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# Delta-Mendota Subbasin Groundwater Sustainability Plan

**DRAFT**

April 2024

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**List of Abbreviations**

AB	Assembly Bill
AEM	Airborne Electromagnetic
AF	acre-feet
AFY	acre-feet per year
AWD	Aliso Water District
AWMP	Agricultural Water Management Plans
BCM	Basin Characterization Model
BLM	United States Bureau of Land Management
BMP	Best Management Practices
CAO	Cleanup and Abatement Order
CASGEM	California Statewide Groundwater Elevation Monitoring
CASP	California Aqueduct Subsidence Program
CC	Coordination Committee
CCID	Central California Irrigation District
CCR	California Code of Regulations
CDEC	California Data Exchange Center
CDFW	controlled by California Department of Fish and Wildlife
CDM	Central Delta Mendota
CDPR	California Department of Parks and Recreation
CE	Categorical Exemption
CEQA	California Environmental Quality Act
CFDW	California Department of Fish and Wildlife
cfs	cubic feet per second
CGPS	Continuous Global Positioning System
CGQMP	Comprehensive Groundwater Quality Management Plan
CIMIS	California Irrigation Management Information System
CNRA	California Natural Resources Agency
COC	constituents of concern
CPS	Crop Production Services
CSD	Community Services District
CVFPB	Central Valley Flood Protection Board
CVHM2	Central Valley Hydrologic Model 2
CVP	Central Valley Project
CVRWQCB	Central Valley Regional Water Quality Control Board
CWC	California Water Code
CWSRF	Clean Water State Revolving Fund
DAC	Disadvantaged Community
DCP	Drought Contingency Plan
DDW	Division of Drinking Water
DMC	Delta-Mendota Canal
DMS	Data Management System
DPWD	Del Puerto Water District
DTSC	California Department of Toxic Substances

DTW	Depth to water
DWR	California Department of Water Resources
DWSAP	Drinking Water Source Assessment and Protection
EDAs	economically distressed areas
EDF	Environmental Defense Fund
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	European Space Agency
ET	evapotranspiration
FCMA	Fresno County Management Areas
FMP	Farm Process Package
FSS	Facilitation Support Services
ft	feet
ft bgs	feet below ground surface
ft msl	feet above mean sea level
ft/day	feet per day
ft/yr	feet per year
GAMA	Groundwater Ambient Monitoring and Assessment
GAR	Groundwater Quality Assessment Report
GDE	Groundwater Dependent Ecosystem
GEA	Grassland Ecological Area
GIS	Geographic Information System
GMP	Groundwater Management Plan
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
GRCD	Grassland Resource Conservation District
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWC	Groundwater Conditions
GWD	Grassland Water District
GWE	groundwater elevation
HBSL	Health Based Screening Level
HCM	Hydrogeological Conceptual Model
ILRP	Irrigated Lands Regulatory Program
IM	Interim Milestone
IRWMP	Integrated Regional Water Management Plan
IS	Initial Study
ISW	Interconnected Surface Water
ITRC	Irrigation Training and Research Center
IWFM	Integrated Water Flow Model
JPA	Joint Powers Authority
JPL	Jet Propulsion Laboratory

LBCDD	Los Banos Creek Detention Dam
LIDAR	Light detection and ranging
LUST	Leaking Underground Storage Tanks
M&I	municipal and industrial
MAA	Management Area A
MAB	Management Area B
MAF	million acre feet
MAR	Managed Aquifer Recharge
MCL	Maximum Contaminant Level
meq/L	milliequivalents per liter
mg/L	milligrams per liter
MHI	median household income
MND	Mitigated Negative Declaration
MNW2	Multi-Node Well Package
MO	Measurable Objective
MOA	Memorandum of Agreement
MOI	Memoranda of Intent
MOU	Memorandum of Understanding
MPG	Mendota Pool Group
MT	Minimum Threshold
MWA	Mendota Wildlife Area
NAD83	North American Datum of 1983
NASA	National Aeronautics and Space Administration
NAVD	North American Vertical Datum
NAWQA	National Water-Quality Assessment
NCCAG	Natural Communities Commonly Associated with Groundwater
ND	Negative Declaration
NDM	Northern Delta-Mendota
NDVI	Normalized Derived Vegetation Index
NEPA	National Environmental Policy Act
NGO	Non-Governmental Organization
NHD	National Hydrography Dataset
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NVRRWP	North Valley Regional Recycled Water Program
NWIS	National Water Information System
NWQMC	National Water Quality Monitoring Council
NWR	National Wildlife Refuge
OSWCR	Online System of Well Completion Reports
P&O	Prioritization & Optimization
PID	Patterson Irrigation District
PIP	Pump-in Program
PLSS	Public Land Survey System



PMA	Projects and Management Actions
POC	Points of Contact
POD	Points of Diversion
PWRPA	Power and Water Resources Pooling Authority
PWS	Public Water System
RCAC	Rural Community Assistance Corporation
RMN	Representative Monitoring Network
RMS	Representative Monitoring Site
RMW	Representative Monitoring Well
RPE	reference point elevation
RTWQMN	Real Time Water Quality Monitoring Network
SAGBI	Soil Agricultural Groundwater Banking Index
SB	Senate Bill
SDAC	severely disadvantaged community
SDWIS	Safe Drinking Water Information System
SFR	Streamflow Routing Package
SGMA	Sustainable Groundwater Management Act
SGWP	Sustainable Groundwater Management Planning
SHE	Self-Help Enterprises
SJR	San Joaquin River
SJREC	San Joaquin River Exchange Contractors
SJRECWA	San Joaquin River Exchange Contractors Water Authority
SJRIP	San Joaquin River Water Quality Improvement Project
SJRRP	San Joaquin River Restoration Program
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLDMWA	San Luis & Delta Mendota Water Authority
SLWD	San Luis Water District
SMARA	Surface Mining and Reclamation Act
SMC	Sustainable Management Criteria
SNMP	Salt and Nitrate Management Plan
SSURGO	Soil Survey Geographic Database
SWP	State Water Project
SWPPP	SWRCB Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAOC	Tidewater Associated Oil Company
TCP	trichloropropane
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TNC	The Nature Conservancy
TRID	Tranquillity Irrigation District
UAVSAR	Unmanned Aerial Vehicle Synthetic Aperture Radar
ug/L	micrograms per liter
UNAVCO	University Navstar Consortium
UR	Undesirable Result

USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
USCS	Unified Soil Classification System
USDA	United States Department of Agriculture
USEPA	United States Environmental Protective Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
WDL	Water Data Library
WDR	waste discharge requirement
WIIN	Water Infrastructure Improvements for the Nation
WLI	Water Leadership Institute
WQP	Water Quality Portal
WRFP	Water Recycling Funding Program
WSID	West Stanislaus Irrigation District
WY	Water Year

## INTRODUCTION

### 1 PURPOSE OF THE GROUNDWATER SUSTAINABILITY PLAN

The purpose of this Groundwater Sustainability Plan (GSP or Plan) is to meet the regulatory requirements set forth in the three-bill legislative package consisting of Assembly Bill (AB) 1739 (Dickinson), Senate Bill (SB) 1168 (Pavley), and SB 1319 (Pavley), collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA defines sustainable groundwater management as the “management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.” Undesirable Results (URs) are defined by SGMA as any of the following effects caused by groundwater conditions occurring throughout a basin:

- Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply;
- Significant and unreasonable reduction of groundwater storage;
- Significant and unreasonable seawater intrusion;
- Significant and unreasonable degraded water quality;
- Significant and unreasonable land subsidence; and/or
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

The Delta-Mendota Subbasin (California Department of Water Resources [DWR] Basin No. 5-022.07; referred to herein as the “Basin”) of the San Joaquin Valley Groundwater Basin is a critically overdrafted basin located in portions of San Joaquin, Stanislaus, Merced, Fresno, Madera, and San Benito Counties. This GSP has been developed to meet SGMA regulatory requirements (see **Appendix A**) while reflecting local needs and preserving local control over water resources.

As described further below, this GSP was explicitly prepared to address DWR’s “inadequate” determination and provide an update on groundwater conditions in the Basin. This amended GSP will supersede the six GSPs that were submitted to DWR in January 2020 (referred to herein as the “2020 GSPs”).

#### 1.1 Background

As described in **Section 5**, this GSP was jointly prepared by seven Groundwater Sustainability Agency (GSA) Groups – the Aliso Water District GSA Group, the Farmers Water District GSA Group, the Fresno County Management Areas A and B (FCMA) GSA Group, the Grassland GSA Group, the Northern Delta-Mendota GSA Group, the Central Delta-Mendota GSA Group, and the San Joaquin River Exchange Contractors (SJREC) GSA Group – which are made up of the 23 Basin GSAs.

The 2020 GSPs were collectively designated as “incomplete” by DWR in its 21 January 2022 letter entitled “*Incomplete Determination of the 2020 Groundwater Sustainability Plans Submitted for the San Joaquin Valley – Delta-Mendota Subbasin*” (**Appendix B**). The Basin GSAs revised their respective GSPs and the

Common Chapter per DWR's comments and resubmitted the GSPs in June 2022 (referred to herein as the "Revised 2022 GSPs").

The Revised 2022 GSPs were deemed "inadequate" by DWR in its 2 March 2023 letter entitled "*Inadequate Determination of the Revised 2020 Groundwater Sustainability Plans Submitted for the San Joaquin Valley – Delta-Mendota Subbasin*" (**Appendix B**). As such, the Basin is subject to the State Water Resources Control Board (SWRCB) intervention process per California Water Code (CWC) § 10735 et seq. Under this statute, the SWRCB may designate a basin as "probationary" after holding a public hearing (CWC § 10735.2(a)). If a basin is designated as probationary, the SWRCB may adopt an interim plan to fix the deficiencies that resulted in probationary status, which could potentially include: "(1) Restrictions on groundwater extractions, (2) A physical solution, (3) Principles and guidelines for the administration of rights to surface waters that are connected to the Basin" (CWC § 10735.8(c)).

If the Basin is designated as "probationary", a GSA or authorized person may petition to exit the SWRCB intervention process or have the interim plan modified if "the [SWRCB], in consultation with [DWR]], determines that the groundwater sustainability plan or adjudication action is adequate" (CWC § 10735.8(g)).

In response to DWR's "inadequate" determination and prior to the Basin's probationary hearing, the Basin GSAs collectively decided to develop a single GSP for the Basin that synthesizes, updates, and replaces content from the Revised 2022 GSPs and Common Chapter to address the Corrective Actions outlined by DWR in its March 2023 "Inadequate" Determination Letter. As of **xx** 2024, all the Basin GSAs adopted this GSP as a GSP for submission to DWR and the SWRCB (see **Appendix C**). This GSP provides a path to maintain and document sustainable groundwater management in the Basin and preserves the long-term sustainability of locally managed groundwater resources.

Since January 2022, the Basin GSAs have participated in numerous Basin-wide coordination efforts to develop a coordinated response to DWR's Corrective Actions. Basin-wide coordination efforts have included the following:

- Adoption of a new Memorandum of Agreement (MOA) between the Basin GSAs in November 2023;
- Basin Coordination Committee meetings with GSA Group representatives;
- Basin ad-hoc Technical Subcommittee meetings with GSA Group representatives and technical staff;
- Consultation meetings with DWR and SWRCB staff (see **Table Intro-1**);
- Intra- and Inter-basin stakeholder outreach and engagement efforts (see **Section 5.5**)

As summarized in **Table Intro-1**, the GSAs participated in six meetings with DWR and SWRCB staff to provide updates on the Basin's coordinated response to the DWR deficiencies, including technical justifications for SMCs and ongoing Plan revisions. Specific revisions to the Revised 2022 GSPs and Common Chapter, as part of the synthesis into this single GSP and in response to DWR's Determination Letter, are summarized below in **Section 1.2**. **Section 1.3** describes the revisions that were further made to update the Plan by incorporating new information, data, and the best available science.

**Table Intro-1. Summary of Basin Meetings with DWR and SWRCB Staff**

Meeting Date	Topic(s)	Summary
3/23/2023	State intervention process	DWR and SWRCB staff reviewed the state intervention process and the timeline for the Basin’s probationary hearing with the GSAs.
7/26/2023	Technical Meeting #1 <ul style="list-style-type: none"> <li>• Basin Coordination Efforts</li> <li>• Water Budget</li> <li>• Sustainable Yield and Change in Storage Estimates</li> <li>• Revised SMCs (Groundwater Levels, Groundwater Storage, Water Quality, and Land Subsidence)</li> </ul>	Basin management presented the Basin’s plan to develop a coordinated GSP, including a preliminary update on the development of a Basin-wide Water Budget and revised SMCs (to be discussed further in future meetings).  <i>SWRCB staff expressed support for the development of a coordinated GSP and provided general guidance for developing Undesirable Results, to be discussed further in future meetings.</i>
9/13/2023	Technical Meeting #2 <ul style="list-style-type: none"> <li>• Proposed Well Mitigation Program</li> <li>• Revised Water Quality SMCs</li> </ul>	Basin management sought input from SWRCB regarding models from other basins for a Well Mitigation Program.  <i>SWRCB staff stated that well mitigation programs developed in other groundwater basins may not work in the Basin, and the Basin should refer to DWR’s Corrective Actions from other plans when developing the program.</i>  Basin management proposed a process to screen for water quality COCs and set SMCs for the applicable COCs.  <i>SWRCB staff emphasized that SMCs should be set to prevent degradation of water quality beyond 2015 levels, and the GSAs should not screen out COCs that were reported to have MCL exceedances in at least three wells within the Basin since 2015 due to concerns that they could be impacted by groundwater management.</i>

Meeting Date	Topic(s)	Summary
10/11/2023	Technical Meeting #3 – Land Subsidence <ul style="list-style-type: none"> <li>• Review of existing subsidence data and P/MAs to address subsidence</li> <li>• Revised Land Subsidence SMCs</li> </ul>	Basin management summarized work the Basin has conducted to date to understand and address subsidence conditions in the Basin. <p><i>SWRCB staff emphasized the need for coordination with neighboring basins to address subsidence hot spots.</i></p> Basin management presented the revised land Subsidence SMCs and monitoring plan for SWRCB input. <p><i>SWRCB staff did not have major comments on the proposed SMCs; however, staff expressed concern at the feasibility of differentiating between subsidence caused by groundwater extraction and subsidence caused by other entities.</i></p>
12/20/2023	Technical Meeting #4 <ul style="list-style-type: none"> <li>• Revised SMCs (Groundwater Levels and Groundwater Storage)</li> <li>• Well Impacts Analysis</li> <li>• GDE Impacts Analysis</li> </ul>	Basin management presented the revised SMCs for Chronic Lowering of Groundwater Level and Reduction of Groundwater Storage and a justification of these SMCs using well and GDE impacts analyses. <p><i>SWRCB staff agreed with setting MTs as the 2015 Lows and encouraged the Basin to include a quantitative threshold for number of dewatered wells in the UR definition.</i></p>
2/21/2024	Technical Meeting #5 <ul style="list-style-type: none"> <li>• Revised SMCs (Degraded Water Quality)</li> </ul>	Basin management presented the proposed approach for Degraded Water Quality SMCs and a justification of these SMCs through analysis of groundwater data and trends in the Basin. SMCs were established for all SWRCB-identified COCs (SWRCB, 2022). <p><i>SWRCB staff agreed with setting SMCs for all identified COCs and emphasized the need for expanded future monitoring of groundwater quality throughout the Basin.</i></p>

Abbreviations:

COCs = Constituents of Concern

GSP = Groundwater Sustainability Plan

DWR = Department of Water Resources  
GDE = Groundwater Dependent Ecosystems  
GSA = Groundwater Sustainability Agency

P/MAs = Projects and Management Actions  
SMCs = Sustainable Management Criteria  
SWRCB = State Water Resources Control Board

## 1.2 Summary of Major Plan Revisions to Address the Deficiencies

DWR’s January 2022 “incomplete” determination letter outlined four deficiencies and associated Corrective Actions for the GSAs to address within a 180-day window (**Appendix B**). After GSP revisions and resubmittal in July 2022, DWR designated the Revised 2022 GSPs as collectively “inadequate” in March 2023 and determined that the Basin had sufficiently addressed only one out of the four deficiencies (Deficiency #4).

After consultation with DWR and SWRCB staff, the following revisions were made to the Plan to address the remaining three DWR Deficiencies and to improve overall Basin coordination efforts.

### Deficiency #1 – The GSPs do not use the Same Data and Methodologies

Corrective Action 1. *“The Common Chapter and the Technical Memoranda do not provide sufficient explanation to confirm that the GSPs have been developed using the same data and methodologies and that elements of the GSPs have been based upon consistent interpretations of the Subbasin’s setting. As presented, the GSPs use different data and different methodologies that rely upon multiple versions of the Subbasin setting, with many of the GSPs defining their own version of a hydrogeological conceptual model, often for very small areas of the Subbasin. The 23 GSAs developing the six GSPs should provide supporting information that is sufficiently detailed and provide explanations that are sufficiently thorough and reasonable to explain how the various components of each GSP will together achieve the Subbasin’s common sustainability goal. The explanation should describe how the sustainable management criteria established for each GSP (including the management areas if applicable) relate to each other and how they are collectively informed by the basin setting, including the water budget, change in groundwater storage, and sustainable yield, on the Subbasin-wide level.”*

This Plan includes the following major revisions to address Deficiency #1:

- Adopted a new MOA among the Basin GSAs to develop and implement a single GSP, achieve a common Sustainability Goal, and emphasize collective implementation (see **Section 3.2**).
- Developed a single GSP that incorporates and synthesizes information from the six 2022 Revised GSPs and Common Chapter and articulates how the Basin GSAs will together achieve the Basin’s common Sustainability Goal.
- Established a uniform Basin Setting, including a common Hydrogeological Conceptual Model (HCM), water budgets, sustainable yield, and change in groundwater storage for the Basin that were developed using the same data and methodologies (see **Sections 7 and 8**).
- Revised the Sustainable Management Criteria (SMCs) to be consistent across the Basin and use the same data and methodologies that are collectively informed by the uniform Basin Setting (see **Section 12**).



- Established a Basin-wide monitoring network that refines and synthesizes the six individual monitoring networks outlined in the 2022 Revised GSPs (see **Section 13**).

**Deficiency #2 – The GSPs Have Not Established Common Definitions of Undesirable Results in the Subbasin.**

Corrective Action 2. *“The GSAs in the Subbasin should modify each of their respective GSPs, as well as any applicable coordination materials, to substantially comply with the GSP Regulations and define undesirable results in a manner that addresses groundwater conditions occurring throughout the Subbasin, not for only the small portion of the Subbasin represented by the respective GSPs. One way for this deficiency to be remedied is for each of the six separate GSPs to use the same quantitative minimum thresholds, or the same methodology to develop the thresholds, and explicit criteria for undesirable results. Alternatively, if the GSAs believe it is not possible, or for some other reason still desire to use different definitions and metrics for undesirable results within each of the Subbasin’s six GSP areas, the Plan must specifically explain how any differences do not affect the requirement to utilize the same data and methodologies for the assumed sustainable yield of the Subbasin. Additionally, if a GSP determines that a sustainability indicator is not applicable within the defined GSP area, then that information must be supported by the best available information and best available science.”*

This Plan includes the following major revisions to address Deficiency #2:

- Updated Basin-wide criteria for Undesirable Results (URs) for each applicable Sustainability Indicator, including explicit (i.e., quantitative) criteria for the URs (see **Section 12**).
- Revised SMCs for each applicable Sustainability Indicator informed by the best available data and information included in the uniform Basin Setting (see **Sections 12**).
- Used common Basin-wide methodologies to revise the Measurable Objectives (MOs), Minimum Thresholds (MTs), and Interim Milestones (IMs; see **Section 12**) for each applicable Sustainability Indicator, informed by the best available data and information included in the uniform Basin Setting.

**Deficiency #3 – The GSPs in the Subbasin Have Not Set Sustainable Management Criteria (SMCs) in Accordance with the GSP Regulations.**

Corrective Action 3. *“The GSAs in the Subbasin should adhere to Subarticle 3 of the GSP Regulations which describes sustainable management criteria. The Plan should explain the coordinated criteria by which the GSAs define conditions occurring throughout the Subbasin that constitute sustainable groundwater management, including the process or processes by which the GSAs characterize undesirable results, establish minimum thresholds, and set measurable objectives for each applicable sustainability indicator. Undesirable results should be coordinated and should define when significant and unreasonable effects for any of the sustainable indicators are caused by groundwater conditions occurring throughout the Subbasin, not only in small GSP areas or even smaller management areas. The minimum thresholds must set numeric values that, if exceeded, may cause undesirable results, and must be defined in accordance with 23 CCR § 354.28(c). The supporting information must be sufficiently detailed and the analyses sufficiently thorough and reasonable, and any effort to disregard the applicability of a sustainability indicator in a GSP must be supported by the best available information and best available science.”*



*Additionally, if management areas will continue to be used throughout the Subbasin, the management areas must comply with 23 CCR § 354.20, as discussed in Deficiency 4.”*

This Plan includes the following major revisions to address Deficiency #3:

- Revised Basin-wide definitions for SMCs for each applicable Sustainability Indicator at all Representative Monitoring Sites (RMSs) informed by the best available data and information included in the uniform Basin Setting (see **Section 12**).
- Used explicit (i.e., quantitative) criteria for URs that define the groundwater conditions, including a description of the Basin-wide groundwater conditions that constitute URs for each Sustainability Indicator and “significant and unreasonable” effects on groundwater users that the GSAs seek to avoid (see **Section 12**).
- Described the process used by GSAs to define URs, establish the MTs and MOs, and set IMs for each applicable Sustainability Indicator (see **Section 12**).
- For Chronic Lowering of Groundwater Levels, added a well impacts analysis to the justification of criteria for URs (see **Section 12.1.2.4**).

### 1.3 Summary of Major Plan Updates

The following updates were made to the Plan to incorporate new information, data, and the best available science.

- Collected and compiled Basin-wide data through September 2023 (Water Year [WY] 2023) pertaining to groundwater elevations, water quality, and land subsidence in the Basin Data Management System (DMS) to inform development of this GSP.
- Described the Basin’s new governance structure, new information gathered, and recent outreach and coordination efforts in the Plan Area chapter (see **Section 5**).
- Incorporated significant new information into the Basin Setting and updated the HCM and Groundwater Conditions (GWC) assessments accordingly (see **Sections 7 and 8**).
- Evaluated current groundwater conditions relative to the revised MOs, MTs, and IMs (see **Section 8**).
- Developed Basin-wide current, historical, and projected water budgets using the Central Valley Hydrologic Model Version 2 (CVHM2; see **Section 9**).
- Estimated the long-term sustainable yield for each principal aquifer using the revised water budget approach (see **Section 9.5**).
- Revised the applicable SMCs at all RMSs to incorporate new data and information and selected methodologies (see **Section 12**).
- Established SMCs at new RMSs (see **Section 12**).

- Refined the Basin-wide monitoring network to include 35 additional Representative Monitoring Wells for Chronic Lowering of Groundwater Levels (RMW-WLs), 21 additional Representative Monitoring Wells for Degraded Groundwater Quality (RMW-WQs), and 19 additional Representative Monitoring Sites for Interconnected Surface Water (RMS-ISW) relative to the monitoring networks in the Revised 2022 GSPs, in addition to adding Interferometric Synthetic Aperture Radar (InSAR) coverage of the entire Basin as a Representative Monitoring Site for Land Subsidence (see **Section 13**).
- Prepared updated descriptions of Projects and Management Actions (P/MAs) planning, implementation, and benefits (see **Section 14**).
- Conducted a quantitative projection of P/MA benefits (see **Sections 9.4 and 15.9**).

## 2 SUSTAINABILITY GOAL

### § 354.24 Sustainability Goal

*Each Agency shall establish in its Plan a sustainability goal for the basin that culminates in the absence of undesirable results within 20 years of the applicable statutory deadline. The Plan shall include a description of the sustainability goal, including information from the basin setting used to establish the sustainability goal, a discussion of the measures that will be implemented to ensure that the basin will be operated within its sustainable yield, and an explanation of how the sustainability goal is likely to be achieved within 20 years of Plan implementation and is likely to be maintained through the planning and implementation horizon.*

### 23 CCR § 354.24

The Sustainability Goal adopted by all Groundwater Sustainability Agencies (GSAs) in the Delta-Mendota Subbasin (Basin), is as follows:

“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, and does not negatively impact surface water diversion and conveyance and delivery capabilities. This goal will be achieved through the implementation of the proposed projects and management actions to reach identified measurable objectives and milestones through the implementation of the GSP(s), and through continued coordination with neighboring subbasins to ensure the absence of undesirable results by 2040.”

### 3 AGENCY INFORMATION

§ 354.6. When submitting an adopted Plan to the Department, the Agency shall include a copy of the information provided pursuant to Water Code Section 10723.8, with any updates, if necessary, along with the following information:

- (a) The name and mailing address of the Agency.
- (b) The organization and management structure of the Agency, identifying persons with management authority for implementation of the Plan.
- (c) The name and contact information, including the phone number, mailing address and electronic mail address, of the plan manager.
- (d) The legal authority of the Agency, with specific reference to citations setting forth the duties, powers, and responsibilities of the Agency, demonstrating that the Agency has the legal authority to implement the Plan.
- (e) An estimate of the cost of implementing the Plan and a general description of how the Agency plans to meet those costs.

#### 3.1 Name and Mailing Address of the Agency

##### 23 CCR § 354.6(a)

The Delta-Mendota Subbasin (herein referred to as the “Basin”) of the San Joaquin Valley Basin (California Department of Water Resources [DWR] Basin No. 5-022.07) is fully covered by 23 Groundwater Sustainability Agencies (GSAs), each acting as the exclusive GSA in their respective portion of the Basin.

The name and mailing addresses of the 23 GSAs covering the Basin are listed below.

##### **Aliso Water District GSA**

Aliso Water District  
Groundwater Sustainability Agency  
13991 Avenue 7  
Madera, CA 93637

##### **Central Delta-Mendota GSA**

Central Delta-Mendota GSA  
c/o Santa Nella County Water District  
12931 S Hwy 33  
Santa Nella, CA 95322

##### **City of Dos Palos GSA**

City of Dos Palos GSA  
2174 Blossom Street  
Dos Palos, CA 93620

**City of Firebaugh GSA**

City of Firebaugh GSA  
1133 P Street  
Firebaugh, CA 93622

**City of Gustine GSA**

City of Gustine GSA  
352 Fifth Street, P.O. Box 16  
Gustine, CA 95322

**City of Los Banos GSA**

City of Los Banos GSA  
520 J Street  
Los Banos, CA 93635

**City of Mendota GSA**

City of Mendota GSA  
643 Quince Street  
Mendota, CA 93640

**City of Newman GSA**

City of Newman GSA  
938 Fresno Street  
Newman, CA 95360

**City of Patterson GSA**

City of Patterson GSA  
1 Plaza, P.O. Box 667  
Patterson, CA 95363

**County of Fresno GSA – Delta-Mendota Management Area A (MAA)**

County of Fresno  
Department of Public Works and Planning  
Water and Natural Resources Division  
2220 Tulare Street, 6th Floor  
Fresno, CA 93721

**County of Fresno GSA – Delta-Mendota Management Area B (MAB)**

County of Fresno  
Department of Public Works and Planning  
Water and Natural Resources Division  
2220 Tulare Street, 6th Floor  
Fresno, CA 93721

**County of Madera GSA – Delta-Mendota**

County of Madera  
200 W. Fourth Street  
Madera, CA 93637

**County of Merced GSA – Delta-Mendota**

County of Merced  
2222 M Street  
Merced, CA 95340

**DM-II GSA**

DM-II GSA  
P.O. Box 1596  
Patterson, CA 95363

**Farmers Water District GSA**

Farmers Water District  
4460 W. Shaw Avenue, #219  
Fresno, CA 93720

**Grassland GSA**

Grassland Groundwater Sustainability Agency  
200 W. Willmott Avenue  
Los Banos, CA 93635

**Northwestern Delta-Mendota GSA**

Northwestern Delta-Mendota GSA  
3800 Cornucopia Way, Suite C  
Modesto, CA 95358

**Oro Loma Water District GSA**

Oro Loma Water District GSA  
264 I Street  
Los Banos, CA 93635

**Patterson Irrigation District GSA**

Patterson Irrigation District  
P.O. Box 685  
Patterson, CA 95363

**San Joaquin River Exchange Contractors (SJREC) Water Authority GSA**

San Joaquin River Exchange Contractors Water Authority  
541 H Street, P.O. Box 2115  
Los Banos, CA 93635

**Turner Island Water District GSA – Delta-Mendota**

Turner Island Water District  
P.O. Box 2586  
Los Banos, CA 93635

**West Stanislaus Irrigation District GSA**

West Stanislaus Irrigation District  
P.O. Box 37  
116 E St.  
Westley, CA 95387

**Widren Water District GSA**

Widren Water District  
259 I Street  
Los Banos, CA 93635

Information regarding the GSAs and current GSA representatives can be found on the Basin’s Sustainable Groundwater Management Act (SGMA) website: <https://deltamendota.org/>

**3.2 Organization and Management Structure of the Agency**

**☑ 23 CCR § 354.6(b)**

On 12 December 2018, the Basin GSAs adopted and executed a Coordination Agreement and Cost Sharing Agreement to comply with the SGMA requirement that if a Basin is covered by multiple GSPs, GSAs must coordinate when developing and implementing their individual GSPs (Title 23 of the California Code of Regulations [23 CCR] § 357.4).

Because the Basin GSAs collectively decided to develop a single GSP for the Basin and a Coordination Agreement is no longer required by the SGMA statute, the Basin GSAs (Parties) signed and executed a Memorandum of Agreement (MOA) on December 11, 2023, superseding the 2018 Coordination Agreement and Cost Sharing Agreement (**Appendix D**). The MOA reflects the GSAs’ commitment to adopt a single, coordinated, and streamlined GSP for the Basin in response to DWR’s Deficiency #1. The MOA

updates the Basin governance structure with an emphasis on GSP implementation and defines seven groups of GSAs (the “GSA groups”) to guide management of separate portions of the Basin through a Coordination Committee. This structure continues to support localized knowledge and management of the Basin while striving for more coordinated sustainability goals, criteria, and objectives. Elements of the MOA are further described in **Section 5.5.5**.

The GSAs acknowledge that management of the Basin through 23 GSAs introduces complexity to the Basin’s organizational structure. However, the GSAs have also recognized a profound responsibility to local communities to uphold their representation in SGMA decision-making processes. Notably, a majority of communities (including disadvantaged communities [DACs]) within the Basin are directly represented through their own GSA, which was a deliberate approach aimed to foster direct participation in SGMA matters. While this single GSP was prepared to streamline the Basin Plan, the GSAs have chosen to preserve the diversity and inclusion that exists within the 23 GSAs through the Basin’s organizational structure.

The GSA Groups and member agencies are listed below in **Table Intro-2** and shown in **Figure Intro-1**. Descriptions of individual GSA Groups are provided in **Section 5.1.2**.

**Table Intro-2. GSA Groups and GSAs in the Delta-Mendota Subbasin**

GSA Group	GSA Name	Member Agency
Aliso Water District	Aliso Water District GSA	Aliso Water District
Farmers Water District	Farmers Water District GSA	Farmers Water District
Fresno County	County of Fresno GSA - Delta-Mendota Management Area A	County of Fresno
	County of Fresno GSA - Delta-Mendota Management Area B	County of Fresno
Grassland	County of Merced GSA - Delta-Mendota	County of Merced
	Grassland GSA	Grassland Water District
		Grassland Resource Conservation District
Central Delta-Mendota	Central Delta-Mendota GSA	San Luis Water District
		Panoche Water District
		Tranquillity Irrigation District
		Fresno Slough Water District
		Eagle Field Water District
		Pacheco Water District
		Santa Nella County Water District
		Mercy Springs Water District
		County of Merced
	County of Fresno	
Oro Loma Water District GSA	Oro Loma Water District	
Widren Water District GSA	Widren Water District	



GSA Group	GSA Name	Member Agency
Northern Delta-Mendota	City of Patterson GSA	City of Patterson
	DM-II GSA	Del Puerto Water District
		Oak Flat Water District
	Northwestern Delta-Mendota GSA	County of Merced
		County of Stanislaus
	Patterson Irrigation District GSA	Patterson Irrigation District
Twin Oaks Irrigation District		
West Stanislaus Irrigation District GSA	West Stanislaus Irrigation District	
San Joaquin River Exchange Contractors	City of Dos Palos GSA	City of Dos Palos
	City of Firebaugh GSA	City of Firebaugh
	County of Fresno GSA - Delta-Mendota Management Area B	County of Fresno
	City of Gustine GSA	City of Gustine
	City of Los Banos GSA	City of Los Banos
	City of Mendota GSA	City of Mendota
	City of Newman GSA	City of Newman
	County of Madera GSA - Delta-Mendota	County of Madera
	County of Merced GSA - Delta-Mendota	County of Merced
	San Joaquin River Exchange Contractors GSA	Central California Irrigation District
		Columbia Canal Company
		Firebaugh Canal Water District
San Luis Canal Company		
Turner Island Water District GSA - Delta-Mendota	Turner Island Water District	

**Abbreviations:**

GSA = Groundwater Sustainability Agency

**3.2.1 Coordination Committee**

The MOA establishes a Coordination Committee to provide a forum for the GSA Groups to work collaboratively and develop recommendations for technical and substantive Basin-wide activities. The Coordination Committee operates in full compliance with the Brown Act and is composed of a Chairperson and Vice Chairperson, Secretary, Plan Manager, and at least one GSA Group Representative and Alternate Representative for each of the seven GSA Groups. The Chairperson and Vice Chairperson are rotated annually among GSA Groups in alphabetical order. The Secretary assumes primary responsibility for Brown Act compliance.

The Coordination Committee has seven voting members and is comprised of at least one Representative from each GSA Group. GSA Group Representatives are selected by each respective GSA Group at the discretion of the respective GSA Group, and such appointments are effective upon providing written

notice to the Secretary and to each Group Contact. Each GSA Group Representative is entitled to one vote at the Coordination Committee. The Alternate Representative is authorized to vote in the absence of the GSA Group Representative. A unanimous vote of the Representatives present is required on most items upon which the Coordination Committee is authorized to act, with the exception of certain ministerial and administrative items.

The number of voting members for each GSA Group as defined in the MOA are listed below:

- (1) Aliso Water District GSA Group
- (1) Central Delta-Mendota GSA Group
- (1) Farmers Water District GSA Group
- (1) Fresno County GSA Group
- (1) Grassland GSA Group
- (1) Northern Delta-Mendota GSA Group
- (1) SJREC GSA Group

Voting procedures to address a lack of unanimity take place upon a majority vote of a quorum of the Coordination Committee and include: straw polls, provisional voting, and delay of voting. Where the law or the MOA require separate written approval by each of the Parties, such approval is evidenced in writing by providing the resolution, motion, or minutes of their respective Board of Directors to the Secretary of the Coordination Committee. Minutes of the Coordination Committee are kept and prepared by the Secretary's or appointee and maintained by the Secretary as Coordination Agreement records and are available to the Parties and the public upon request. Meeting agenda and minutes are posted on the Delta-Mendota website ([www.deltamendota.org](http://www.deltamendota.org)).

The Coordination Committee will continue to meet and confer on GSP implementation as the Parties to the MOA deem necessary. The focus of the meetings will be to review data and other Plan implementation actions that will ensure the GSAs are progressing toward the Basin sustainability goal, while meeting the Annual Reporting requirements and any other requirements agreed upon for purposes of coordination.

Coordination Committee meetings are open to the public and include opportunities for public comment. Meetings are typically held on the second Monday of each month at 1:00 pm in the San Luis & Delta Mendota Water Authority (SLDMWA) Boardroom, 842 6th Street, Los Banos, CA.

#### 3.2.1.1 Ad-Hoc Subcommittees

The Coordination Committee may appoint ad-hoc subcommittees, working groups, and otherwise direct staff made available by the Parties. Subcommittees or working groups may include qualified individuals possessing the knowledge and expertise on the topics being addressed by the subcommittee or working group, whether or not such individuals are GSA Group Representatives. Tasks assigned to subcommittees, working groups, or staff made available by the Parties may include developing technical data, supporting information, and/or recommendations on specialized matters to the Coordination Committee. During development of this GSP, the Coordination Committee appointed several ad-hoc subcommittees for single

purpose issues that were disbanded after that issue was resolved. Standing ad-hoc subcommittees are described in further detail below:

- **Basin Ad-hoc Technical Subcommittee:** The Basin Ad-hoc Technical Subcommittee provided input and recommendations to the Coordination Committee on technical issues during GSP development and implementation. The Basin Ad-hoc Technical Subcommittee was comprised of GSA representatives and technical staff that met at least monthly, and often more frequently during the development of this GSP. The Basin Ad-hoc Technical Subcommittee was charged with coordinating implementation of the required technical elements of the GSP (e.g., water budgets, monitoring networks) and providing recommendations to the Coordination Committee. The Coordination Committee took actions to provide direction to the Basin Ad-hoc Technical Subcommittee and approve Basin Ad-hoc Technical Subcommittee recommendations and work products.

### 3.3 Plan Manager

**23 CCR § 354.6(c)**

The Plan Manager for this GSP is John Brodie, Water Resources Programs Manager for the SLDMWA. The contact information for Mr. Brodie is provided below.

John Brodie  
Water Resources Programs Manager  
San Luis & Delta-Mendota Water Authority  
842 6<sup>th</sup> Street  
Los Banos, CA 93635  
Email: john.brodie@sldmwa.org  
Office Phone: (209) 826-1872

### 3.4 Legal Authority of the GSA

**23 CCR § 354.6(d)**

All 23 GSAs covering the Basin applied for and were granted exclusive GSA status under California Water Code (CWC) § 10723(c).

### 3.5 Estimated Cost of Implementing the GSP and the Agency's Approach to Meet Costs

**23 CCR § 354.6(e)**

Information on estimated costs to implement this GSP and the plan to meet those costs is provided in **Section 15.2**.

## 4 GSP ORGANIZATION

This Groundwater Sustainability Plan (GSP) is organized as follows

- Sections 1 through 4 comprise the **Introduction**, including the following sections:
  - Section 1. **Purpose of the Groundwater Sustainability Plan**
  - Section 2. **Sustainability Goal**
  - Section 3. **Agency Information**
  - Section 4. **GSP Organization**
- Section 5 provides a **Description of the Plan Area**.
- Sections 6 through 9 present the **Basin Setting**, including the following sections:
  - Section 6. Introduction to Basin Setting
  - Section 7. Hydrogeologic Conceptual Model
  - Section 8. Current and Historical Groundwater Conditions.
  - Section 9. Water Budget Information.
- Sections 10 through 12 present the **Sustainable Management Criteria**, including the following sections:
  - Section 10. Introduction to Sustainable Management Criteria
  - Section 11. Sustainability Goal
  - Section 12. Sustainability Indicators
- Section 13 presents the **Monitoring Network**.
- Section 14 presents the **Projects and Management Actions**.
- Section 15 presents the **Plan Implementation**.
- **References and Technical Studies** are included at the end of this document.
- Supporting information is provided in appendices as follows:

## REFERENCES AND TECHNICAL STUDIES

### § 354.4. General Information


*Each Plan shall include the following general information:*

*(b) A list of references and technical studies relied upon by the Agency in developing the Plan. Each Agency shall provide to the Department electronic copies of reports and other documents and materials cited as references that are not generally available to the public.*

### 23 CCR § 354.4(b)

SWRCB. (2022, November 22). *Groundwater Quality Considerations for High and Medium Priority Groundwater Basins* [SWRCB memo to DWR]. [https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/DrinkingWater/Files/20221122\\_Groundwater-Quality-Comments-to-DWR.pdf](https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/DrinkingWater/Files/20221122_Groundwater-Quality-Comments-to-DWR.pdf)

**Legend**

-  Delta-Mendota Subbasin Coordination Committee Voting Member

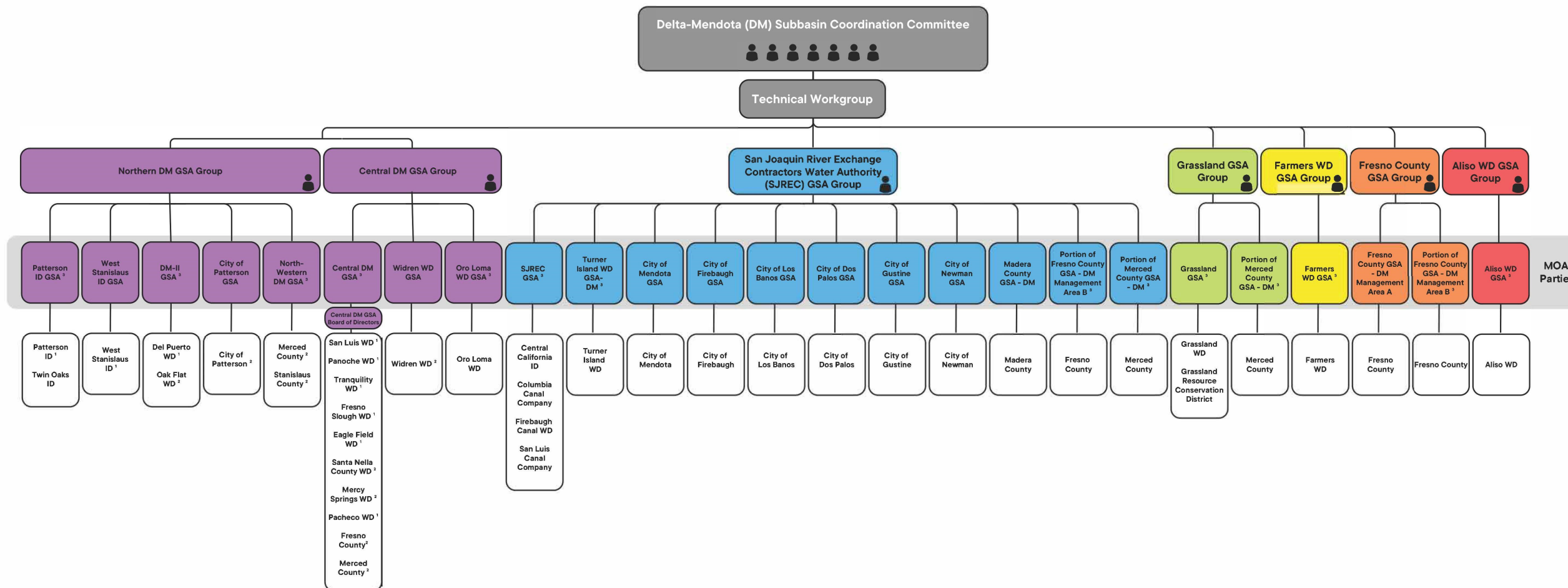
1. Participation in North-Central Delta-Mendota Region GSP through Activity Agreement with the Authority
2. Participation in North-Central Delta-Mendota Region GSP through Memorandum of Agreement with the Authority
3. Technical Workgroup Member

**Abbreviations**

- DM = Delta-Mendota
- ID = Irrigation District
- WD = Water District
- GSA = Groundwater Sustainability Agency
- SGMA = Sustainable Groundwater Management Act

**Notes**

1. If accommodation or alternative format is needed for this figure, please contact the Plan Manager for assistance.



**Delta-Mendota Subbasin SGMA Governance Structure**

**DRAFT**