



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

**Monday, May 4, 2026, 2:00 PM**

**In person:**

Patterson City Council Chambers  
1 Plaza Circle, Patterson, CA 95363

**Zoom Webinar Link:**

<https://zoom.us/j/97464044803>

**Webinar ID: 974 6404 4803**

**Call-In: +16694449171,,97464044803# US**

**NOTICE IS HEREBY GIVEN** that a Special Meeting of the Northern Delta-Mendota Regional Management Committee has been called for **Monday, May 4, 2026, 2:00 PM**, on items listed on the attached agenda, which is incorporated by reference and made a part hereof.

*Teleconference Locations:*

1 Plaza Circle  
Patterson, CA 95363

Persons with a disability may request disability-related modification or accommodation by contacting Karlee Liddy at the Hallmark Group Office, 500 Capital Mall Suite 2350, Sacramento CA 95814, via telephone at (916) 767-4287, or via email at kliddy@hgcpm.com. Requests should be made as far in advance as possible before the meeting date, preferably 3 days in advance of regular meetings or 1 day in advance of special meetings/workshops.

**AGENDA**

1. Call to Order/Roll Call (Pierce)
2. Pledge of Allegiance (Pierce)
3. Consider Corrections or Additions to the Agenda of Items, as Authorized by Government Code Section 54950 et seq. (Pierce)
4. Opportunity for Public Comment (Pierce)

**Consent Calendar**

5. Review and Take Action on the Consent Calendar (Pierce)

- a. Minutes of the March 4, 2026 Meeting
- b. Budget to Actual Report

**Closed Session**

- 6. Conference with Legal Counsel – Anticipated Litigation (Layne)  
*The Committee will meet in closed session to confer with legal counsel on significant exposure to anticipated litigation pursuant to paragraph (2) of subdivision (d) of Government Code Section 54956.9: (1 case)*

**Open Session**

- 7. Report from Closed Session (Layne)

**Action Items**

- 8. Direction on the Proposed Subbasin Model Calibration Phased Approach and Cost Share (Liddy)
- 9. Direction on the USBR WaterSMART Applied Science Grant Application (Liddy/ Dutton)
- 10. Consider Recommendation to the DM Subbasin JPA Board to Authorize Houston Engineering Make Improvements to the Data Management System (Liddy)

**Report Items**

- 11. Update on Subsidence Benchmark Sites Under the SGMA Round 1 Grant Implementation Activities (Liddy)
- 12. Update on GSP Implementation
  - a. Pumping Reduction Plan (PRP) Implementation and Exceedance Reporting (Dutton/Mani)
  - b. Q1 Water Level and Quality Monitoring Event and DMS Upload (Liddy)
- 13. Program Management Report (Liddy)
- 14. Next Steps (Liddy)
- 15. Reports Pursuant to Government Code Section 54954.2(a)(3) (Layne)
- 16. Next Meeting(s): (Pierce)
  - a. June 3, 2026, 1 p.m. PST, Patterson City Council Chambers
- 17. Adjournment (Pierce)



TO: Northern DM Region Management Committee  
Agenda Item No. 5

FROM: Karlee Liddy, Hallmark Group

DATE: May 4, 2026

SUBJECT: Review and Take Action on the Consent Calendar

**Recommendation**

Approve the Consent Calendar.

**Discussion**

The documents below are included in the consent calendar for consideration of approval:

- a. Minutes of the March 4, 2026 Northern DM Region Management Committee Meeting (**Attachment 1**).
- b. Budget to Actual Report through February 2026 from SLDMWA (**Attachment 2**) and through March 2026 from Hallmark Group (**Attachment 3**).



**Meeting of the Northern Delta-Mendota Region Management Committee**

Wednesday, March 4, 2026, 1:00 PM

Patterson City Council Chambers, 1 Plaza Circle, Patterson, CA 95363

**Draft Meeting Minutes**

**In-Person Attendees:**

Bobby Pierce, West Stanislaus Irrigation District  
Vince Lucchesi, Patterson Irrigation District (PID)  
Lacey McBride, Merced County  
Maria Encinas, City of Patterson  
Joel Andrews, City of Patterson  
Adam Scheuber, Del Puerto WD  
Larrisa Camara, City of Patterson  
Brittany Harker, Stanislaus County  
Amir Mani, EKI  
Karlee Liddy, Hallmark Group

**Online Attendees:**

Anthea Hansen, Del Puerto WD  
Christy McKinnon, Stanislaus County  
Lauren Layne, Baker Manock & Jensen  
Anona Dutton, EKI  
Susan Xie, EKI

**AGENDA**

- 1. Call to Order/Roll Call**  
Chair Pierce called the meeting to order at 1:00 pm PST.
- 2. Pledge of Allegiance**  
Chair Pierce led the Committee in the pledge of allegiance.
- 3. Consider Corrections or Additions to the Agenda of Items, as Authorized by Government Code Section 54950 et seq.**  
No corrections or additions were made.
- 4. Election of Committee Officers – Chair, Vice Chair, Secretary and Treasurer**

**Motion:**

Member Lucchesi made a motion to maintain the current Chair and Vice Chair (Members Pierce and Lucchesi, respectively), and to appoint Hallmark Group as the Northern DM Committee Secretary and Treasurer. The motion was seconded by Member Scheuber and passed unanimously via roll call vote.

**5. Opportunity for Public Comment**

There were no comments from members of the public at this time.

**Consent Calendar**

**6. Review and Take Action on the Consent Calendar**

- a. Minutes of the January 7, 2026 Meeting
- b. Budget to Actual Report

**Motion:**

Member Lucchesi made a motion to approve the consent calendar, which was seconded by Member Encinas and passed unanimously via roll call vote.

Member Encinas asked if others were still receiving invoices from the San Luis & Delta Mendota Water Authority for groundwater management activities and legal counsel Lauren Layne suggested she reach out to Scott Petersen (Water Policy Director) regarding those invoices.

**Closed Session**

**7. Conference with Legal Counsel – Anticipated Litigation**

The Committee did not enter closed session.

**Open Session**

**8. Report from Closed Session**

The Committee did not enter closed session.

**Action Items**

**9. Ratify the Northern DM GSA Group Representative and Alternate to the DM Authority Board of Directors**

Lauren Layne, Baker Manock & Jensen, provided background regarding the need for the Northern DM to ratify their representative to the DM Subbasin JPA Board.

**Motion**

Member Scheuber made the motion to ratify the Northern DM GSA Group representative and alternate to the DM Authority Board of Directors - Member Lucchesi and Member McKinnon, respectively. Member McBride seconded the motion, which passed unanimously via roll call vote.

**10. Consider Approval of Northern DM Committee Consultant Contracts and Recommend JPA Board Approval**

Karlee Liddy, Hallmark Group, provided background regarding the need for the Northern DM Committee to approve the consultant contracts. On February 9, 2026, the DM Subbasin JPA Board approved the Northern DM Region Management Committee Budget for Fiscal Year 2027. However, the Northern DM Committee and DM Authority Board need to authorize the consultant contracts, which were included in the meeting packet for consideration of approval.

She noted that the contract amounts match those outlined in the approved Fiscal Year 2027 Budget for the Northern DM Committee.

**Motion**

Member Lucchesi made a motion to authorize and recommend that the DM Subbasin JPA Board approve and execute consultant contracts for services to the Northern DM Region Management Committee, pursuant to Special Project Agreement. Member Encinas seconded the motion, which passed unanimously via roll call vote.

**11. Consider Approval of the Termination of the Activity Agreement with the San Luis & Delta-Mendota Water Authority and Authorize the Chairman to Sign the Notice of Termination of Activity Agreement Letter**

Lauren Layne stated that a letter signed by all entities of the Northern DM Region Management Committee terminating the activities agreement was requested by the SLDMWA Board of directors. She explained that since all of the Northern DM entities have signed the special project agreement with the DM Subbasin JPA, that already served as authorization to sign the termination agreement. Members Scheuber and Lucchesi directed staff to submit the signed termination agreement to the SLDMWA Board (with signature from Merced County pending).

**12. Review and Consider Approval of the 2026 Meeting Calendar for the Northern Delta-Mendota Region Management Committee**

Karlee Liddy presented the proposed meeting calendar for 2026 and stated that the Northern DM Committee could maintain the monthly meeting cadence (first Wednesday of the month) and would simply need to notice cancellations if directed by the Committee. Member Scheuber stated that the group should continue meeting monthly to continue providing recommendations to the Northern DM representative to the DM Subbasin JPA Board, which meets monthly.

**Motion**

Member Lucchesi made a motion to maintain the monthly meeting schedule for its regular meetings and to notice canceled meetings as needed. Member Scheuber seconded the motion, which passed unanimously via roll call vote.

**Report Items**

**13. Status of Northern Delta-Mendota Special Project Agreement**

Lauren Layne and Karlee Liddy provided an update on the special project agreement with the DM Subbasin JPA, noting that Merced County approved the agreement on March 3, 2026 and was awaiting signatures. All other GSAs of the Northern DM Committee signed at this time.

**14. SGMA Round 1 Grant Implementation Activities**

Though not included as a memo in the meeting packet, there was a discussion regarding the potential extension of the SGMA Grant through DWR. Karlee Liddy introduced three options for approaching the potential extension.

Member Scheuber stated that Del Puerto Water District is working with Aliso GSA and SJREC and would be in favor of the extension to help maximize subsidence benchmark locations. Chair Pierce asked what the scope of work was for component 8, and Member Scheuber responded that it would identify and establish more precise benchmarks for the Northern DM area,

including the installation of rods, brass caps and would account for any ground disturbance or NOE needed for CEQA compliance.

The Committee directed Member Lucchesi to vote in favor of option 3 to extend the existing grant funds through April 2027, and to authorize that Woodard & Curran initiate one more invoicing package with DWR.

**15. GSP Implementation Updates**

- a. Update on Pumping Reduction Plan and GSP Implementation Tracking and Exceedance Reporting
- b. Update on the Draft DM Subbasin Annual Report to DWR

Susan Xie and Amir Mani (EKI) provided a summary of the key takeaways from the technical ad hoc committee meeting on February 26, 2026, where the timing of proceeding with the model calibration was discussed. She stated that deferring the calibration to next year will still require firm commitment from all GSAs to provide complete high-quality data (including well registration and metering data).

Member Lucchesi stated that he envisions the initial calibration as a framework for the model, which will be fed with improved data and improved over time, and will not continue to be as expensive moving forward. Chair Pierce stated that the irrigation districts may have more tools to enforce well registration and metering than the county GSAs and listed three methods for doing so: 1. restrict surface water deliveries 2. pursue litigation 3. put meters on wells and monitor meter data.

Mr. Mani stated that improved surface water use data is also needed, and that the magnitude in the increase in surface water use from WY22-23 does not reflect the large drop in groundwater pumping by the model. Member Lucchesi suggested performing an internal QA/QC exercise well before the annual report is drafted next year, and staff agreed.

Member Encinas stated that the Floragold well is a proxy well for the Keystone well (02-009) and that groundwater quality data has been collected but the City is waiting for sample results from the lab. She also stated that Floragold well is in the upper aquifer, not lower.

Ms. Layne reminded the Committee that since the decision is ultimately a budget decision, that it will require a unanimous vote at the DM Subbasin JPA Board level.

**16. Program Management Report**

- a. Review of Previous Meeting Action Items
- b. Schedule of Key Milestones

Ms. Liddy gave a brief summary of action items completed since the last meeting (held in January), and there were no questions from the Committee.

**17. Next Steps**

- Send SLDMWA termination of activity agreement letter for the Board meeting on March 5, 2026.
- Maintain monthly meeting frequency and notice cancelations as needed.

- Direction to the Northern DM representative to the DM Subbasin JPA Board to support the DWR grant extension.
- Direction to the Northern DM representative to the DM Subbasin JPA Board to support the authorization to perform the model calibration in the current fiscal year.
- All GSAs provide comments/ feedback back to Woodard & Curran by March 13, 2026 and anticipate a special meeting of DM Subbasin JPA for week of March 23,2026.

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

Nothing to report.

**19. Next Meeting(s):**

The next meeting of the Northern DM Region Management Committee is scheduled for April 1, 2026 at 1 p.m. PST at Patterson City Council.

**20. Adjournment**

Member Lucchesi adjourned the meeting at 2:48 p.m.

**Attachment 2**

**SAN LUIS & DELTA-MENDOTA WATER AUTHORITY  
MARCH 1, 2025 - FEBRUARY 28, 2026  
SUSTAINABLE GROUNDWATER MANAGEMENT ACT SERVICES AGREEMENT  
ACTIVITY AGREEMENTS BUDGET TO ACTUAL  
NORTHERN DELTA-MENDOTA REGION (FUND 64)  
Report Period 3/1/25 - 2/28/26**

<b>EXPENDITURES</b>	Annual Budget	Paid/ Expense	Amount Remaining	% of Amt Remaining	Expenses Through
<b><u>Legal:</u></b>					
Baker Manock & Jensen	\$ 35,000	\$ 19,531	\$ 15,470	44%	2/28/26
<b><u>Other Professional Services:</u></b>					
Contracts	\$ 363,028	\$ 161,369	\$ 201,659	56%	1/31/26
<b><u>Other:</u></b>					
Executive Director	\$ 500	\$ -	\$ 500	100%	
General Counsel	\$ 1,500	\$ -	\$ 1,500	100%	
Water Policy Director	\$ 20,000	\$ 7,415	\$ 12,585	63%	12/12/25
In-House Staff	\$ 2,500	\$ 1,919	\$ 581	23%	2/28/26
Hydrotech 3	\$ 24,423	\$ 15,852	\$ 8,571	35%	2/28/26
Conferences & Training	\$ 1,000	\$ -	\$ 1,000	100%	
Travel/Mileage	\$ 2,000	\$ 73	\$ 1,927	96%	5/31/25
Group Meetings	\$ 1,000	\$ -	\$ 1,000	100%	
Telephone	\$ 500	\$ -	\$ 500	100%	
<b>Total Expenditures</b>	<b>\$ 451,451</b>	<b>\$ 206,159</b>	<b>\$ 245,292</b>	<b>54%</b>	

# **Northern Delta-Mendota Region Management Committee**

**Report on Financial Transactions  
May 4, 2026**

# Northern Delta-Mendota Region Management Committee

## Budget Variance Report

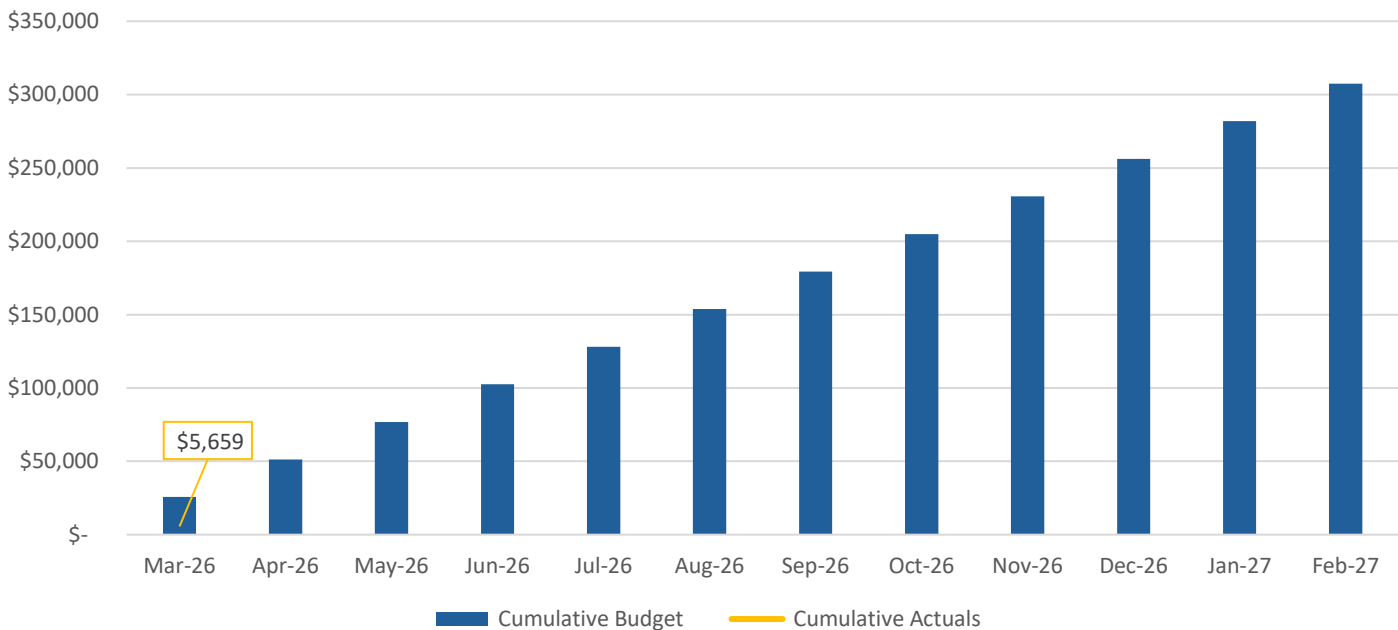
Fiscal Year-to-Date Through March 31, 2026

Operating Expenses	Actual	Budget	Variance
Legal Counsel	\$ 1,155	\$ 1,667	\$ (512)
Program Manager/Executive Director	4,504	8,957	(4,453)
Technical Consultants	-	6,667	(6,667)
Annual Report	-	6,250	(6,250)
Contingency	-	2,083	(2,083)
<b>Total Operating Expenses</b>	<b>\$ 5,659</b>	<b>\$ 25,624</b>	<b>\$ (19,964)</b>

### FY27 Operating Budget

Legal Counsel	\$ 20,000
Program Manager/Executive Director	107,482
Technical Consultants	80,000
Annual Report	75,000
Reserve Fund for GSP Update	100,000
Contingency	25,000
<b>Subtotal FY27 Operating Budget</b>	<b>\$ 407,482</b>
Reserve Funds (Restricted Cash Deposits):	
Reserve Fund for GSP Update	100,000
<b>Net FY27 Operating Budget</b>	<b>\$ 307,482</b>

### Cumulative Budget-to-Actual

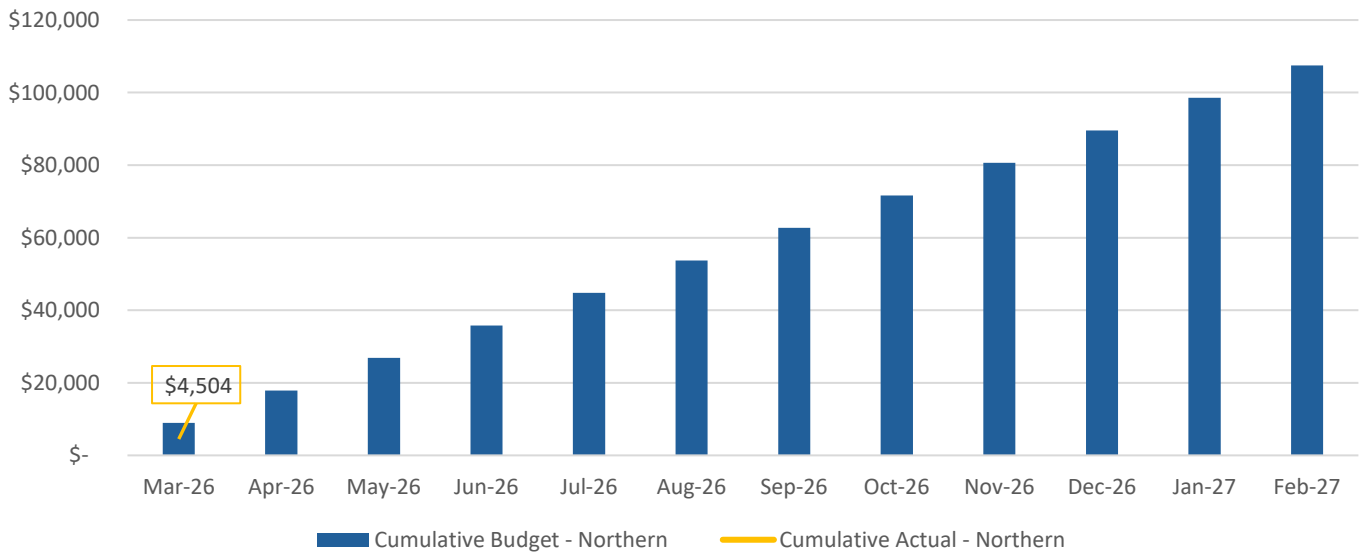


# Northern Delta-Mendota Region Management Committee

## Primary Contracts

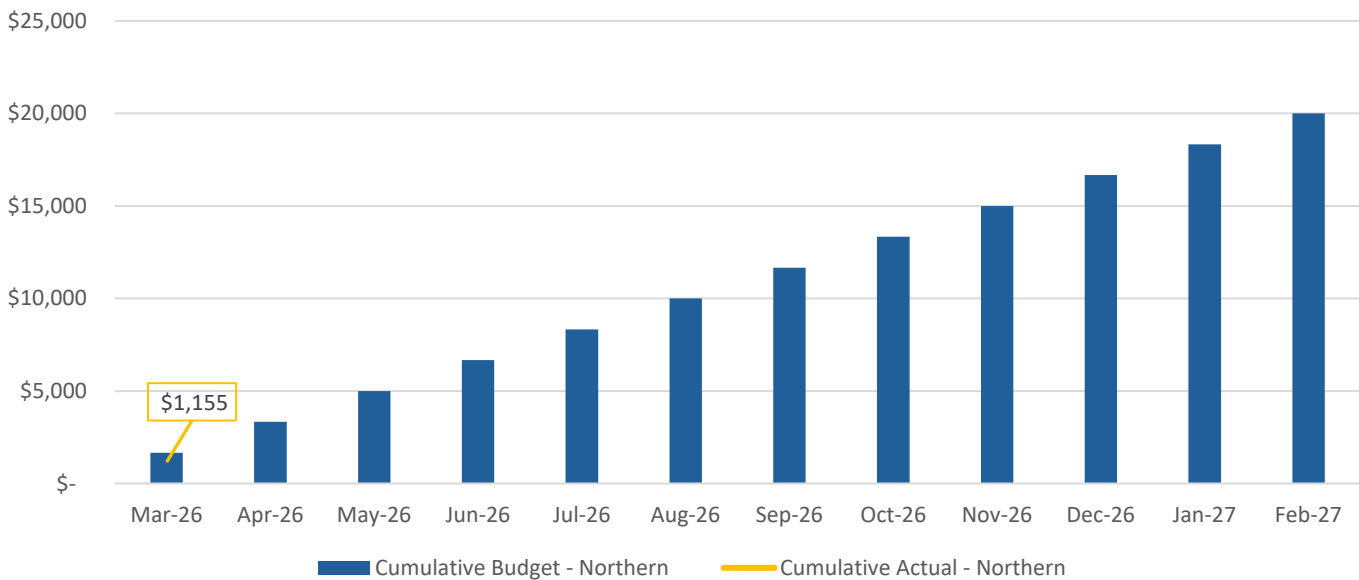
### Hallmark Group

#### Cumulative Budget-to-Actual



### Baker Manock & Jensen

#### Cumulative Budget-to-Actual



**Northern Delta-Mendota Region Management Committee**  
**Member Agency Contribution Invoicing**  
**As of April 30, 2026**

Agency	Invoice Amount
City of Patterson GSA	\$ 20,374.10
Del Puerto Water District	56,232.52
Merced County	3,056.12
Oak Flat Water District	4,889.78
Patterson Irrigation District GSA	28,523.74
Stanislaus County	58,066.19
West Stanislaus Irrigation District GSA	32,598.56
<b>Total Contributions Invoiced</b>	<b>\$ 203,741.01</b>

*Payments received as of April 30, 2026*

## Northern Delta-Mendota Region Management Committee Summary of Invoices Memo

The invoices below have been reviewed and approved for payment by the Executive Director and are expected to be paid by May 31, 2026.

<b>Vendor/Consultant</b>	<b>Billing Period</b>	<b>Invoice Total</b>
Baker Manock & Jensen	Mar-26	\$1,155.00
Hallmark Group	Mar-26	\$4,504.06
<b>Total</b>		<b>\$5,659.06</b>

The Northern Delta-Mendota Region Management Committee checking account balance at JPMorgan Chase Bank was \$198,851.23 as of April 30, 2026.



TO: Northern DM Region Management Committee  
Agenda Item No. 8

FROM: Karlee Liddy, Hallmark Group

DATE: May 4, 2026

SUBJECT: Direction on the Proposed Subbasin Model Calibration Phased Approach and Cost Share

### **Recommendation**

Provide direction to the Northern DM GSA Group representative to the DM Subbasin JPA Board regarding the model calibration phased approach and cost share.

### **Discussion**

On February 4, 2026, the DM JPA Board ratified the Fiscal Year 2027 Budget and authorized an initial cash call to the GSA Groups for 6-months of costs totaling \$536,350. During this meeting, the Board authorized the execution of a contract with EKI for technical support services with the condition that the “Model Calibration” task (section 3.2) be discussed with the technical ad hoc prior to further Board review.

On February 9, 2026, EKI confirmed that the Board needed to decide by the end of March 2026 if the model calibration should be performed in Fiscal Year 2027 to allow adequate time to perform the work. On February 26, 2026, the technical ad hoc met to discuss the model calibration, and during the March 9, 2026 DM Subbasin JPA Board meeting, after lengthy discussion on the topic, the Board deferred the decision on model calibration to the April 13, 2026 meeting.

During the April 13, 2026 DM JPA Board meeting, EKI presented a phased approach to the model update. The Board generally supported a phased approach, but requested that the cost share methodology for current and future technical work (including the proposed model calibration) be revisited. The Board directed staff to convene 1) the budget ad hoc to address the cost share issue for future technical efforts in the DM Subbasin, including the model calibration, and 2) the technical ad hoc to further review and provide feedback to EKI on the proposed phased approach. The Board directed both ad hoc meetings to include representatives from the seven GSA Groups and a list of participants is included below.

The technical ad hoc met on April 22, 2026 to review and discuss the phased approach. The ad hoc confirmed unanimous support for the phased approach as presented by EKI. EKI’s presentation for the phased approach to the model calibration is provided as **Attachment 1**, with a minor addition to task 4 as suggested by the ad hoc.

The budget ad hoc met on April 21, 2026, and agreed that the existing 1/7<sup>th</sup> cost share and the acreage-based cost share options (A and B) were not likely to receive consensus from the DM JPA Board. Therefore, the ad hoc developed four additional cost share options provided as **Attachment 2**.

The ad hoc also considered a minimum cost share percentage and maximum cost share percentage for each of the seven participating DM GSA Groups, but no formal recommendation was developed for the DM Subbasin JPA Board. Lastly, the ad hoc identified a lack of consensus regarding the definition of technical efforts to which the cost share allocation would be applied in the future.

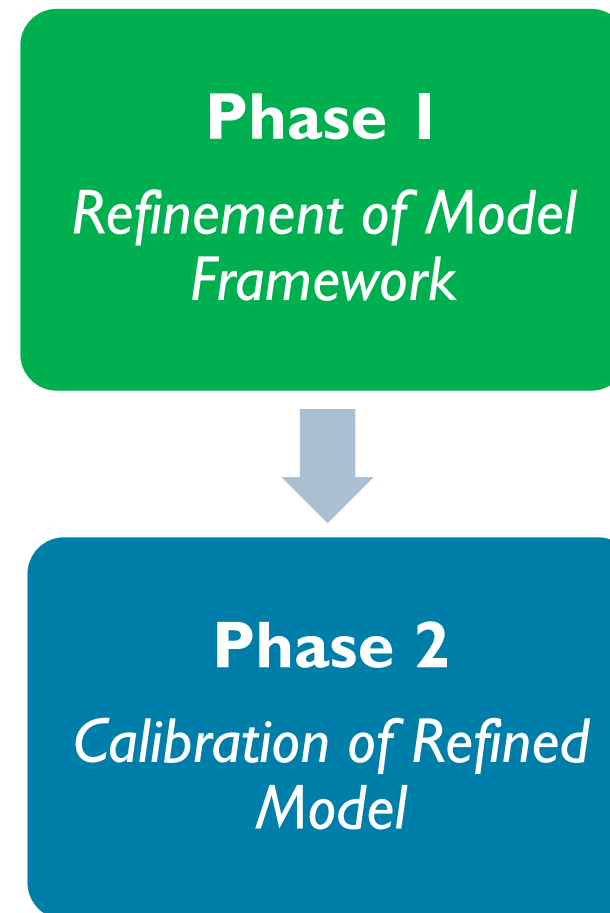
On April 23, 2026, the Central DM GSA Board reviewed, discussed, and provided direction to the Central DM GSA Group representative to the DM Subbasin JPA Board to approve the cost share options A or D for the phased approach to the model calibration.

Ad hoc GSA Group Participants

	<b>GSA Group</b>	<b>Budget Ad hoc</b>	<b>Technical Ad hoc</b>
1	Aliso	Joe Hopkins (Director)	Joe Hopkins (Director) Ethan Andrews Rick Iger
2	Central	Chase Hurley (Director)	Patrick McGowan
3	Farmers	Will Halligan	Jim Stilwell (Director) Will Halligan Andrew Francis
4	Fresno	Auggie Ramirez (Director)	Will Halligan
5	Grassland	Ellen Wehr	Rick Iger
6	Northern	Bobby Peirce	Adam Scheuber
7	SJREC	<i>None</i>	John Wiersma (Director) Jarrett Martin (Alternate)

# PHASED APPROACH

- Recommending revised phased approach to model calibration
  - 2-year process
  - ~\$200-\$300k per phase
  - Phased approach will ultimately allow for closer alignment between parties on modeling effort
- Proposing to conduct Phase I this year, which includes a reduced scope aimed at refining the model framework



# PHASED APPROACH BREAKDOWN

## Phase 1

### Refinement of Model Framework

- Aimed at refining existing model structure and inputs and developing a local model from regional CVHM2
- Involves refinement of land uses, surface water use, lithology, boundary conditions, land surface water budget, grid, and total groundwater use
- Contingent on receiving clarity on land surface water budget

**Deliverable for Phase 1:**  
*Updated framework for model*



## Phase 2

### Calibration of Refined Model

- Includes calibrating the refined model from Phase 1
  - Refining aquifer and subsidence parameters
  - Matching water level and subsidence data
- Contingent on receiving metered data and refined well inventory with locations and screening depths

**Deliverable for Phase 2:**  
*Calibrated Model*

# OBJECTIVE AND PHASE 1 SCOPE

- Define Model calibration objectives and intended Model use to inform scope decisions and Task structure.

## Task 1 – Coordination With a Technical Ad-hoc Group (TAG)

- Anticipated Key decision points – Bi-monthly meetings on average:
  - Coordination with neighboring basins and data gathering
  - Define Model platform and temporal and spatial extent, resolution, and layering
  - Review of surface water budgets and well inventory to be implemented in the model
  - Review and approve assumptions related to data gap filling
  - Review and approve calibration plan

## Task 2 – Data Review, and Defining Model Platform, Extent, Domain, and Resolution

- Review available datasets, including information developed for the GSP, subsidence data, and newly available data through WY 2025
- Review data from neighboring basins and formalize the model's active domain
- Define Model platform best suited to provide the simulation and representation desired based on availability of data and objectives
- Evaluate and refine model resolution (grid size and layering) to ensure sufficient representation of GSA operations and lithology

# PHASE 1 SCOPE (CONT.)

## Task 3 – Development of Hydrostratigraphic Framework and Model Structure (Refine Model Grid and Layering)

- Improve Basin Leapfrog Model resolution based on additional data, use publicly available data and CVHM2 to extent to entire model domain
- Implement refined model extent and layering based on Task 2 and enhanced Leapfrog Model
- Improve layer alignment, resolve inconsistencies in aquifer representation, and enhance the differentiation of fine- and coarse-grained materials to support improved simulation of groundwater flow and subsidence
- Address known structural issues such as misrepresentation of hydrogeologic conditions in portions of the Basin

## Task 4 – Refinement of Land Surface Inputs and Simulation

- Refine land surface inputs and associated model packages (e.g., FARM, SFR, MNW2) to improve representation of land use, irrigation demand, surface water deliveries, and groundwater pumping.
- Cross check aquifer specific and total estimated pumping from land surface budgets and the current CVHM2 model against available metered data from the GSAs, identify data gaps, and define an approach to improve those estimates as part of this modeling phase.
- Updates will incorporate available data through WY 2025 and will focus on improving the temporal (annual and sub-annual) and spatial representation of recharge, pumping, and return flows within the Basin

# PHASE 1 SCOPE (CONT.)

## Task 5 – Historical Model Adjustment and Verification

- Construct the historical model to reflect improvements based on Tasks 1-4
- Compare simulated groundwater levels, streamflows, and subsidence to observed data to assess the reasonableness of model inputs and structure prior to calibration
- Model performance will be evaluated using statistical metrics (e.g., RMSE, bias, correlation) and supporting graphical analyses (e.g., hydrographs, scatterplots, and spatial residual maps) to identify areas requiring further refinement

## Task 6 – Project Management and Client Coordination

- Provide overall project management, including coordination with the Client and TAG, tracking progress and schedule, and preparing invoices and progress updates

## Q&A

- Question theme I: model framework and hydrogeologic representation
  - Model layering and hydrostratigraphy
  - Representation of upper vs lower aquifer
  - Corcoran clay and confining units
  - Model domain extent and resolution
- *Model structure will be refined, both in grid and layering, based on the Basin HCM and its associated lithologic Leapfrog Model.*
- *Model extent will be determined based on available data to constrain GWLs and boundary flows, and to simulate and extend operations (SW, pumping, and recharge).*

# Q&A

- Question theme 2: representation of hydrologic processes and inputs
  - Groundwater pumping and well configuration
  - Surface water deliveries, routing, and transfers
  - ET, recharge, and return flow
  - Use of datasets (e.g., CVHM2, ET, land use)
  - Parameter assumptions (K,  $S_y$ , etc.)
- *Land surface inputs (land use, irrigation demand, SW deliveries, and pumping) will be updated based on data available through WY 2025. The data will be the reference to adjust CVHM2 surface water inputs and pumping.*
- *Additional data collected through WY 2026 will be utilized as part of phase 2 of the model calibration.*
  - *Well registration data will be used to update well representation within the Basin and replace USGS/CVHM2 assumptions.*

# Q&A

- Question theme 3: Model verification, resolution, and readiness for Calibration
  - Verification against observed data
  - Cross-checks (e.g., metered vs. simulated pumping)
  - Temporal coverage
  - Ability to resolve conditions at GSA scale
  - Reduction of uncertainty and improvement in confidence
- *Model performance evaluation will be based on the comparison of simulated groundwater conditions (GWs and subsidence) with observed data, and include key aggregated statistics such as RMSE.*
- *Model grid refinement will provide enhance representation of conditions at GSA-scale.*
- *Cross-checks of pumping will be done through the Land Surface Water Budget validation identified.*

Questions?



# Model Calibration Cost Share Options

Model Calibration cost (est.)      \$      500,000

Reference Data:					
		WY 25 Pumping	Acres	AF/ac	AF/ac %
1	SJREC	114,366	291,069	0.39	6%
2	Central	18,441	163,787	0.11	2%
3	Northern	37,708	152,140	0.25	4%
4	Grassland	18,119	104,137	0.17	3%
5	Aliso	73,900	26,636	2.77	40%
6	Fresno	12,273	22,519	0.55	8%
7	Farmers	5,800	2,214	2.62	38%
		<u>280,607</u>	<u>762,502</u>	<u>6.87</u>	

GSA Group	A		B		C			
	A: 1/7th Cost Share		B: Acreage-Based		C: Hybrid: Entity + Acreage			
	Cost	Percent	Cost	Percent	50% Per Entity	50% Per Acre	Cost	Percent
1	\$ 71,429	14.3%	\$ 190,864	38.2%	\$ 35,714	\$ 95,432	\$ 131,146	26.2%
2	\$ 71,429	14.3%	\$ 107,401	21.5%	\$ 35,714	\$ 53,701	\$ 89,415	17.9%
3	\$ 71,429	14.3%	\$ 99,764	20.0%	\$ 35,714	\$ 49,882	\$ 85,596	17.1%
4	\$ 71,429	14.3%	\$ 68,286	13.7%	\$ 35,714	\$ 34,143	\$ 69,857	14.0%
5	\$ 71,429	14.3%	\$ 17,466	3.5%	\$ 35,714	\$ 8,733	\$ 44,447	8.9%
6	\$ 71,429	14.3%	\$ 14,767	3.0%	\$ 35,714	\$ 7,383	\$ 43,098	8.6%
7	\$ 71,429	14.3%	\$ 1,452	0.3%	\$ 35,714	\$ 726	\$ 36,440	7.3%
Total	\$ 500,000	100%	\$ 500,000	100%	\$ 250,000	\$ 250,000	\$ 500,000	100%

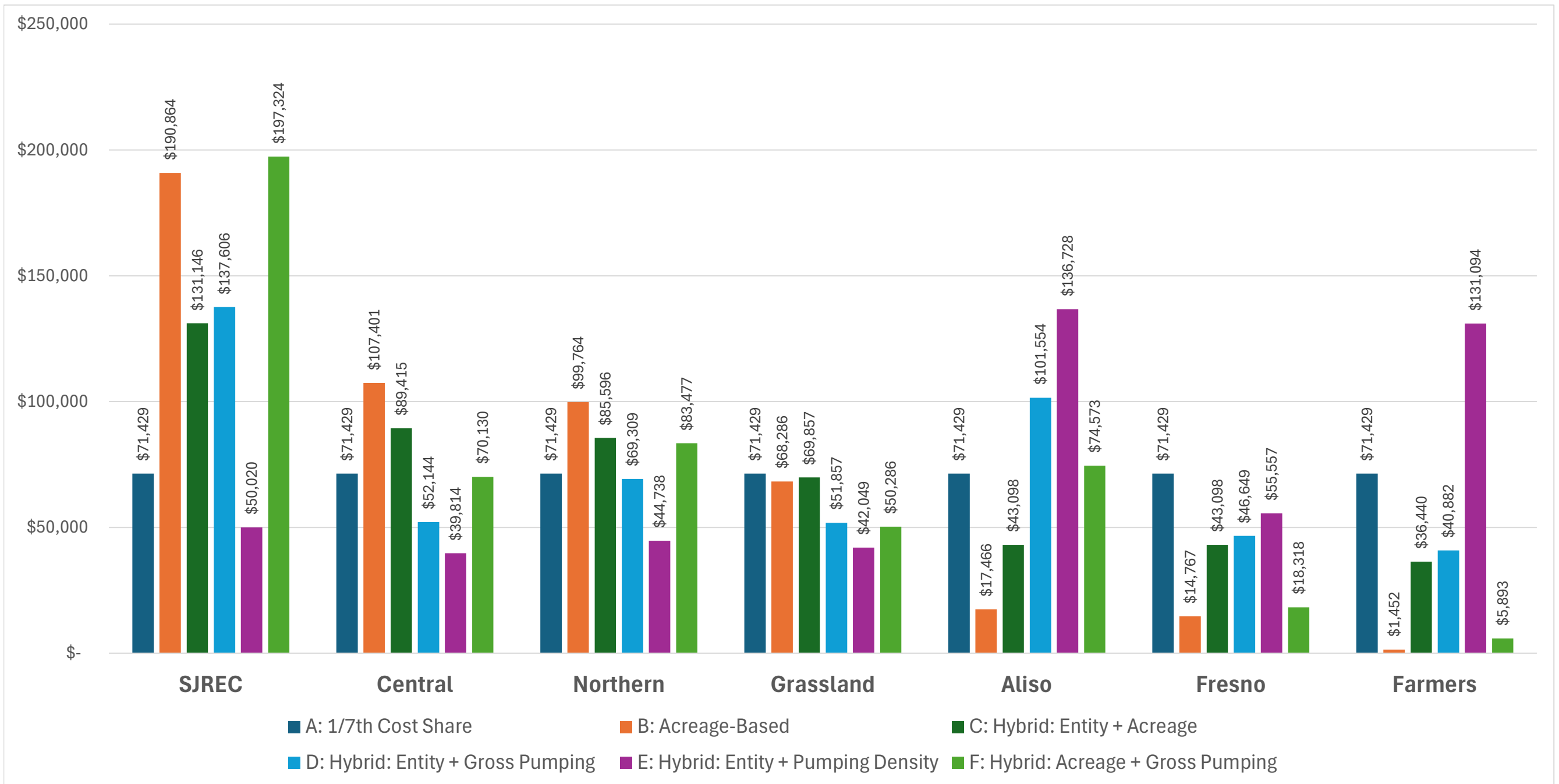
GSA Group	D				E				F			
	D: Hybrid: Entity + Gross Pumping				E: Hybrid: Entity + Pumping Density				F: Hybrid: Acreage + Gross Pumping			
	50% Per Entity	50% Gross Pumping	Cost	Percent	50% Per Entity	50% Pumping Density	Cost	Percent	50% Per Acre	50% Gross Pumping	Cost	Percent
1	\$ 35,714	\$ 101,892	\$ 137,606	27.5%	\$ 35,714	\$ 14,306	\$ 50,020	10.0%	\$ 95,432	\$ 101,892	\$ 197,324	39.5%
2	\$ 35,714	\$ 16,430	\$ 52,144	10.4%	\$ 35,714	\$ 4,099	\$ 39,814	8.0%	\$ 53,701	\$ 16,430	\$ 70,130	14.0%
3	\$ 35,714	\$ 33,595	\$ 69,309	13.9%	\$ 35,714	\$ 9,024	\$ 44,738	8.9%	\$ 49,882	\$ 33,595	\$ 83,477	16.7%
4	\$ 35,714	\$ 16,143	\$ 51,857	10.4%	\$ 35,714	\$ 6,335	\$ 42,049	8.4%	\$ 34,143	\$ 16,143	\$ 50,286	10.1%
5	\$ 35,714	\$ 65,839	\$ 101,554	20.3%	\$ 35,714	\$ 101,014	\$ 136,728	27.3%	\$ 8,733	\$ 65,839	\$ 74,573	14.9%
6	\$ 35,714	\$ 10,934	\$ 46,649	9.3%	\$ 35,714	\$ 19,843	\$ 55,557	11.1%	\$ 7,383	\$ 10,934	\$ 18,318	3.7%
7	\$ 35,714	\$ 5,167	\$ 40,882	8.2%	\$ 35,714	\$ 95,380	\$ 131,094	26.2%	\$ 726	\$ 5,167	\$ 5,893	1.2%
Total	\$ 250,000	\$ 250,000	\$ 500,000	100%	\$ 250,000	\$ 250,000	\$ 500,000	100%	\$ 250,000	\$ 250,000	\$ 500,000	100%

**Cost Contribution By Entity**

	SJREC	Central	Northern	Grassland	Aliso	Fresno	Farmers
<b>A</b> A: 1/7th Cost Share	\$ 71,429	\$ 71,429	\$ 71,429	\$ 71,429	\$ 71,429	\$ 71,429	\$ 71,429
<b>B</b> B: Acreage-Based	\$ 190,864	\$ 107,401	\$ 99,764	\$ 68,286	\$ 17,466	\$ 14,767	\$ 1,452
<b>C</b> C: Hybrid: Entity + Acreage	\$ 131,146	\$ 89,415	\$ 85,596	\$ 69,857	\$ 43,098	\$ 43,098	\$ 36,440
<b>D</b> D: Hybrid: Entity + Gross Pumping	\$ 137,606	\$ 52,144	\$ 69,309	\$ 51,857	\$ 101,554	\$ 46,649	\$ 40,882
<b>E</b> E: Hybrid: Entity + Pumping Density	\$ 50,020	\$ 39,814	\$ 44,738	\$ 42,049	\$ 136,728	\$ 55,557	\$ 131,094
<b>F</b> F: Hybrid: Acreage + Gross Pumping	\$ 197,324	\$ 70,130	\$ 83,477	\$ 50,286	\$ 74,573	\$ 18,318	\$ 5,893

**Percent Contribution By Entity**

	SJREC	Central	Northern	Grassland	Aliso	Fresno	Farmers
<b>A</b> A: 1/7th Cost Share	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%
<b>B</b> B: Acreage-Based	38.2%	21.5%	20.0%	13.7%	3.5%	3.0%	0.3%
<b>C</b> C: Hybrid: Entity + Acreage	26.2%	17.9%	17.1%	14.0%	8.9%	8.6%	7.3%
<b>D</b> D: Hybrid: Entity + Gross Pumping	27.5%	10.4%	13.9%	10.4%	20.3%	9.3%	8.2%
<b>E</b> E: Hybrid: Entity + Pumping Density	10.0%	8.0%	8.9%	8.4%	27.3%	11.1%	26.2%
<b>F</b> F: Hybrid: Acreage + Gross Pumping	39.5%	14.0%	16.7%	10.1%	14.9%	3.7%	1.2%





TO: Board of Directors  
Agenda Item No. 9

FROM: Karlee Liddy, Hallmark Group

DATE: May 4, 2026

SUBJECT: Direction on the USBR WaterSMART Applied Science Grant Application

### **Recommendation**

Direction on the USBR WaterSMART Applied Science Grant Application.

### **Discussion**

On March 5, 2026, the U.S. Bureau of Reclamation (USBR) announced the WaterSMART: Applied Science Grants opportunity for state, tribal and local entities to plan and implement actions that increase water supply and hydropower reliability across California.

On April 28, 2026, the USBR hosted a public webinar to provide grant details and application tips for entities interested in applying. The \$6M grant supports Modeling, Forecasting, and Data Accessibility projects that help improve water delivery, enhance water supply forecast skill, and improve drought management throughout the state. Therefore, **staff seeks direction from the Northern DM Committee regarding applying for the grant opportunity to help cover the Subbasin model calibration costs.**

### **Considerations for the Committee include:**

1. The first round grant application is due **July 8, 2026.**
2. **7-10 Awards** are anticipated for the first round.
3. Each award not to exceed **\$400,000.**
4. **50% non-federal cost share** is required.
5. It is possible to **start the projects now** and apply the costs incurred toward the required match until the grant is awarded.
6. EKI estimates that developing an application to the grant opportunity will require about **\$30,000**, which is not currently included in the approved Fiscal Year 2027 budget. EKI may develop a scope of work and describe what is needed to fulfill the application requirements for DM Subbasin JPA Board consideration on May 18, 2026.



TO: Board of Directors  
Agenda Item No. 10

FROM: Karlee Liddy, Hallmark Group

DATE: May 4, 2026

SUBJECT: Consider Recommendation to the DM Subbasin JPA Board to Authorize Houston Engineering Make Improvements to the Data Management System

**Recommendation**

Direction on potential Data Management System enhancements.

**Discussion**

In June 2025, and in preparation for the Fiscal Year 2027 budget development, Woodard & Curran worked with Houston Engineering to develop a list of potential data management system (DMS) enhancements and associated costs. The Fiscal Year 2027 budget was approved by the Delta-Mendota Subbasin which included approximately \$12,000 for potential DMS enhancements.

During the March 19, 2026, technical ad hoc meeting, the ad hoc provided a recommendation on which DMS enhancements to implement which is provided as **Attachment 1** and total approximately \$9,000.

**Committee Feedback Needed:**

- Staff is seeking a recommendation to the DM Subbasin JPA Board (which will convene on May 18, 2026) on the DMS enhancements that were recommended by the technical ad hoc.

**Proposed Improvements to the Delta-Mendota Subbasin Data Management System - 2026**

Item No.	Improvement Description (blue text = added detail/ refined scope from tech ad hoc)	Cost	Tech Ad Hoc Recommendation 3/19/2026
1	Identifier for proxy data collected with different symbology displayed on hydrograph or chemograph	\$2,154	Implement
2	DMS accounts for each GSA representative/agency responsible for monitoring wells with permission to upload data (Separate out Northern and Central GSA groups, with respective participants)	\$2,200	Implement
3	Email reminders to specific well contacts to upload data by designated date (i.e., grace period of 1 week following end of month for groundwater levels)	\$909	Implement
4	Linear trend line on hydrographs calculated by 4-year rolling average of season low measurements for groundwater levels	\$1,482	No
5	Linear trend line on chemographs calculated by 3-year rolling average concentration for each constituent of concern for groundwater quality, or other methodology as defined in each Pumping Reduction Plan	\$1,077	No
6	Add a new input to the subsidence monitoring site data entry formed called: "Is this subsidence monitoring site within the SSMA (Southern Subsidence Management area) or within 1 mile of delta Mendota canal. This will be a Yes/No input.	\$336	No
7	Monthly exports of measurements exceeding the MTs by GSA	\$1,077	No
8	Data validation checks to identify questionable measurements not identified as such during monitoring activities (flag measurements as questionable that fall outside of the historical minimum and maximum for each well)	\$1,077	Implement
9	Perform QA/QC of "Export Data" tool from DMS to ensure any calculations and data categories are correct	\$741	
10	Modify groundwater level data import sheet to require associated depth to groundwater measurement	\$336	No
11	Auto-import latest InSAR layer from DWR's SGMA Data Viewer to display on DMS Dashboard Map, stations, benchmarks, extensometers	\$1,800	Implement
<b>TOTAL</b>		<b>\$13,189</b>	
<b>Total (Implement)</b>		<b>\$8,881</b>	



TO: Northern DM Region Management Committee  
 Agenda Item No. 12

FROM: Karlee Liddy, Hallmark Group

DATE: March 4, 2026

SUBJECT: GSP Implementation Updates

**Recommendation**

None; Information only.

**a. Pumping Reduction Plan (PRP) Implementation and Exceedance Reporting**

An update on the PRP and GSP implementation tracking and exceedance reporting is provided as **Attachment 1**.

**b. Q1 Water Level and Quality Monitoring Event and DMS Upload**

As required by the Sustainable Groundwater Management Act (SGMA), the Delta-Mendota Subbasin GSAs are responsible for measuring, monitoring, and reporting groundwater level and quality data on a quarterly and biannual basis, respectively. The target months for monitoring are below:

Groundwater Level Monitoring	Groundwater Quality Monitoring
February	February
May	--
August	August
November	*Constituents: arsenic; nitrate; 1,2,3-TCP; gross alpha radioactivity; TDS; and hexavalent chromium.

All Q1 data has been received from all Northern DM GSAs. Staff is working to get all data uploaded into the DMS as soon as possible.