Delta-Mendota Subbasin Coordination Committee

May 13, 2019, 9:30 AM

Meeting Minutes

Coordination Committee Members and Alternates Present

Ric Ortega – Grassland Water District
John Wiersma – San Luis Canal Company
Jim Stilwell – Farmers Water District
Jarrett Martin – Central California Irrigation District
Ben Fenters – San Luis Water District
Lacey Kiriakou – Merced County
Joe Hopkins – Provost & Pritchard/Aliso Water District

Others Present

John Beam – Grassland Water District
Claire Howard – CivicSpark/SLDMWA
Seth Harris – SLDMWA
Andrew Garcia – SLDMWA
Leslie Dumas – Woodard & Curran

By Phone

Ellen Wehr – Grassland Water District
Kirsten Pringle – Stantec

AGENDA

1. **Call to Order/Roll Call**

Ben Fenters called the meeting to order at approximately 9:38 AM

2. **Committee to Consider Corrections or Additions to the Agenda of Items, as authorized by Government Code Section 54950 et seq.**

Andrew Garcia made three amendments to the agenda of items, which are all reflected in updated item list in the meeting minutes.

- The Committee will move "Committee to Consider Approval of Scope of Work for GSP Implementation" to a Report Item for discussion rather than approval. This item is now listed as #9 under the Report Items section.
- The item "Committee to Consider Approval of Original Estimate of FY 20 Budget" will move to a Report Item because not all Coordination Committee members were in attendance, and approval for budget requires full attendance. This item is now listed as #10 under the Report Items section.

- The item "Committee to Consider Approval of Roll-Up of Sustainable Management Criteria and Monitoring Networks" will be amended for "Committee to Consider Approval of Roll-Up of Sustainable Management Criteria and Representative Monitoring Networks." This is now listed as #7 under the Action Items section.

3. **Opportunity for Public Comment**

No members of the public were present; no public comment was received.

Consent Calendar

4. **Committee to Consider Approval of April 8, 2019 Meeting Minutes**

The Committee approved the meeting minutes from the April 8th Coordination Committee meeting. Ric Ortega provided the motion for the approval and Joe Hopkins seconded the approval.

Action Items

5. **Committee to Consider Approval of Lower Aquifer Sustainable Yield Memo, Garcia**

The Committee reviewed the memo explaining the lower aquifer sustainable yield determination. Jarrett Martin provided the motion for the approval, and Ric Ortega seconded.

6. **Committee to Consider Approval of Upper Aquifer Sustainable Yield Range, Garcia**

Andrew explained the determination of the range for the upper aquifer sustainable yield, including the use of a 10% error to develop a range for the projected sustainable yield with conditions included for climate change factors as well as projects and management actions. Andrew explained that additional input on the memo is still needed, especially from the legal counsels of the Coordination Committee parties. Andrew explained that he will redistribute the memo and seek additional clarification from the member agencies prior to further review during the June Coordination Committee meeting.

7. **Committee to Consider Approval of Roll-Up of Sustainable Management Criteria and Representative Monitoring Networks, Dumas**

Leslie Dumas provided an overview of the roll-up table that summarized the sustainable management criteria verbiage for each GSP group. She explained that specific minimum threshold and measurable objective criteria for each representative monitoring site is included in a separate spreadsheet. Since sustainable management criteria will be reviewed during the upcoming public workshops, the draft table will be recirculated to gather additional input from Committee members.

The Woodard & Curran team also provided a set of maps with labeled representative monitoring sites. Jarrett Martin explained that the San Joaquin River Exchange Contractors team will provide a revised map package for the SJREC area for inclusion in the maps that will presented in the upcoming public workshops. The Committee discussed that the data gaps referenced in the monitoring network maps will not be included in the maps that will be presented during the public workshops. The Committee determined that the Technical Working Group will further discuss data gap sections and buffer zones.

Jarrett Martin expressed concern regarding the development of the subsidence monitoring network maps. He explained that there was disconnect when forming the maps, and that SJREC will ensure that the maps presented at the workshops will be updated to ensure they encompass only the representative network. He also expressed concern about the materials presented to The Nature Conservancy in late April that provided information on groundwater dependent ecosystems, vegetative index, and wetland areas in the Subbasin. Jarrett explained that the maps presented did not have the updated information for SJREC's area that had been provided earlier, and he shared that he was concerned that this incorrect mapping could later harm the Subbasin following GSP submission. Andrew shared that this process was a lesson learned, and reinforced the need for groups within the Subbasin to communicate more.

Ric Ortega also shared that the monitoring networks did not include a correct map for Grassland GSA; Ric said he will share an updated shapefile for the Grassland area. Andrew said that the updated GDE information will be reviewed at the next in-person Technical Working Group meeting. Leslie shared that this situation emphasizes the version control issue that members within the Subbasin have faced in the GSP development process; she shared that groups should share metadata to address this problem.

The Committee approved the sustainable management criteria roll-up and the representative monitoring network pending additional refinement in the following week. Jarrett motioned this approval, and Ric seconded it.

8. **Committee to Consider Approval of Budget to Actuals Report, Garcia**

The Committee reviewed the prepared budget to actual report. Andrew explained that the section for SLDMWA salary and Contracts are both only for March 2019. Jarrett motioned to approve the report and Augie seconded the approval.

Report Items

9. **Committee to Discuss Scope of Work for GSP Implementation, Garcia**

Andrew walked through each section of the compiled scope of work summary for GSP implementation. This summary includes a breakdown of tasks as well as components delegated to SLDMWA staff and components reserved to individual GSP groups. Andrew explained that input received for this task breakdown will be essential for SLDMWA to develop an accurate understanding of its responsibilities during GSP implementation.

10. **Committee to Discuss Original Estimate of FY 20 Budget, Garcia**

Andrew explained that the original FY 20 budget was presented during the January Coordination Committee meeting when the FY 18 and FY 19 original estimates were approved. During this January meeting, the Coordination Committee did not approve the original estimate for FY 20. More information will be provided in future meetings to discuss the FY 20 budget.

11. **Committee to Discuss Payment of January and February 2019 Invoice, Garcia/Dumas**

The discussion for items #11 and #12 were combined. The notes from this discussion are included under item #12.

12. **Committee to Discuss Amendment 3 Request for Coordinated Costs, Garcia**

Andrew explained that the January and February 2019 invoice for coordinated consultant expenses reflects the increase in consultant involvement to refine the water budgets developed for the Subbasin. The increase in water budget adjustments and associated meeting time resulted in a higher invoice for January and February 2019 than was previously anticipated. The Amendment 3 request reflects an increased budget for coordinated expenses, and includes the January and February 2019 invoices.

The Amendment 3 request that identifies the increase in budget for the Coordination Committee's consultant costs must be shared with individual agency boards for approval prior to seeking the Coordination Committee's approval. The Coordination Committee determined that the January and February 2019 invoice and the Amendment 3 request will be reviewed by a subgroup of Coordination Committee members prior to acceptance by the Coordination Committee. A Doodle poll will be shared with this subgroup to determine a meeting time for later this week or the following week. Following this discussion, the Coordination Committee will seek approval of the Amendment 3 request at a future Coordination Committee meeting.

13. **Committee to Discuss Spring Workshops and Presentation Slides, Pringle**

The Coordination Committee reviewed the slides developed by the Communications Working Group for the public workshops scheduled for the following week. The Coordination Committee provided feedback that was shared with the Communications Working Group and considered for inclusion during the public workshops.

14. **Next Steps**

- The monitoring network maps will be updated with revised shapefiles from GSP groups and with corrected information provided by GSP group representatives prior to printing posters for display during the public workshops.
- A Doodle poll will be shared with a subgroup of the Coordination Committee to determine a time for further discussion of the January and February 2019 invoice and Amendment 3 request for coordinated consultant costs.
- The feedback shared regarding the presentation slides will be shared with the Communications Working Group and considered for inclusion during the public workshops.
- The sustainable management criteria will be reviewed and any additional comments must be shared by Thursday, May 16th.
- The January and February invoice will be considered for formal approval at a future Coordination Committee meeting.

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

No additional topics were discussed under this item.

16. **ADJOURNMENT**

The meeting was adjourned at 12:44 PM.

SAN LUIS & DELTA-MENDOTA WATER AUTHORITY

P O Box 2157 Los Banos, CA 93635
(209) 826-9696 Phone (209) 826-9698 Fax

MEMO

TO:	Coordination Committee
FROM:	San Luis & Delta-Mendota Water Authority
PRESENTED BY:	Andrew Garcia, SLDMWA
SUBJECT:	Budget to Actual
DATE:	June 10, 2019 Committee Meeting

Budgeted expenditures for FY 2020 for the overall Coordination Committee is $152,152.
Total SLDMWA expenses through April 2019 are $3,634 or 2.3% of expenses.
Woodard & Curran invoices to date only represent invoices for March 2019.
These invoices are $39,520 to account for the remaining 26.1% of expenses.
Budget remaining for FY 2020 is $108,998 or 71.6%.
The costs represented for April and May 2019 are estimated costs and subject to change.

SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
MARCH 1, 2019 - FEBRUARY 29, 2020
SUSTAINABLE GROUNDWATER MANAGEMENT ACT COORDINATED EXPENSES

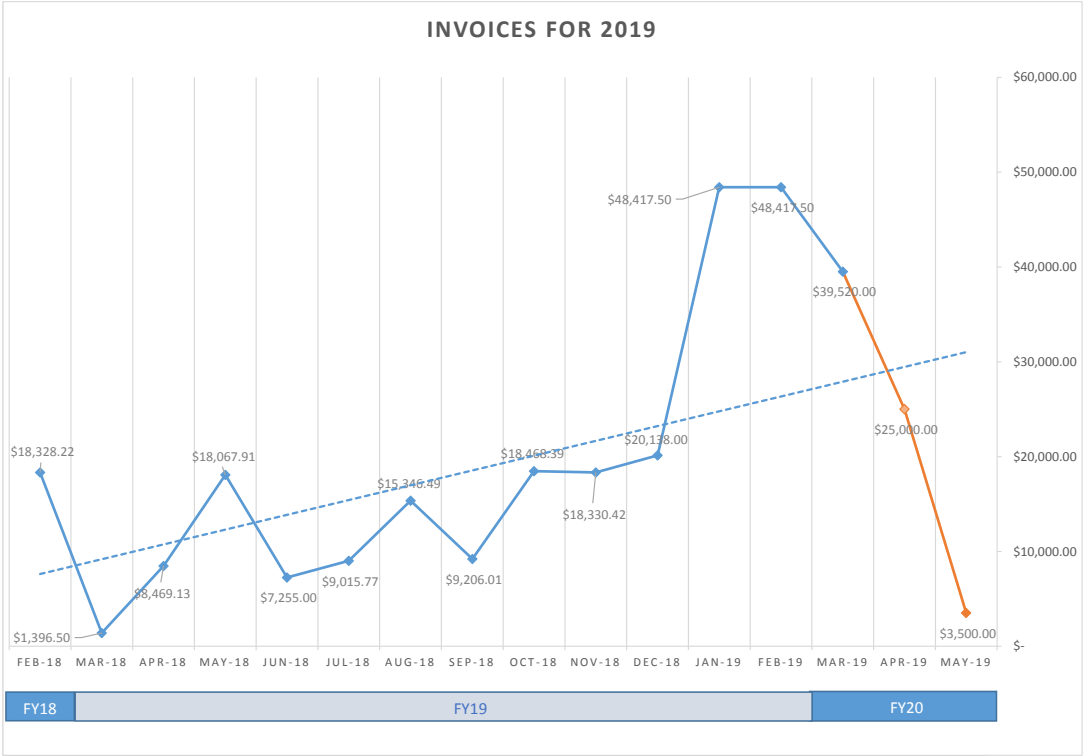
Report Period April 2019

Delta-Mendota Subbasin Coordination Committee Meeting 06.10.19

EXPENDITURES		Annual Budget	Previous Expenses	Current Expenses	Total Expenses to Date	Amount Remaining	% of Budget Spent	% of Amt Complete	Expenses Through
Legal									
		$ -	$ -	$ -	$ -	$ -			4/30/2019
Authority Salaries									
		$ 44,317	$ 1,876	$ 1,574	$ 3,450	$ 40,867	8%		4/30/2019
Other Services and Expenses									
Meals, Conference Calls, Travel, etc.		$ -	$ -	$ 184	$ 184	$ (184)			4/30/2019
Contracts									
Task 1	Funding Administration	$ 19,990	$ 4,082	$ -	$ 4,082	$ 15,908	20%	20%	3/31/2019
Task 2	Data Management	$ -	$ 990	$ -	$ 990	$ (990)	0%	15%	3/31/2019
Task 5	Intrabasin Coordination	$ 52,287	$ 34,449	$ -	$ 34,449	$ 17,838	66%	10%	3/31/2019
Task 6	Interbasin Coordination	$ 30,238	$ -	$ -	$ -	$ 30,238	0%	0%	3/31/2019
Task 9	Outreach and Education	$ 5,320	$ -	$ -	$ -	$ 5,320	0%	10%	3/31/2019
	subtotal	*$ 107,835*	*$ 39,521*	*$ -*	*$ 39,521*	*$ 68,314*			
	TOTAL	$ 152,152			$ 43,155	$ 108,997	28%	10%	

Coordination Committee Expenses

Invoices Approved February 2018 to February 2020



FY18	Feb-18	$ 18,328.22	
FY19	Mar-18	$ 1,396.50	
	Apr-18	$ 8,469.13	
	May-18	$ 18,067.91	
	Jun-18	$ 7,255.00	
	Jul-18	$ 9,015.77	
	Aug-18	$ 15,346.49	
	Sep-18	$ 9,206.01	
	Oct-18	$ 18,468.39	
	Nov-18	$ 18,330.42	
	Dec-18	$ 20,138.00	
	Jan-19	$ 48,417.50	
	Feb-19	$ 48,417.50	
FY19	Mar-19	$ 39,520.00	
	Apr-19	$ 25,000.00	**April and May 2019 invoice totals are estimates**
	May-19	$ 3,500.00	
Invoiced Contract Total		$ 280,376.84	
FY19 Contract to Date		$ 222,528.62	
FY19 SLDMWA Expense YTD		$ 33,937.03	
FY20 Contract to Date		$ 39,520.00	**Only for March 2019**
FY20 SLDMWA Expense YTD		$ 3,633.96	**For March and April 2019**
	Total FY20	$ 43,153.96	
	FY20 Budget	$ 152,152.00	
	Under Budget	$ 108,998.04	

MEMORANDUM

TO: Delta-Mendota Subbasin Coordination Committee

FROM: Andrew Garcia, Senior Civil Engineer

DATE: June 10, 2019

RE: Revised Budget for Coordinated Tasks Associated with GSP Development

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BACKGROUND

The Coordination Committee requested an updated budget estimate that reflects all consultant costs associated with GSP development through submission in January 2020 following increased consultant costs in January and February 2019. Budget increases must be approved by the Coordination Committee and receive individual agency approval.

Following the Coordination Committee meeting on May 13th, 2019, Woodard & Curran provided an updated budget estimate that encompasses coordinated consultant costs through GSP submission in January 2020 as well as estimated costs for work completed through May 2019. A subgroup of the Coordination Committee met on May 21st to further review the updated budget estimate and contract costs. The results of this update are tabulated below. SLDMWA staff and the Northern & Central Delta-Mendota Management Committees recommend that reimbursement for coordinated expenses be pursued through an amendment to the grant agreement with DWR.

BUDGET

Table 1 provides a summary of the original approved Coordinated Activities Consultant Contract, a revised Proposed Coordinated Activities Amount, and a total for the Amount Remaining to Complete through GSP submission in January 2020.

Table 1: Remaining Coordinated Expenses to Complete GSP

Cost Breakdown	**Original Approved Coordinated Activities Amount**	**Proposed Coordinated Activities Amount**	**Remaining Amount to Complete**
Coordinated Consultant Contract Cost	$ 288,804	$ 507,132	$ 218,328*

Table 2: Estimated Coordinated Expense Reimbursement

Cost Breakdown	**Original Approved Coordinated Activities Amount**	**Proposed Coordinated Activities Amount**	**Coordinated Expense Reimbursement – Grant Amendment**
Coordinated Consultant Contract Cost	$ 288,804	$ 507,132	$386,506*

*The costs associated with the Coordinated Consultant Contract will seek grant reimbursement through Category 1

Amendment 3 Fee Estimate

San Luis & Delta-Mendota Water Authority
GSP Development Amendment for SGWP Projects

Tasks	Leslie Dumas	Reza Namvar	Ian Jaffe	Technical Lead	Natalie Cochrane	Zachary Roy	Staff Support	Graphics	Admin.	Total Hours	Total Labor Costs (1)	Outside Services: Stantec	Outside Services: Subtotal	Outside Services: Sub Consultant Total Cost (2)	ODCs: ODCs	ODCs: Total ODCs (3)	Total: Total New Fee	Total: Existing Fee	Total: Total Fee (with reallocation)	Proposed Category 1 Funded	Notes
	Project Manager	Modeling Lead	Project Controls / Technical Lead	Data Collection and Analysis	Technical Lead	Modeling Support	Misc.	Graphics and Support				Outreach									
	$282	$282	$212	$266	$187	$162	$162	$110	$110												
Phase 1: Northern and Central GSP																					
1.3 Flow Modeling										0	$0		$0	$0		$0	$60,180	$376,131	$436,311		
Finalize Historical and Current Water Budgets	4	8			12	24				48	$9,516		$0	$0		$0	$9,516				
Develop Future Baseline Water Budgets	2	8			2	16				28	$5,786		$0	$0		$0	$5,786				*This estimate was prepared based on current budget status and the additional scope covered in January and February 2019. The amendment should carry us to task completion.*
Develop Future Baseline Water Budgets with Climate Change	2	8			2	20				32	$6,434		$0	$0		$0	$6,434				
Develop Scenarios using Future with CC Water Budgets	4	12			12	32				60	$11,940		$0	$0		$0	$11,940				
Prepare Water Budgets TM	4	12			16	16				48	$10,096		$0	$0		$0	$10,096				
Attend meetings and Conference Calls	8	8			8	8				32	$7,304		$0	$0		$0	$7,304				
Additional Documentation		4			8	40				52	$9,104		$0	$0		$0	$9,104				
1.5 Intrabasin Coordination	320		120		80					520	$130,640		$0	$0	$725	$798	$131,438	$152,188	$283,626	$283,626	*Covers additional meetings/coordination*
2.9 (Optional Task) Annual Reporting																	$134,796		$134,796		
Data collection and analysis	32		72	80	68		80			332	$71,244		$0	$0		$0	$71,244				*This new task covers the Annual Reporting requirements for the N&C group (the 2020 report and template development).*
Annual Report Documentation	48		80	16	80		80	4	4	312	$63,552		$0	$0		$0	$63,552				
Subtotal Phase 1:	424	60	272	96	288	156	160	4	4	1464	$325,616	0	0	0	$725	$798	$326,414		$854,733	$283,626	
Phase 2: Coordinated Activites																					
2.2 Coordinated DMS *(Category 1 Project)*			10		32		32			74	$13,288		$0	$0		$0	$13,288	$28,614	$41,902	$41,902	
2.5 Intrabasin Coordination	360		170		120					650	$160,000		$0	$0	$396	$436	$160,436	$139,564	$300,000	$300,000	*Covers additional meetings/coordination*
2.6 (New Task) Coordinated Flow Modeling																					
2.6.1 D-M Water Budgets & Scenarios																	$44,604	$0	$44,604	$44,604	
Compile Historical and Current Water Budgets and Compare Total Storage	4	8			16	32				60	$11,560		$0	$0		$0	$11,560				
Compile Future Baseline Water Budgets	2	4			2	16				24	$4,658		$0	$0		$0	$4,658				*This new task covers the model effort to roll up and coordinate the individual GSP water budgets and underflows.*
Compile Future Baseline Water Budgets with Climate Change	4	8			2	24				38	$7,646		$0	$0		$0	$7,646				
Compile Scenarios using Future with CC Water Budgets	4	8			8	16				36	$7,472		$0	$0		$0	$7,472				
Prepare Water Budgets Sections of GSP Common Chapter	4	4			12	16				36	$7,092		$0	$0		$0	$7,092				
Attend meetings and Conference Calls	8	4			8	8				28	$6,176		$0	$0		$0	$6,176				
Subtotal Phase 2:	386	36	180	0	200	112	32	0	0	946	$217,892	$0	$0	$0	$396	$436	$218,328		$386,506	$386,506	
Phase 3: Facilitation and Outreach Support																					
SDAC Engagement and Education Program *(Category 1 Project)*										0	$0	$35,568	$35,568	$39,125		$0	$51,253	$48,442	$99,695	$51,253	
Public Meeting Support	40		4							44	$12,128		$0	$0		$0	$12,128				
SDAC Representation *(Category 1 Project)*										0	$0	-$8,078	-$8,078	-$8,886		$0	-$7,290	$44,984	$37,694	-$7,290	
Technical Assisstance Request			4		4					8	$1,596		$0	$0		$0	$1,596				*Stantec has requested shifting some of their existing budget off of the SDAC Representation task.*
Vulnerability Assessment and Project Development *(Category 1 Project)*										0	$0	$41,216	$41,216	$45,338		$0	$81,502	$25,370	$106,872	$81,502	
Component Administration	8		32							40	$9,040		$0	$0		$0	$9,040				*Subtasks listed here represent expanded W&C scope.*
Rapid Appraisal Form	4		8		12					24	$5,068		$0	$0		$0	$5,068				
Vulnerability Assessment Report of SDAC	4		8		12		28			52	$9,604		$0	$0		$0	$9,604				
Conceptual Project Development Memos	8		16				42			66	$12,452		$0	$0		$0	$12,452				
Subtotal Phase 3:	64	0	72	0	28	0	70	0	0	234	$49,888	68,706	$68,706	$75,577	$0	$0	$125,465		$244,261	$125,465	
TOTAL without Optional Tasks	794	96	372	0	368	268	102	0	0	2000	$458,600	$68,706	$68,706	$75,577	$1,121	$1,234	$535,411		$488,522	$795,597	
Optional Tasks TOTAL	80	0	152	96	148	0	160	4	4	644	$134,796	$0	$0	$0	$0	$0	$134,796		$0	$0	
TOTAL	874	96	524	96	516	268	262	4	4	2644	$593,396	$68,706	$68,706	$75,577	$1,121	$1,234	**$670,207**	<--Amendment Request		**$795,597**	

1. The individual hourly rates include salary, overhead and profit.
2. Subconsultants will be billed at actual cost plus 10%.
3. Other direct costs (ODCs) such as reproduction, delivery, mileage (rates will be those allowed by current IRS guidelines), and travel expenses, will be billed at actual cost plus 10%.
4. The RMC/W&C Team reserves the right to adjust its hourly rate structure and ODC markup at the beginning of the calendar year for all ongoing contracts.

GSP Coordination and Development

6/9/2019

Item No.	Task	Due	2018 Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	2019 Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	2020 Jan	Feb	Mar	Comments
	Coordinated Activities																													
1	**Common Chapter**	***12/13/2019***																												
2	**General Information**																				X									
3	a. Decision Making and Governance	12/12/2018													X															
4	**Plan Area / Description**	11/13/2019																			X									
5	a. Compile Individual GSP Physical Settings and Characteristics	11/13/2019															X			X										
6	b. Communications Section / Outreach Discussion	8/9/2019															X					X								This chapter will have to be updated to the latest information before going public
6a	c. Coordinated Implementation 'Policies' or 'Policy'	8/9/2019																				X								Assuming Policy is 'Agree to coordinate, Collaborate, Report
7	**Cost and Funding**	12/12/2018												X																
8	a. Cost Sharing Agreement / Coordinated Expenses	12/12/2018												X																
9	**Basin Setting**	***3/8/2019***																												
10	**Hydrogeologic Conceptual Model Development**	3/8/2019															X													
11	a. Maps and Narrative Description	3/8/2019															X													
12	b. Cross Sections	3/8/2019															X													
13	c. Lateral Boundaries and Definable Bottom	11/1/2018											X																	
14	d. Summary of Aquifer Properties and Groundwater Conditions	11/1/2018											X																	
15	e. Identification of Subbasin-wide (Coordinated) Management Areas, if any	TBD																												
16	**Water Budgets (Section 10727.2)**	3/16/2019															X													
17	a. Historic, Current, and Projected Timeframes	10/31/2018											X																	
18	b. Wet, Dry, Normal Year Designations	1/21/2019													X															
19	c. Methodology	1/21/2019													X															
20	d. Assumptions	1/7/2019													X															
21	e. Confirm Boundary Flows and Change in Storage	3/1/2019															X													
22	f. Develop and Compile all GSP Group Datasets (Land Surface and Groundwater Budget for Historic, Current and Projected Water Budgets)	3/11/2019															X													
23	g. Well Inventory	3/16/2019															X													
24	h. Cross-Check with Subbasin-wide Contouring and Change in Storage from historical water level measurements	2/11/2019														X														
25	i. Estimate of sustainable yield for the basin	3/19/2019															X													
26	**Management Areas**	2/19/2019														X														
27	a. Common Terminology	2/19/2019														X														
28	b. Subbasin-wide mapping (draft)	TBD																												
29	c. Final Subbasin-wide mapping	TBD																												
30	**Sustainable Management Criteria**	***4/16/2019***																												
31	**Sustainability Indicators at Representative Monitoring Sites**																		X											*Initially 4/1/19 was input as placeholder due dates*
32	a. Determination of Subbasin Management Areas	3/19/2019															X													*To be recommended on 3/19 by tech. wg for 4/8 CC adoption*
33	b. Miminum Thresholds and Sustainability Indicators (Sum of the parts and Cross-Check)	4/16/2019																X												
34	c. Interim Milestones	4/16/2019																X												
35	d. Undesirable Results Definition	3/19/2019																X												*To be recommended on 3/19 by tech. wg for 4/8 CC adoption*
36	e. Sustainability Goal for Subbasin	6/10/2019																X												To be Discussed June 10, 2019.
37	f. Initial comparison of Sustainable Management Criteria items a)-e)	4/16/2019																X												
38	g. Finalize Sustainable Management Criteria	5/13/2019																	X											*Propose final adoption 5/13, followed by public workshops*
39	**Monitoring Networks**	***12/13/2019***																												
40	**Determination of Subbasin Monitoring Network**	12/13/2019																		X										

GSP Coordination and Development

6/9/2019

Item No.	Task	Due	2018												2019												2020			Comments
	Coordinated Activities		Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	
41	a. Locations, Depths, Frequency, Type, Completion report, RP Elevation, etc.	3/27/2019																X												*To be discussed at Monitoring Network Ad-Hoc WG*
42	b. Compilation of relevant data for Representative Monitoring Sites and Coordination of 'Site' Criteria	4/3/2019																X												*Compiled and discussed w/Monitoring Network AdHoc WG*
43	c. Data Gap Assessment	5/6/2019																	X											*One week prior to May CC Meeting*
44	d. Description of how network will meet requirements of SGMA	5/6/2019																	X											*From each GSP Group to Woodard&Curran*
45	e. Indicators for network for each of the applicable undesirable results	5/1/2019																		X										
46	f. Objectives, Protocols, Data Reporting Requirements	7/8/2019																			X									*Ok to push until July? Linked to DMS Development*
47	g. Finalize Monitoring Network Plan/Section	8/12/2019																				X								*Ok to push until August for 8/12 CC Meeting?*
48	**Management Actions and Projects**	***7/8/2019***																												
49	Development and Review of Individual GSP Group Projects and Management Actions	4/16/2019															X													*4/8 CC Meeting and 4/16 DM Tech WG.*
50	Discussion and Development of Coordinated Projects and Managament Actions	5/6/2019																X												N/A
51	Common Section Development	7/8/2019																			X									
52	Permitting, Legal Authority, Cost, and Management	Ongoing																			X	*ONGOING*								
53	**Plan Implementation**	3/31/2020																												
54	Annual Report Standard Format	9/9/2019																				X								
54.a	Coordinate data type, units, format for collection for Water Year 2019	10/14/2019																						X						
54.b	Quality Assurace / Quality Ccntrol meeting and discussion for GSP Group Annual Report data	11/11/2019																							X					Could be December to coincide with Contouring effort
54.c	Technical in-person water surface elevation map development meeting	12/2/2019																								X				1 week before Coordination Committee meeting
54.d	First Subbasin-wide Annual Report Draft	2/3/2020																										X		1 week before Coordination Committee meeting
54.e	Complete Revisions and DIstribute final draft for comment	3/2/2020																											X	1 week before Coordination Committee meeting
54.f	Submit Annual Report to DWR	4/1/2020																											X	
55	Determine Process and Coordination Required for Implementation	10/14/2019																						X						Includes role of the Water Authority
56	Funding Sources Identification	12/12/2018												X	*ONGOING*															
57	**Coordinated Data Management System (Required, § 352.6)**	***1/10/2020***																												
58	**Development of Coordinated DMS**	1/10/2020																		X										
59	a. Data Compilation with description of sources, type, management	3/15/2019															X													*Deadline requested by DMS dev.*
60	b. QA/QC of data to support GSP and DRAFT template of Annual Report	3/29/2019															X													*Draft Annual report outline due to dev. 3/22*
61	c. DMS Setup	5/1/2019																									X			
61.a	c.1. Data Flowcharts	8/2/2019																				X								
61.b	c.2. DMS Page Wireframes	9/6/2019																					X							
61.c	c.3. Data Inport Wizards	10/15/2019																						X						
61.d	c.4. Import GSP Group Data	12/1/2019																								X				
61.e	c.5. Final Testing of DMS and Annual Report Requirements	1/15/2020																									X			
62	d. Coordinate DMS Permissions	1/15/2020																									X			
63	e. Ensure Annual Reporting Requirements can be met	1/10/2020																									X			
64	**Subbasin Coordination**	***2/1/2020***													*ONGOING*															
65	**Intrabasin Coordination (Required, § 357.4)**	12/12/2018												X																
66	a. Determine other Plans to be submitted	2/1/2018		X																										
67	b. Establish a submitting agency to be single point of contact and report submittal to DWR	6/1/2018						X																						
68	c. Develop Coordination Agreement	12/12/2018												X	*ONGOING*															
69	d. Develop Cost Sharing Mechanism	12/12/2018												X																
70	**Interbasin Coordination (Optional but advised, § 357.2)**																													

GSP Coordination and Development

6/9/2019

Item No.	Task	Due	2018												2019												2020			Comments
	Coordinated Activities		Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	
71	a. Meet and Compare Results	7/1/2019																			X									
72	b. Develop Dispute Resolution Processes	2/1/2020																									X			
73	c. Develop Data Sharing Agreements, as necessary	2/1/2020																									X			
74	**Development of Technical Memorandums**	***7/1/2019***																												
75	**Development of 5 Coordinated Technical Memorandums**	6/15/2019																		X										
76	a. Common Methodologies for GSP Development	5/1/2019																	X											
77	b. Subbasin Wide Monitoring Network	6/1/2019																		X										
78	c. Coordinated Water Budget	4/1/2019																X												
79	d. Coordinated Data Management System	6/1/2019																		X										
80	e. Description of how respective GSPs implemented together will meet the requirements of SGMA	6/15/2019																		X										
81	**Review and Unanimous Approval of Technical Memorandums by Coordination Committee**	7/1/2019																			X	X								Accounts for revisions
82	**Compile Final GSP Sections**	***9/9/2019***																					[FLOAT]							Accounting for Public Review Draft (FLOAT)
83	**Review of final compiled GSP sections by internal working group**	8/12/2019																				X								Internal review and final edits prior to public
84	N-C GSP group internal review																													
85	SJREC GSP group internal review																													
86	Grassland GSP group internal review																													
87	Farmers GSP group internal review																													
88	Fresno GSP group internal review																													
89	Aliso GSP group internal review																													
90	**Distribute draft GSP to basin stakeholders (Section 10728.4)**	9/9/2019																				X								Public Draft
91	**90-Day Public Notice of Adoption**																													Public Draft
92	**Finalize GSPs and distribute for final review**																													
93	**Hold Public Hearing to adopt plan(s) at least 90 days after notice to city/county to receive feedback**																													Adoption
94	**Submit all plans and Common sections / plan to DWR**	1/31/2020																									X			

Delta-Mendota Subbasin Groundwater Sustainability Plan
Annual Report Outline

1) With Houston and Brian's team, we are primarily focused on the Subbasin-wide annual report
2) Each Individual GSA will have to prepare or be part of an individual annual report per GSP group
3) The DMS will / should be capable of "rolling-up" uploaded details by each GSP group for this *Coordinated* Annual Report.
4) The *Coordinated* Annual Report should reference the individual GSPs and include the following sections, which will summarize all other data provided and generate basin-wide results as applicable;
    i. Executive Summary
    ii. Groundwater Elevation Data
        1. Seasonal High and Seasonal Low Contour Maps
        2. Hydrographs for Subbasin Monitoring Network representative monitoring sites, at a minimum
    iii. Annual Aggregated Data Identifying Groundwater Extraction Data for the Preceding Water Year (by water use sector)
    iv. Surface Water Use for or Available for Use for Groundwater Recharge or in-lieu use
        1. SW use by source
        2. SW use by sector
    v. Total Water Use
    vi. Change in Groundwater Storage for both upper and lower aquifer
        1. Graph depicting water yr type, groundwater use, annual change in gw storage, cumulative change in gw storage for the basin based on historical data to the greatest extent (minimum from Jan 1, 2015, to current reporting year
    vii. Regional Monitoring Program – Subsidence Rates and Survey Data
    viii. Description of progress towards implementing the Plan, including progress toward interim milestone and implementation of projects or management actions since previous annual report.
        1. Monitoring Network Representative Monitoring Sites Tracking of Sustainable Management Criteria
5) The DMS should summarize and output as much of the report as possible, but I assume some of the contours and other data may need to be summarized by the Authority/Plan Manager or its Consultant.
6) We will need to establish a timeline and QC / Review period as these Annual reports are prepared. If not always, then at least for the first few years following GSP submittal and 5-Year updates.

TO: Delta-Mendota Subbasin Coordination Committee

FROM: Andrew Garcia, Senior Civil Engineer

DATE: June 10, 2019

RE: Delta-Mendota Subbasin Sustainable Yield Calculation – Upper Aquifer

SUMMARY OF ISSUE

The Delta-Mendota Subbasin Coordination Committee (Coordination Committee) is required to develop a sustainable yield value for both the upper and lower aquifer of the Delta-Mendota Subbasin per the Sustainable Groundwater Management Act (SGMA) regulations. This value is intended to represent the amount of subsurface water that can be extracted from a specific aquifer without causing undesirable results. In order to comply with SGMA regulations, the Coordination Committee understands the need to estimate an upper aquifer sustainable yield value for inclusion in the Groundwater Sustainability Plan (GSP), while improving data collection and reporting requirements to allow for a more accurate sustainable yield determination in the future. As confirmed with the California Department of Water Resources, only a subbasin-level sustainable yield estimated is required; individual GSP estimates are optional.

ANALYSIS

Methodologies for calculating upper aquifer sustainable yield were discussed by both the Coordination Committee and the ad-hoc Technical Working Group of the Coordination Committee. After reviewing several options for this calculation, the Coordination Committee requested that the Technical Working Group further discuss potential options and provide a recommendation back to the Coordination Committee for adoption. On April 16, 2019, a joint workshop of the Coordination Committee and the Technical Working Group was held to discuss options for upper aquifer sustainable yield estimation and to identify a recommendation.

During the April 16th workshop, several basic concepts and principles were discussed to calculate the upper aquifer sustainable yield value. Consideration was given to several potential options with increasing detail, including some combination of the following: total Subbasin upper aquifer pumping volumes, total Subbasin upper aquifer change in storage (including the effects of precipitation, evapotranspiration, and deep percolation), and Subbasin upper aquifer subsurface inflows and outflows. Inflow from certain neighboring subbasins, based on groundwater flow direction, as well as subsurface inflow from the Coast Range at existing gradients (as part of the inflow to the Northern & Central Delta-Mendota GSP area) was considered. Outflow to neighboring subbasins at existing gradients was also considered in certain applicable areas along the Delta-Mendota Subbasin boundary based on groundwater flow characteristics.

Outflow from the Aliso GSP area east of the San Joaquin River was not considered as outflow for purposes of developing these principles.

The formula for determining upper aquifer sustainable yield was applied to rolled-up Delta-Mendota Subbasin projected water budgets (WY2014-2070) in two categories:

- *Projected Baseline values with Climate Change Factors*
- *Projected Baseline values with Climate Change Factors and Projects and Management Actions*

If the projected baseline values for the Subbasin are expected to have undesirable results, the GSAs are required to implement projects or management actions that will offset the overdraft and result in a sustainable condition. The Technical Working Group recommended calculation of both a projected baseline for sustainable yield with applied climate change factors and a projected baseline for sustainable yield with climate change factors plus planned projects and management actions. Staff completed preliminary calculations for both baselines using average annual values from the Subbasin projected water budgets and following the formula below:

Upper Aquifer Sustainable Yield: Pumping + Change in Storage + (Outflow– Inflow)

The Technical Working Group determined that a +/- 10% factor should be applied to determine a range for the upper aquifer sustainable yield value. The +/- 10% factor is applied based on the percentage difference between the values from change in storage contour mapping (prepared by Provost & Pritchard) and reported changes in storage from the Subbasin consolidated historic water budgets (WY2003-2012) for the upper aquifer.

In summary, the most detailed range for the upper aquifer sustainable yield is calculated using the above formula for both categories of water budgets: projected baseline with climate change factors and projected baseline with climate change factors plus projects and management actions. The 10% factor is applied to the results for both categories. This range aims to demonstrate the Subbasin's upper aquifer sustainable yield without implementing any projects and management actions (low end of range) and how the Subbasin's upper aquifer sustainable yield will be impacted by implementing projects and management actions (high end of range).

RATIONALE

The upper aquifer sustainable yield values, derived from calculations using the best available but limited data, are to be considered preliminary estimations only and will be updated to an anticipated higher level of accuracy in future GSP updates. The intention of the Delta-Mendota Subbasin Groundwater Sustainability Agencies (GSAs), following GSP submission in 2020, is to increase Subbasin-wide data collection efforts. Improved data, modeling results, and understanding of subsurface flows will allow the GSAs and each GSP Group to improve estimated sustainable yield values for future GSP updates. It is pertinent to understand that by adopting or "approving" any of the sustainable yield calculations and results for the upper aquifer, the GSAs and other agencies acting within the Delta-Mendota Subbasin are not foreclosing the likelihood that this calculation will be improved or updated in the future.

The sustainable yield calculated range reflects the principle that the GSAs within the Delta-Mendota Subbasin reserve the right to claim or retain some portion of subbasin outflow in the future if the Delta-Mendota Subbasin GSAs determine that doing so will improve Subbasin sustainability or will prevent

undesirable results due to chronic lowering of groundwater. This outflow may be generated by the lowering of groundwater levels from neighboring subbasins and an equitable portion of sources of recharge shared between two subbasins, by physical or non-physical means. Furthermore, intrabasin coordination during GSP development, followed by continuing interbasin and intrabasin coordination discussions and data collection after GSP adoption, will allow the GSAs to further refine these determinations.

DETERMINATION

The Technical Working Group recommended to the Delta-Mendota Coordination Committee the below tabulated Sustainable Yield 'Overall Range (Rounded)' for adoption and inclusion in the Common Chapter.

	Average Annual Water Budget Results (2014-2070), Acre-Feet	
Upper Aquifer	**Baseline Projected (with CCF)**	**Projected with CCF & Projects/MAs**
Pumping	333,000	325,000
Change in Storage	(50,000)	(2,000)
Outflow	244,000	297,000
Inflow	166,000	184,000
Total (Rounded)	361,000	436,000
10% error	36,000	44,000

	Upper Aquifer Sustainable Yield, Acre-Feet	
Low	325,000	392,000
High	397,000	480,000
Overall Range (Rounded)	**325,000**	**480,000**

Discussion of Delta-Mendota Subbasin Sustainability Goal

Proposed language for review during the June 10, 2019 Coordination Committee meeting:

"The Delta-Mendota Subbasin will manage groundwater resources for the benefit of all users of groundwater in a manner that allows for operational flexibility, ensures resource availability under drought conditions, does not negatively impact surface water diversion, conveyance and delivery capabilities, and does not result in the loss of productive agriculture. This goal will be achieved through the implementation of projects and management actions to avoid undesirable results and by operating within the sustainable yield established for each principal aquifer."