Northern & Central Delta-Mendota Region Subbasin Groundwater Sustainability Plan

September 25, 2019







NORTHERN & CENTRAL DELTA-MENDOTA

DELTA

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Meet your GSP



Groundwater **Sustainability Plan**

For the Northern and Central Delta-Mendota Regions

January 2020







Executive Summary Chapter 1 – Introduction Chapter 2 – Plan Area Chapter 3 – Governance Chapter 4 – Outreach Chapter 5 – Basin Setting Chapter 6 – Sustainable Management Criteria Chapter 7 – Sustainability Implementation Chapter 8 – Plan Implementation

Chapter 9 – Technical Studies

Currently available online at www.deltamendota.org





Chapter 2 – Plan Area

- Plan Area Description
- Land Use Elements
- Existing Water Resources Monitoring and Management Programs
 - ILRP
 - CV-SALTS
 - IRWM
 - Well Permitting
 - CASGEM
 - Subsidence Monitoring
 - Pump-in Program
- Existing and Planned Conjunctive Use Programs
- Plan Elements from CWC Section 10727.4
 - Groundwater Dependent Ecosystems
 - Wellhead Protection Areas and Recharge Areas
 - Groundwater Contamination Cleanup



Chapter 3 - Governance

- GSA and Plan Manager contact information
 - San Luis & Delta-Mendota Water Authority is Plan Manager
 - Region GSAs include:
 - o Central Delta-Mendota GSA
 - o City of Patterson GSA
 - o DM-II GSA
 - o Northwestern Delta-Mendota GSA
 - o Oro Loma Water District GSA
 - o Patterson Irrigation District GSA
 - West Stanislaus Irrigation District GSA
 - Widren Water District GSA
- GSA coordination
- Governance structure



Chapter 3 - Governance



Chapter 4 - Outreach

- Description of beneficial uses and users in Plan Area
- Plan Development
- Outreach
 - Noticing
 - Opportunities for Public Engagement



Chapter 4 - Outreach

- Description of beneficial uses and users in Plan Area
- Plan Development
- Outreach
 - Noticing ۲
 - **Opportunities for Public** Engagement
 - Outreach to Diverse Social, Cultural and Economic Areas
 - Methods for Disseminating Information

	BADA			Home Learn More +	Get Involved • Resources • Contacts
	N	orthern & (Central Delta	Mendota Regi	on
	webs 76 a z Reges NG	ene to the Northern & Central De eage II dedicated to providing info ns of the Delho Mendoto Subboos Dorthern & Cerr	tes Mendeta Region GSP page.	eer related to the sustainable management of heree for Draft GSP ta GSP	he Northern and Central Softs Mendata (N.C.556)
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DELTA- MENDOTA	The Pla	Northern & Central De n (GSP).	lta-Mendota Region GSP Gro	up is seeking public comment o	n the Groundwater Sustainability
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NORTHERN & CENTRAL DELTA- MENDOTA	Sustainability Plan (GS III), the horth-charal Group complete United States and Technic Complete United States and Technic Complete United States and Technic Memoradam Costsued development of the following Off sections Of sections Of the States and Technic Complete Distance States Of States and Technic Complete Distance States Off States and Technic Complete Distance States Off States and Technic Complete Distance States Dist	Group Updates FARMERS WATER DISTRICT	Ferners Werr Dation GSP Group completed the following activities in July: - 1651s to Bain Steep Caylaces - Completed fins dark of Sustanable Management Citeria and Monttoning Network O Laysters - Troylow terbalance with Common Chapters - Troylow terbalance with Common Chapters - Troylow terbalance and Steep Common - Complete gliceman terview of Dark OS - Sodary notice of intent to adopt GSP - 90-day notice of intent to adopt GSP	OM Region GSP G	roup
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Chapter 5 – Basin Setting

- Overview
- Hydrogeologic Conceptual Model
- Groundwater Conditions
- Water Budgets



Chapter 5 – Basin Setting Hydrogeologic Conceptual Model



Chapter 5 – Basin Setting Groundwater Conditions



Chapter 5 – Basin Setting Water Budget





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Chapter 5 – Basin Setting Water Budget



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Chapter 6 – Sustainability Management Criteria

- Sustainability Goal
- Minimum Thresholds
- Measurable Objectives
- Interim Goals





Chapter 6 – Sustainability Management Criteria Aquifer: Lower MC 15-1 Historic High Avg





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Chapter 7 – Sustainability Implementation

- Projects and Management Actions
 - Project/Management Action Definitions
 - Legal Authority
 - Costs
 - Public Noticing
 - Permitting
 - Benefit and Evaluation
- Monitoring
 - Monitoring Objectives
 - Monitoring Networks
 - Monitoring Protocols
- Data Gaps



Chapter 7 – Sustainability Implementation

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Tier	Category	Project / Management Action	Project Proponent
Tier 1	Projects	Los Banos Creek Recharge and Recovery Project	San Luis Water District
	-	Orestimba Creek Recharge and Recovery Project	Del Puerto Water District
		North Valley Regional Recycled Water Program (NVRRWP) – Modesto and Early Turlock Years	Del Puerto Water District
		City of Patterson Percolation Ponds for Stormwater Capture and Recharge	City of Patterson
		Kaljian Drainwater Reuse Project	San Luis Water District
		West Stanislaus Irrigation District Lateral 4-North Recapture and Recirculation Reservoir	West Stanislaus Irrigation District
		Revision to Tranquillity Irrigation District Lower Aquifer Pumping	Tranquillity Irrigation District
	Management	Lower Aquifer Pumping Rules for Minimizing Subsidence	N/A
	Actions	Maximize Use of Other Water Supplies	N/A
		Increasing GSA Access to and Input on Well Permits	N/A
		Drought Contingency Planning in Urban Areas	N/A
		Fill Data Gaps	N/A
Tier 2 Proje	Projects	Del Puerto Canyon Reservoir Project	Del Puerto Water District
		Little Salado Creek Groundwater Recharge and Flood Control Basin	Stanislaus County
		Patterson Irrigation District Groundwater Bank and/or Flood-Managed Aquifer Recharge (MAR)- type Project	Patterson Irrigation District
		West Stanislaus Irrigation District Lateral 4-South Recapture and Recirculation Reservoir	West Stanislaus Irrigation District
		Ortigalita Creek Groundwater Recharge and Recovery Project	San Luis Water District
	Management Action	Develop Program to Incentivize Use of Surface Water and Reduce Groundwater Demand	N/A
Tier 3	Projects	Pacheco Reservoir Expansion	Santa Clara Valley Water District
		Raising San Luis Reservoir	U.S. Bureau of Reclamation (USBR)
		Sites Reservoir	Sites Project Authority
		Los Vaqueros Expansion Phase 2	Contra Costa Water District
	Management	Groundwater Extraction Fee with Land Use Modifications	N/A
	Actions	City of Patterson Reduced Groundwater Use Portfolio	City of Patterson
		Rotational Fallowing of Crop Lands	N/Ă

Chapter 7 – Sustainability Implementation – Monitoring for Water Levels and Storage



Chapter 7 – Sustainability Implementation – Monitoring for Water Quality



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Chapter 7 – Sustainability Implementation – Monitoring for Subsidence





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Chapter 7 – Sustainability Implementation – Monitoring for Interconnected Surface Water





Chapter 8 – Plan Implementation

- Implementation Schedule
- Implementation Costs and Funding Sources
- Annual Reports
- Five-Year Assessment Report





Appendices

- Appendix A Coordination Agreements
- Appendix B Common Chapter for Delta-Mendota Subbasin
- Appendix C Outreach Documentation
- Appendix D Water Budgets Model Documentation
- Appendix E Hydrographs for Sustainable Management Criteria
- Appendix F Quality Assurance Program Plan
- Appendix G Noticing and Adoption Documentation
- Appendix H GSP Cross-walk





Next Steps

- Public Draft GSP posted on September 9, 2019
- Notice of Intent to Adopt GSP posted on September 9, 2019
- 90-day noticing period to counties and cities in GSP jurisdiction
- Public review period closes October 11, 2019
- Finalize GSP and summarize comments received
- Northern & Central Delta-Mendota Region GSP adoption in December 2019 and January 2020
- GSP submittal to DWR by January 31, 2020
- 60-day public review period beginning February 1, 2020





Estimated Implementation Costs

Activity	Estimated Cost	Assumptions				
Monitoring Program						
Coordination with Monitoring Entities	\$74,000 annually	Coordination with GSAs or member agencies at the GSP- level				
Data Field Collection	\$136,000 annually	Completed by SLDMWA with consultant support as requested to perform their monitoring activities; Includes two (2) days of field work for water levels per year, one (1) day of field work for water quality per year, and one (1) day of field work for subsidence per year (on average, varies by subsidence management area and remaining Plan area)				
Monitoring Data Quality Control and Analysis	\$53,000 annually	Data collection and entry from local entities and performing quality control on collected data				
Oversight and Coordination of Monitoring	\$44,000 annually	Staff oversight and scheduling with local and contract labor				
Monitoring Network Maintenance	\$22,000 annually	As needed				
Data Gap Tracking	\$51,000 annually	Tracking of ongoing studies and data collection by other entities and programs				
Local Monitoring	\$52,000 annually	Data collection and reporting to the GSP-level				
Lab Testing	\$31,000 annually	Sending water quality samples to the lab and associated chain of custody; Includes annual water quality sampling.				
Training	\$38,000 annually	Training for new employees or skills				
Annual Reporting and Analysis						
Water Levels	\$27,000 annually during years with no 5-Year Update	Tracking relative to sustainability indicators and associated				
Change in Storage	\$27,000 annually during years with no 5-Year Update	thresholds, which include data analysis, tracking trends, and				
Water Quality	\$27,000 annually during years with no 5-Year Update	reporting to SLDMWA (Plan Manager)				
Subsidence	\$27,000 annually during years with no 5-Year Update					
Annual Report Documentation	\$67,000 annually during years with no 5-Year Update					
5-Year Update						
Threshold Evaluation and Updating	\$238,000 every five years (across two years to develop)					
Numerical Model Updates and Coordination	\$390,000 every five years (across two years to develop)	Includes model runs and refinement				
Evaluation of Initial GSP Effectiveness	\$284,000 every five years (across two years to develop)					
Plan to Improve GSP	\$284,000 every five years (across two years to develop)					



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Estimated Implementation Costs

Activity	Estimated Cost	Assumptions				
Coordination						
Advisory Committee Meeting Support	\$49,000 annually	Monthly meetings for first two (2) years (2020 and 2021) then, then quarterly thereafter and associated preparation by SLDMWA staff or consultant				
GSA Board Meeting Support	\$18,000 annually	Monthly meetings for first two (2) years (2020 and 2021) then, then quarterly thereafter and associated preparation by SLDMWA staff or consultant				
Public Outreach	\$46,000 annually	For modifications and re-adoption of the GSP; Supporting fee development, promote compliance with program, etc.; Includes two (2) public meetings per year				
Website Maintenance	\$9,000 annually					
Interbasin Coordination	\$85,000 annually	Quarterly meetings; Includes consultation with legal support				
Intrabasin Coordination	\$73,000 annually	Monthly meetings for first two years (2020 and 2021), then quarterly thereafter; Includes consultation with legal support				
Regulatory Tracking and Enforcement	\$76,000 annually	Oversight by Plan Manager to ensure efforts are staying on Plan				
Data Management System (DMS) Maintenance						
Data Quality Control	\$45,000 annually					
DMS Cleanup/Maintenance	\$24,000 annually					
Budget and Schedule Monitoring	\$53,000 annually					
Grant Tracking and Administration						
Grant Tracking and Pursuit	\$9,000 annually	Includes tracking grant programs and writing two (2) Requests for Proposals per year; Does not include grant application writing				
Grant Administration	\$129,000 annually					
General Administration						
Accounting	\$15,000 annually	SLDMWA expenses related to GSP implementation, annual reporting, and 5-Year Update				
Auditing	\$6,000 annually					
Document Management	\$7,000 annually					
General Staff Oversight	\$47,000 annually					
Contract Management	\$3,000 annually					
Legal Support	\$88,000 annually	For litigation, JPA formation, and coordination with outside counsel				
Total - during Annual Report years (2020-2024)	\$1,458,000 annually					
Total - during 5-Year Update years (2024-2025)	\$2,479,000 annually					



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