region.	SGMA Round 1 Funding Agreement executed with DWR on 10/7/22. ISW network design in progress. Funding for additional ISW wells in NCDM was included in SGMA Round 2 Grant Application (not successful).
2b	Collect and analyze data from ICSW monitoring wells	2a	2030	CC Section 4.2.8; NCDM GSP Section 5.3.8	N/A	Limited data collection and analysis to date.	--
3	GDE mapping						
3a	Analyze locations of potential GDEs using recent groundwater elevation/depth contour mapping	--	2025	CC Section 4.2.8; NCDM GSP Section 5.3.8	N/A	Limited/no data collection and analysis to date.	--
4	Re-evaluate land subsidence SMC considering new data and studies						
4a	Collect and analyze subsidence data from 2020-2025 and identify where there are spatial data gaps	--	2025	CC Section 4.2.8	Ongoing, data collected WY2020 and 2021	Completed <i>Conceptual Master Plan for Subsidence Monitoring and Management for the Delta-Mendota Subbasin</i> in June 2022. Some GSAs (PID, WSID) have been collecting local data.	Two NCDM GSAs performed subsidence monitoring at end of 2022. DWR performed survey along Aqueduct and CVP in Feb. 2023. USBR survey planned for Dec. 2023.
4b	Work with USBR to revise CVHM2 model to simulate interactions between groundwater extractions and land subsidence	--	2025	CC Section 5.4.4	N/A	Intermittent coordination meetings have occurred between SLDMWA, GSAs, and USBR.	Reviewed groundwater model with USBR & USGS in December 2022 and March 2023. Model likely not available for formal release until later in 2023. With input from Subbasin GSAs, EKI currently using the model to evaluate Subbasin water budget.
4c	Determine portion of subsidence caused by groundwater extraction within and outside the Subbasin at each RMS	4a, 4b	2025	NCDM GSP Section 6.3.5.3	N/A	\$929,400 awarded to Subbasin in SGMA Round 1 Implementation Grant for portion of data gap filling efforts, including subsidence monitoring.	SGMA Round 1 Funding Agreement executed with DWR on 10/7/22. Consultant RFP for subsidence monitoring in progress.
4d	Review and revise HCM to incorporate new subsidence data, including AEM survey and results from the subsidence study	4a, 4c	2025	CC Section 5.4.4; NCDM GSP Section 6.3.5.3	N/A	Limited/no analysis to date.	Review of recent subsidence data in progress through revision of SMCs in reponse to DWR Inadequate Determination.
4e	Assess allowable land subsidence on a Subbasin and localized basis	4a, 4c, 4d	2025	CC Section 5.4.4; NCDM GSP Section 6.3.5.3	N/A	Limited/no analysis to date.	Review of recent subsidence data in progress through revision of SMCs in reponse to DWR Inadequate Determination.
4f	Conduct an updated subsidence DMC Conveyance Capacity Analysis	--	2025	NCDM GSP Section 5.3.8	N/A	SLDMWA led effort. SLDMWA noted that work has been done to create a model in HEC-RAS and an EIR for Subsidence Correction Project is expected to be complete mid-2023.	--

Table 1: Northern & Central Delta-Mendota GSP Implementation Commitments - in Text of Groundwater Sustainability Plan

Task	Activity	Related	GSP Deadline	GSP Reference ^(a)	Status as Reported in WY2022 Annual Report	Comments	Status of Activities ^(b)
5	Refine/update water budget and sustainable yield estimates						
5a	Establish additional CIMIS and/or other weather stations to define spatial variability of precipitation and evapotranspiration	--	2025	NCDM GSP Section 5.3.8	N/A	Limited/no analysis to date.	--
5b	Reconciliation of water budget nomenclature in individual GSPs with terminology used in the Common Chapter	--	2025	CC Section 4.3.1	N/A	Limited/no analysis to date.	Improvements to Subbasin water budgets in progress through Response to DWR Inadequate Determination.
5c	Improve estimated allocation of groundwater extraction between two aquifers (based on well construction information and inventory projects completed by GSAs in 2022)	1a, 1b	2025	CC Section 4.3.1	N/A	Limited/no analysis to date. Reconciliation of Well Census and Inventory information with update to pumping estimates remains to be done. Some GSAs have initiated efforts to register wells and require metering/water use reporting, but incomplete records to date.	--
5d	Improve storage estimates of each aquifer using data collected from 2020-2025	--	2025	CC Section 4.3.1	N/A	Limited/no analysis to date.	Improvements to storage estimates in each aquifer in progress using model in Response to DWR Inadequate Determination.
6	Update Sustainable Management Criteria						
6a	Develop short-term (acute) thresholds for Chronic Lowering of Groundwater Levels	--	2025	CC Section 5.4.1; NCDM GSP Section 6.3.1.2	N/A	Limited/no analysis to date.	Revision of Subbasin SMCs in progress through Response to DWR Inadequate Determination.

Abbreviations:

- | | |
|-------------------------------------------------------------|-----------------------------------------------------|
| AEM = Airborne Electromagnetic | N/A = Not Applicable |
| CC = Common Chapter | NCDM = Northern & Central Delta-Mendota |
| CIMIS = California Irrigation Management Information System | PID = Patterson Irrigation District |
| CVHM2 = Central Valley Hydrologic Model, Version 2 | RMS = Representative Monitoring Site |
| DMC = Delta-Mendota Canal | SGM = Sustainable Groundwater Management |
| EIR = Environmental Impact Report | SGMA = Sustainable Groundwater Management Act |
| GDE = Groundwater Dependent Ecosystem | SLDMWA = San Luis and Delta-Mendota Water Authority |
| GSA = Groundwater Sustainability Agency | SMC = Sustainable Management Criteria |
| GSP = Groundwater Sustainability Plan | USBR = United States Bureau of Reclamation |
| HCM = Hydraulic Conceptual Model | WSID = West Stanislaus Irrigation District |
| ICSW = Interconnected Surface Water | WY = Water Year |

Notes:

- (a) Commitments identified in this table were made in either the 2022 Amended NCDM GSP or the Common Chapter for the Delta-Mendota Subbasin GSPs.
- (b) Based upon information communicated by GSAs.
- (c) A yellow highlighted row indicates that the activity was not included in the 2020 GSP submittal and was added during the 2022 GSP revision process.

Table 2: Northern & Central Delta-Mendota GSP Implementation Commitments - Projects

Tier ^(a)	Project ^(b)	Project Proponent	Implementation Start Date	Estimated Cost	Status as Reported in WY2022 Annual Report ^(c)	Comments ^(d)	Status of Activities ^(e)
1	Los Banos Creek Recharge and Recovery Project	San Luis Water District	February 2020	\$9,116,374	Preliminary design completed in 2018; additional steps pending funding for CEQA, design, and construction.	\$1,000,000 awarded in SGMA Round 1 Implementation Grant.	SGMA Round 1 Funding Agreement executed with DWR on 10/7/22. Permitting and design in progress.
1	Orestimba Creek Recharge and Recovery Project	Del Puerto Water District	February 2020	\$7,923,450	CEQA/NEPA complete; design anticipated complete in early 2023; construction anticipated to begin in early 2023.	--	Design is complete. Construction anticipated complete in winter 2023.
1	North Valley Regional Recycled Water Program (NVRWP) – Modesto and Early Turlock Years	Del Puerto Water District	February 2020	\$96,000,000	Completed Turlock and Modesto components in March 2020; Ceres component in progress, funding requested through SGMA Round 1 Implementation Grant; anticipated completion in 2023.	Portions of project are completed. \$250,150 awarded in SGMA Round 1 Implementation Grant.	SGMA Round 1 Funding Agreement executed with DWR on 10/7/22.
1	City of Patterson Percolation Ponds for Stormwater Capture and Recharge	City of Patterson	February 2020	\$7,800,000	Project still in conceptual and EIR phase (linked to planned development); preliminary design initiated in 2022.	--	Preliminary design initiated and in progress.
1	Kaljia Drainwater Reuse Project	San Luis Water District	February 2020	\$16,500,000	Preliminary design and CEQA/permitting in progress; design planned in phases from 2023-2025, construction planned in phases to start in 2025.	--	Preliminary design complete; permitting in progress.
1	West Stanislaus Irrigation District Lateral 4-North Recapture and Recirculation Reservoir	West Stanislaus Irrigation District	February 2020	\$1,120,000	FS completed in Sept 2021; design anticipated to take 8 months with CEQA in parallel. Funding obtained from SGMA Round 1 Grant.	\$250,150 awarded in SGMA Round 1 Implementation Grant.	SGMA Round 1 Funding Agreement executed with DWR on 10/7/22. Construction planned to start in fall 2024.
1	Revision to Tranquillity Irrigation District Lower Aquifer Pumping	Tranquillity Irrigation District	February 2020	\$0	Well Water Operations Plan established in 2017 and implemented on an annual basis.	--	--
2	Del Puerto Canyon Reservoir Project	Del Puerto Water District	January 2026	\$491,300,000	CEQA completed in October 2021; NEPA draft released in November 2021; preliminary design completed in 2022; 100% design and permitting anticipated complete in 2024; construction anticipated complete in 2028.	--	Preliminary design is complete. NEPA anticipated complete in 2024; 100% design and permitting anticipated complete in 2024; construction anticipated complete in 2028.
2	Little Salado Creek Groundwater Recharge and Flood Control Basin	Stanislaus County	January 2026	\$7,710,000	Scheduled for development in subsequent phases of the overall Crow's Landing Industrial Business Park.	--	--
2	Patterson Irrigation District Groundwater Bank and/or Flood MAR-type Project	Patterson Irrigation District	January 2026	TBD	Consultant retained for FS; acquired small potential property.	--	Pilot study anticipated in winter 2023.
2	West Stanislaus Irrigation District Lateral 4-South Recapture and Recirculation Reservoir	West Stanislaus Irrigation District	January 2026	\$1,500,000	Preliminary design completed in September 2021.	Partially funded under IRWM grant.	--
2	Ortitalita Creek Groundwater Recharge and Recovery Project	San Luis Water District	January 2026	TBD	Funding requested in SGMA Round 2 Grant Application.	Partially funded under IRWM grant.	Expect to complete preliminary design in winter 2023. Funding request was included in SGMA Round 2 Grant Application (not successful).

Abbreviations and Notes provided on page 2

Table 2: Northern & Central Delta-Mendota GSP Implementation Commitments - Projects

Abbreviations:

CEQA	= California Environmental Quality Act
CLIBP	= Crows Landing Industrial Business Park
EIR	= Environmental Impact Report
FS	= Feasibility Study
IRWM	= Integrated Regional Water Management
MAR	= Managed Aquifer Recharge
N/A	= Not Applicable
NCDM	= Northern & Central Delta-Mendota
NEPA	= National Environmental Policy Act
SGM	= Sustainable Groundwater Management
TBD	= To Be Determined
USBR	= United States Bureau of Reclamation
WY	= Water Year

Notes:

- (a) Projects and Management Actions divided into Tiers (pg 7-1 of Revised GSP):
- Tier 1 – Near-term projects and management actions that the Groundwater Sustainability Agencies (GSAs) are committed to implementing at this time. These projects and management actions are either currently in the process of being implemented or could be implemented in the near future (constructed and operational) within the next five years (by 2025).
- Tier 2 – Projects and management actions that have been identified and require further development before implementation can occur. It is anticipated that these projects and management actions could be developed over the next five years and implemented beginning in 2026 or later, pending re-evaluation prior to the 5-year GSP Update in 2025.
- Tier 3 – Longer-term projects and management actions that may be implemented in the future as needed. Many of these projects are outside of the GSAs' control but could have implications on surface water availability and/or are additional projects/management actions that could be implemented under an adaptive management approach. For purposes of this analysis, did not include the Tier 3 projects listed in the GSP (because implementation of the identified projects is driven by others).
- (b) Project information obtained from Section 7 of the 2022 amended NCDM GSP.
- (c) Consolidated WY 2022 Annual Report dated March 2023.
- (d) Per SGMA Budget Spending Plan circulated by John Brodie on 12 August 2022, NCDM was awarded a total of \$1,500,300 from SGMA Round 1 grant to Subbasin.
- (e) Based upon information communicated by GSAs and other updates.

Table 3: Northern & Central Delta-Mendota GSP Implementation Commitments - Management Actions

Tier ^(a)	Responsible GSAs	Status of Activities ^(d)	Status as Reported in WY2022 Annual Report ^(c)	Notes
1	Lower Aquifer Pumping Rules for Minimizing Subsidence			
	Central Delta-Mendota GSA	Adopted Administrative Policy No. 2 regarding well metering and reporting in January 2023.	Several GSAs have adopted ordinances requiring registration of wells and/or reporting of pumping. The Central GSA has developed and approved an Administrative Policy for metering/reporting. A few GSAs do not extract from Lower Aquifer.	GSA efforts to require metering and reporting of pumping are continuing. This pumping data, coupled with the Well Census and Inventory Report, could be used to better understand the location and distribution of pumping.
	City of Patterson GSA			
	DM-II GSA	Collecting data, and require signed agreement with owner of new wells that pumping will occur only per GSP rules. Policy adopted in 2022 which requires registration of wells, and metering starting in 2023.		
	Northwestern Delta Mendota GSA	Stanislaus & Merced County permits for new extraction wells require metering and reporting.		
	Oro Loma Water District GSA			
	Patterson Irrigation District GSA	Adopted ordinance requiring the registration of wells and reporting of pumping. Working on implementation.		
	West Stanislaus Irrigation District GSA	Financial incentive for grower initial use (2 AF/ac) of surface water.		
	Widren Water District GSA	Two operational WWD Upper Aquifer (no Lower Aquifer) supply wells are equipped with meters.		
1	Maximize Use of Other Water Supplies			
	Central Delta-Mendota GSA	SNCWD: Signed partial agreement with USBR for CVP supply; additional USBR contracting planned. Pacheco WD developing contract for surface water supplies to reduce Lower Aquifer pumping.	No formal policies implemented.	--
	City of Patterson GSA	Evaluating stormwater recharge project (tied to development).		
	DM-II GSA	Adopted a policy requiring purchase of 75% of CVP allocation. Exceptions allowed only if groundwater use will not be increased.		
	Northwestern Delta Mendota GSA			
	Oro Loma Water District GSA			
	Patterson Irrigation District GSA	Surface water is preferred by local growers.		
	West Stanislaus Irrigation District GSA	Financial incentive for grower initial use (2 AF/ac) of surface water. Discharge of groundwater into WSID is prohibited unless WSID is short of water.		
	Widren Water District GSA			
1	Increasing GSA Access to and Input on Well Permits			
	Central Delta-Mendota GSA	Merced updated its well permitting process.	GSAs have coordinated on increasing GSA participation in well permitting process. Merced County and Stanislaus County have updated their well permitting process and requirements.	Governor's Executive Order N-7-22 regarding well permitting provides some clarity and authority.
	City of Patterson GSA			
	DM-II GSA	District staff review submitted well applications for potential impacts.		
	Northwestern Delta Mendota GSA	Merced updated its well permitting process. Stanislaus well permitting process being updated.		
	Oro Loma Water District GSA			
	Patterson Irrigation District GSA			
	West Stanislaus Irrigation District GSA	Adopted ordinance requiring the registration of wells and reporting of pumping.		
	Widren Water District GSA			
1	Drought Contingency Planning in Urban Areas			
	City of Patterson GSA	Conducted contingency planning described in adopted 2020 UWMP.	Conducted as part of UWMP.	--
1	Fill Data Gaps			
	Central Delta-Mendota GSA	Adopted Administrative Policy No. 2 regarding well metering and reporting in January 2023.	Funding was awarded in April 2022 to fill data gaps in interconnected surface water and subsidence monitoring under the SGMA Round 1 Implementation Grant.	See "Implementation Activities" tab for specific data-gap filling efforts. Additional ISW wells in NCDM included in SGMA Round 2 Grant Application (not successful).
	City of Patterson GSA	Conducted subsidence monitoring and added well to monitoring network. Improving well metering.		
	DM-II GSA	DPWD serving as grantee for SGMA Round 1 Implementation Grant. Obtained WaterSMART grant to obtain remote monitoring equipment for high priority wells.		
	Northwestern Delta Mendota GSA			
	Oro Loma Water District GSA			
	Patterson Irrigation District GSA	Improving pumping data collection.		
	West Stanislaus Irrigation District GSA			
	Widren Water District GSA			

Abbreviations and Notes provided on page 2

Table 3: Northern & Central Delta-Mendota GSP Implementation Commitments - Management Actions

Abbreviations:

CDM = Central Delta-Mendota	N/A = Not applicable
CVP = Central Valley Project	PID = Patterson Irrigation District
DPWD = Del Puerto Water District	SGM = Sustainable Groundwater Management
EO = Executive Order	USBR = United States Bureau of Reclamation
GSA = Groundwater Sustainability Agency	UWMP = Urban Water Management Plan
GSP = Groundwater Sustainability Plan	WSID = West Stanislaus Irrigation District
NCDM = Northern & Central Delta-Mendota	WY = Water Year

Notes:

- (a) Projects and Management Actions divided into Tiers (pg 7-1 of 2022 Amended NCDM GSP):
 - Tier 1 – Near-term projects and management actions that the Groundwater Sustainability Agencies (GSAs) are committed to implementing at this time. These projects and management actions are either currently in the process of being implemented or could be implemented in the near future (constructed and operational) within the next five years (by 2025).
 - Tier 2 – Projects and management actions that have been identified and require further development before implementation can occur. It is anticipated that these projects and management actions could be developed over the next five years and implemented beginning in 2026 or later, pending re-evaluation prior to the 5-year GSP Update in 2025.
 - Tier 3 – Longer-term projects and management actions that may be implemented in the future as needed. Many of these projects are outside of the GSAs’ control but could have implications on surface water availability and/or are additional projects/management actions that could be implemented under an adaptive management approach.
- (b) Management Action information obtained from Section 7 of the 2022 Amended NCDM GSP.
- (c) Consolidated WY 2022 Annual Report dated March 2023.
- (d) Based upon information communicated by GSAs.

Table 4: Northern & Central Delta Mendota GSP Implementation - Status of Well Ordinances

Organization	Ordinance Identification	Ordinance Date	Text
Fresno County	Ordinance No. 00-13	September 2000	Section 14.03.090 - Conditions of permit approval. "C. If requested by the county, the permittee shall share with the county groundwater monitoring information and data, and, where practicable, the parties shall coordinate their groundwater management efforts to effectively monitor groundwater resources throughout the county"
Merced County	Ordinance No. 1930 An Ordinance to Prevent the Mining and Export of Groundwater from the Unincorporated Portions of Merced County	March 2015	Section 9.27.065 - Groundwater Monitoring & Reporting "A. Monitoring. All new permits for wells or groundwater exports under the scope of this ordinance shall be measured by a properly installed and maintained water measuring device satisfactory to the Department of Public Health, Division of Environmental Health. As an alternative to water measuring devices, other reasonable methods to determine groundwater extraction may be used if approved by the Department of Public Health, Division of Environmental Health. B. Reporting. All persons, including Public Works Agencies, that extract groundwater within the County shall cause to be prepared and submitted to the Department of Public Health, Division of Environmental Health, annual reports of groundwater information that are necessary to monitor the existing condition of groundwater resources within the County....The required information to be reported shall include without limitation water level and pumping data...."
Stanislaus County	Ordinance CS 1155, Section 9	2014	Section 9.37.065 - Groundwater Monitoring. "A. All persons, including public water agencies that extract groundwater within the county shall cause to be prepared and submitted to the county department of environmental resources periodic reports of groundwater information that are reasonably necessary to monitor the existing condition of groundwater resources within the county, to determine trends, or to develop effective sustainable groundwater management plans and policies. A de minimis extractor shall not be required to submit such information. B. The department shall develop and recommend regulations to be adopted by the board that establish the frequency and timing of required reports, and the required information to be monitored, including, without limitation, water level and pumping data, or other data necessary for any other method to determine groundwater production."
Patterson Irrigation District	Resolution 05-2020: Patterson Irrigation District Groundwater Sustainability Agency Rule Regarding Irrigation Well Meters	15 April 2020	"The owner of any Groundwater Extraction Facility within the PID GSA must register that Groundwater Extraction Facility with the PID GSA... ...The owner of every Groundwater Extraction Facility within the PID GSA must measure use of that Groundwater Extraction Facility by a water-measuring device (Meter) satisfactory to the PID GSA... ...Meters must be installed on all Groundwater Extraction Facilities by January 1st, 2021."
West Stanislaus Irrigation District	West Stanislaus Irrigation District Groundwater Sustainability Agency Policy Regarding Irrigation Well Meters	2020	"The owner of any Groundwater Extraction Facility within the WSID GSA must register that Groundwater Extraction Facility with the WSID GSA... ...The owner of every Groundwater Extraction Facility within the WSID GSA must measure use of that Groundwater Extraction Facility by a water-measuring device (Meter) satisfactory to the WSID GSA. Meters must be installed on all Groundwater Extraction Facilities by January 1st, 2021. The meter shall measure all flow rate in gallons per minute, or cubic feet per second and totalize total extractions in gallons, cubic feet, or in acre-feet."

Table 4: Northern & Central Delta Mendota GSP Implementation - Status of Well Ordinances

Organization	Ordinance Identification	Ordinance Date	Text
Del Puerto Water District	Groundwater Well Metering Policy	2022	Covers well registration, metering, access, costs, semi-annual reporting, maintenance, and exclusions. Packets were sent to customers explaining the new well registration and metering requirements.
City of Patterson	Ordinance No. 348, Section 1	1981	13.20.010 Private wells - Construction prohibited. No person, firm or corporation may drill, dig or install a water well in the city for any purpose whatsoever, save and except the Patterson City Water Company.
Central Delta-Mendota GSA	Central GSA Resolution Nos. 2021-01 and 2021-02	25 January 2021	Adopted two Resolutions on 25 January 2021: require registration of all wells by 4/1/2021, impose fee for late registration. Adopted Well Metering and Reporting Policy in 2022 to require installation of meters on production wells within the GSA and reporting of pumped groundwater volumes. Adopted Policy Number Two in January 2023, and distributed to constituents. GSA members are developing draft Well Access and Indemnity Agreements to allow meter reading for property owners with groundwater wells.
Widren Water District	N/A	N/A	N/A. The two operational supply wells in WWD are equipped with meters.

Abbreviations:

- GSA = Groundwater Sustainability Agency
- GSP = Groundwater Sustainability Plan
- N/A = Not Applicable
- NCDM = Northern & Central Delta-Mendota
- No. = Number
- PID = Patterson Irrigation District
- SGMA = Sustainable Groundwater Management Act
- WSID = West Stanislaus Irrigation District

Notes:

- (a) Online search for ordinances adopted by NCDM GSAs and member agencies performed in August 2022.
- (b) Note that County Ordinances are also discussed in Section 2.3.2 of the 2022 Amended NCDM GSP. Discussion speaks more to permitting process for well construction/destruction and less to measuring of pumped groundwater.

GSP Implementation Schedule Northern & Central Delta-Mendota GSP Region

3-MONTH LOOK-AHEAD SCHEDULE

TASK	RESPONSIBLE PARTY	START	END	AUG				SEP				OCT				NOV			
				WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 1	WEEK 2	WEEK 3	WEEK 4
BASIN-SCALE COORDINATION																			
Intra-Basin Coordination																			
Subbasin Coordination Committee	Basin GSAs		Semi-Monthly		■	■		■						■					■
Subbasin Technical Working Group	Basin GSAs		Monthly		■				■										
Respond to Inadequate Determination from DWR	Basin GSAs / EKI	3/2/23	7/31/24	■															
SGM Implementation Grant																			
Perform SGM Round 1 Grant Approved Activities	Basin GSAs	10/7/22	4/30/25	■															
N-C REGION COORDINATION / ADMINISTRATION																			
N-C Coordination Meetings																			
Northern Region Management Committee Meetings	GSAs		Monthly	■					■					■					■
Central Region Management Committee Meetings	GSAs		Quarterly															■	
Technical/Finance Working Group Meetings	GSAs		TBD																
GSP Progress Checks																			
GSP Implementation Progress Reports (Tracking Tools)	GSAs		Semi-Annual																■
N-C REGION GSP IMPLEMENTATION																			
Water Level Monitoring																			
Collect Fall Water Level Data	GSAs / SLDMWA	9/1/23	10/31/23																
Data QA/QC	GSAs / W&C	10/31/23	11/30/23																
Fall Data Consolidation/Upload to DMS/SGMA Portal	GSAs / W&C	10/31/23	12/31/23																
Water Quality Monitoring																			
Collect Water Quality Data	GSAs	5/1/23	8/31/23	■															
Data QA/QC	GSAs / W&C	7/31/23	9/30/23																
Data Consolidation/Upload to DMS	GSAs / W&C	7/31/23	9/30/23																
Interconnected Surface Water Monitoring																			
Install/Identify New Monitoring Wells	WSID / PID / NWDM	3/1/20	12/31/23	■															
Meet with Adjoining GSP Groups	WSID / PID / NWDM		As-needed																
Projects^(a)																			
Los Banos Creek Recharge and Recovery Project	SLWD		In design	TBD	■														
Kaljjan Drainwater Reuse Project	SLWD		Design in 2024	TBD	■														
Orestimba Creek Recharge and Recovery Project	DPWD		Const in 2023	12/31/23	■														
NVRRWP – Increased Modesto and Turlock Portions ^(b)	DPWD		Complete		■														
Percolation Ponds for Stormwater Capture and Recharge	City of Patterson		PD in 2023	TBD	■														
WSID Lateral 4-North Recapture and Recirculation Reservoir ^(c)	WSID		Design in 2023	Est. 2024	■														
Revision to TRID Lower Aquifer Pumping ^(d)	TRID		On-going		■														

GSP Implementation Schedule Northern & Central Delta-Mendota GSP Region

3-MONTH LOOK-AHEAD SCHEDULE

TASK	RESPONSIBLE PARTY	START	END	AUG				SEP					OCT				NOV			
				WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 1	WEEK 2	WEEK 3	WEEK 4
Management Actions^(a)																				
Lower Aquifer Pumping Rules for Minimizing Subsidence	GSAs	6/25/20	12/31/23																	
Maximize Use of Other Water Supplies	GSAs	6/25/20	10/31/24																	
Increasing GSA Access to and Input on Well Permits	GSAs	6/11/20	12/31/23																	
Drought Contingency Planning in Urban Areas	GSAs	Complete																		
Fill Data Gaps	GSAs	2/1/20	4/30/25																	
Additional GSP Activities																				
Basin Groundwater Model CVHM2-SJB	USGS/USBR / EKI	3/1/20	TBD																	
Develop/Revise Subbasin GSP	GSAs / EKI	3/1/23	7/31/24																	
Project Management and Communication	SLDMWA / EKI	3/1/23	2/29/24																	
As-Needed Technical Support	EKI / W&C	3/1/23	2/29/24																	

Abbreviations

- | | | | |
|-----------------------------------------|-------------------------------------------------------|---------------------------------------------------|--------------------------------------------|
| DMS = Data Management System | GSP = Groundwater Sustainability Plan | P&P = Provost & Pritchard | TWG = Technical Working Group |
| DM = Delta Mendota | MNM = DWR SGMA Monitoring Network Module | QA/QC = Quality Assurance/Quality Control | USBR = United States Bureau of Reclamation |
| DPWD = Del Puerto Water District | NVRRWP = North Valley Regional Recycled Water Program | SLDMWA = San Luis & Delta-Mendota Water Authority | USGS = United States Geological Survey |
| EKI = EKI Environment & Water, Inc. | P&MA = Projects and Management Actions | SLWD = San Luis Water District | W&C = Woodard & Curran |
| FS = Feasibility Study | PD = Preliminary Design | TBD = to be determined | WSID = West Stanislaus Irrigation District |
| GSA = Groundwater Sustainability Agency | PID = Patterson Irrigation District | TRID = Tranquillity Irrigation District | WY = Water Year |

Notes

- (a) Projects and Management Actions extend through 2025.
- (b) Portion of project is complete. Increased supply of recycled water expected.
- (c) Needs to be coordinated with Orestimba and Del Puerto Creek projects.
- (d) In operation starting in 2017.

Key Dates

- Aug 2, 2023: Northern Delta-Mendota Management Committee Meeting
- Aug 8, 2023: Special Meeting of Subbasin Coordination Committee and Technical Working Group
- Aug 14, 2023: Subbasin Coordination Committee and Technical Working Group Meeting
- Aug 28, 2023: Special Meeting of Subbasin Coordination Committee and Technical Working Group
- Sept 6, 2023: Northern Delta-Mendota Management Committee Meeting
- Oct 4, 2023: Northern Delta-Mendota Management Committee Meeting

Funding Opportunities – Updated 7/20/2023

Pilot Program for Water Resource Projects for Disadvantaged Communities

The program seeks to fully fund small water resources projects for economically disadvantaged communities. Eligible projects include: emergency streambank protection for public facilities, local protection from flooding, and aquatic ecosystem restoration. No local cost share is required. U.S. Army Corps of Engineers. Deadline 8/21/23

Integrated Climate Adaptation and Resiliency Program’s Regional Resilience Planning and Implementation Grant Program

The Regional Resilience Grant Program (RRGP) funds planning and implementation projects that strengthen climate change resilience at a regional scale. The RRGP funds projects led by partnerships that involve multiple jurisdictions working together to address the most significant climate change risks in their regions, especially in communities that are most vulnerable to climate change impacts. Up to \$3 Million per project, \$9.4 Million total available. Governor’s Office of Planning and Research. Deadline: 8/29/23

Instream Flow Water Purchase Program

The Instream Flow Water Purchase Program (WPP) establishes financial instruments and agreements necessary to ensure water for beneficial instream flows are made available from those with legal rights to use or dedicate water. Projects must measurably enhance streamflow at a time and location necessary to provide fisheries or ecosystem benefits or that improve upon existing flow conditions. Minimum qualifications will require applicants to provide at least 2,000 acre-feet of water through sale, lease, license, dedication or other binding mechanism, including forbearance, for purposes of instream flow enhancement between January 1st and June 30th in every water year type in which the water right holder proposes to provide water. These flows must be provided in the Sacramento-San Joaquin Delta Watershed for at least 10 water years (subject to negotiation if only provided in specific water year types). Up to \$360 Million available. Department of Water Resources. Deadline: 10/1/23

Farm and Ranch Solid Waste Clean-up and Abatement Program

The program offers financial support to address the cleanup & prevention of illegal dumping on properties designated for agricultural purposes. It is possible to include multiple projects/sites within a single application. \$50,000 maximum per site, \$200,000 maximum per application. Dept. of resources, Recycling, and Recovery. Deadline 10/5/23.

Regional Climate Collaborative Program (Round 2)

The Regional Climate Collaborative (RCC) Program provides resources to advance climate change mitigation, adaptation, and resilience within under-resourced communities. The program funds cross-sector partners to form a Collaborative and conduct various capacity building activities, such as partnership development, project and plan development, data collection, education and training, and the creation of technical assistance hubs to pursue climate investments. A total of \$8.5 million available with a maximum award of \$1.75 million. Strategic Growth Council. Deadline: 12/6/23

Water Resilience Infrastructure-Water Recycling

The purpose of the grant is to provide technical and financial assistance to local agencies for the planning and construction of water recycling projects that promote the beneficial use of treated municipal wastewater in order to augment fresh water supplies in California. Up to \$15 million

available per project and a total of more than \$232 Million. State Water Resources Control Board.
Deadline: 6/30/25

Emergency Community Water Assistance Program

This program helps eligible communities prepare, or recover from, an emergency that threatens the availability of safe, reliable drinking water and is targeted at small communities and rural areas (DACs, SDACs, and EDAs). \$150,000 available for leak repair and maintenance to existing water lines and construct water line extensions; up to \$1,000,000 for construction of new wells, transmission lines, treatment plants, or other sources of water. USDA Rural Development. Applications accepted on a continuous basis.

County-Wide and Regional Funding Program

Funding for regional programs that address drought-related and contamination issues for small water systems and domestic wells serving DACs. No deadline. Funding is from the State Water Board.

Restoration Grant Program

Multiple funding programs including wetland restoration, wildlife corridors, and addressing climate impacts. Project categories include: planning, implementation, acquisition, monitoring, and scientific studies. Applications accepted on rolling basis. Funding from CA Dept. of Fish and Wildlife.

Riparian Habitat Conservation Program

The Wildlife Conservation Board is accepting concept proposals for projects that provide meaningful and sustainable improvements to riparian habitats. \$3 Million available on a rolling basis.

Fertilizer Research and Education Program

Total of \$225,000 available for projects on: improving input management, understanding plant-soil processes, and evaluating loss pathways. They are focused on nutrients in general with nitrogen/nitrates as a particular focus. It is a rolling deadline with funding awarded as projects are approved. CA Dept. of Food and Agriculture.

Building Resilient Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA) Programs

Applications accepted through the Governor's Office of Emergency Services. BRIC is prioritizing the following types of projects: infrastructure projects, projects that benefit disadvantaged communities as referenced in EO 14008, and projects that incorporate nature-based solutions including those designed to reduce carbon emissions, climate change adaptation and resilience projects. 25% Match required. Applications accepted on a rolling deadline.