

## 8. PLAN IMPLEMENTATION

### 8.1 PLAN IMPLEMENTATION

Implementation of this Groundwater Sustainability Plan (GSP) includes implementation of the projects and management actions included in **Chapter 7**, as well as the following:

- Groundwater Sustainability Plan implementation, administration, and management
- Implementation of the monitoring program described in **Chapter 7** of this GSP
- Annual Reporting
- Five-year assessment reports, also referred to as 5-Year Updates to this GSP

This chapter also describes the contents of both the annual reports and five-year assessment reports that must be provided to the California Department of Water Resources (DWR) as required by Sustainable Groundwater Management Act (SGMA) regulations.

#### 8.1.1 Implementation Schedule

**Figure 8-1** illustrates the implementation schedule for this GSP through 2025. Included in the chart are activities necessary for ongoing GSP monitoring and updates, as well as tentative schedules for the anticipated projects and management actions, to the first interim goal. Additional details about the activities included in the schedule are provided in the respective sections of this GSP. Adaptive management actions will only be implemented if the GSP interim goals, as described in **Chapter 6 Sustainable Management Criteria**, are not being met.

### 8.2 IMPLEMENTATION COSTS AND FUNDING SOURCES

Northern and Central Delta-Mendota Regions Groundwater Sustainability Agencies (GSAs) operations and GSP implementation will incur costs which will require funding by the individual entities comprising the GSAs. The five primary activities that will incur costs include:

- Implementing the GSP
- Implementing GSP-related projects and management actions
- GSA and Plan Administrator operations
- Annual data collection, analysis, and reporting
- Developing five-year assessment reports

**Table 8-1** summarizes these activities and their estimated costs, where some costs and associated activities will be undertaken by each Northern and Central Delta-Mendota Regions GSAs as well as San Luis & Delta-Mendota Water Authority (SLDMWA). Costs are subject to change based on whether GSAs, SLDMWA, or consulting staff conduct each activity. Costs associated with implementing GSP-related projects and management actions are included in **Section 7.1 Projects and Management Actions** of the *Sustainability Implementation* chapter.

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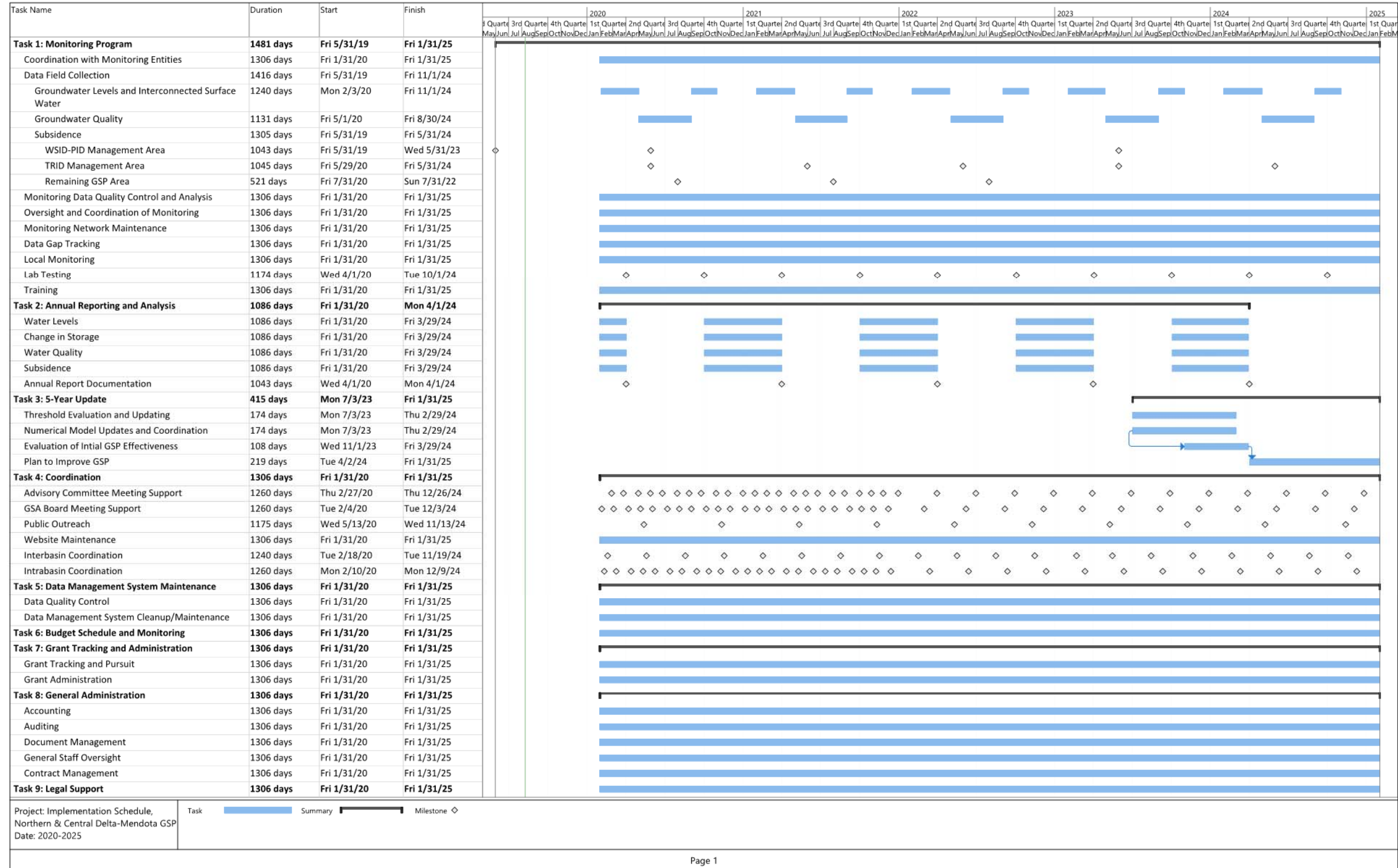


Figure 8-1. Implementation Schedule

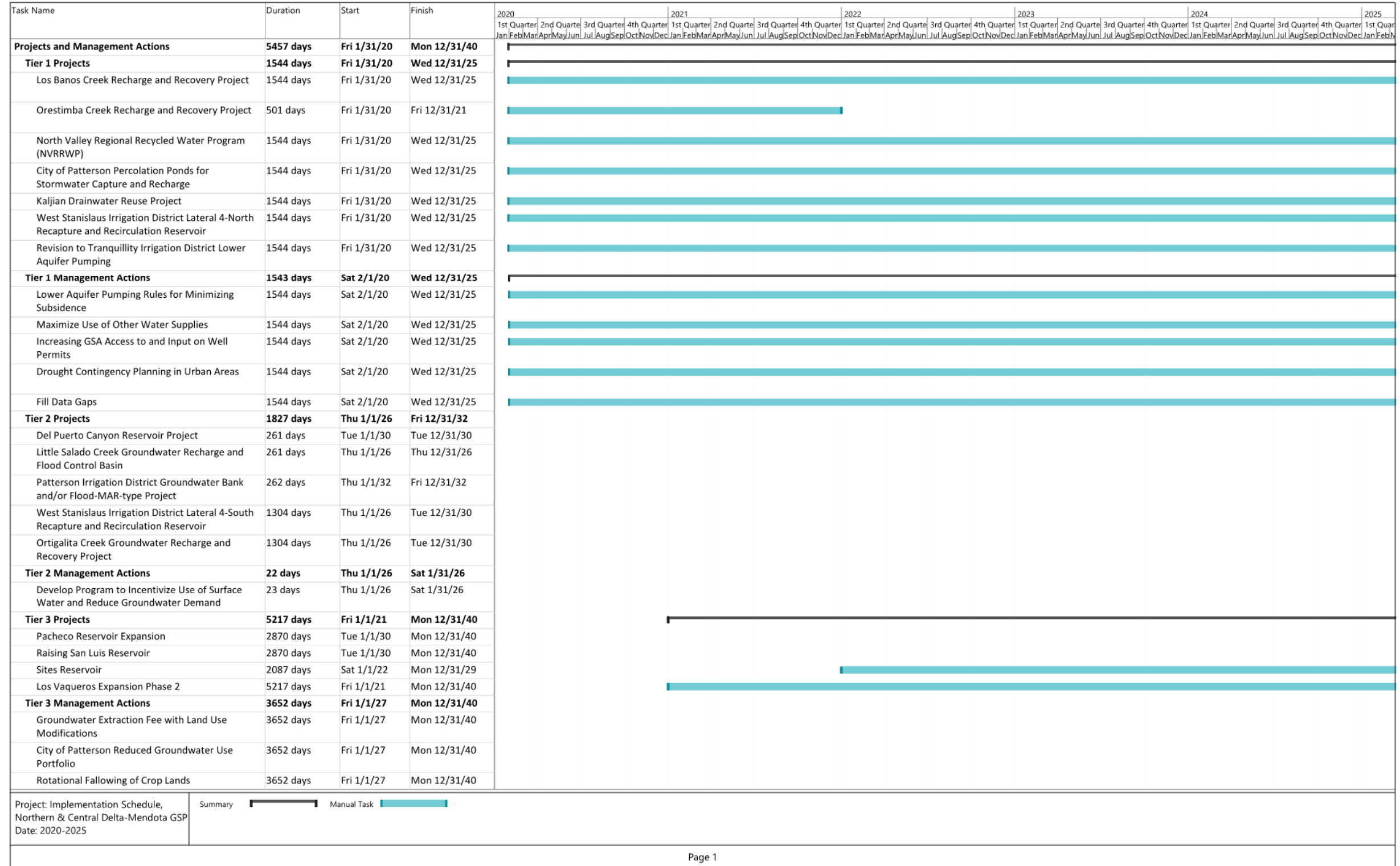


Figure 8-1. Implementation Schedule (continued)

Table 8-1. Northern & Central Delta-Mendota Region GSP Estimated Implementation Costs

Activity	Estimated Cost	Assumptions
<b>Monitoring Program</b>		
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
<b>Annual Reporting and Analysis</b>		
Water Levels	\$27,000 annually during years with no 5-Year Update	Tracking relative to sustainability indicators and associated thresholds, which include data analysis, tracking trends, and reporting to SLDMWA (Plan Manager)
Change in Storage	\$27,000 annually during years with no 5-Year Update	
Water Quality	\$27,000 annually during years with no 5-Year Update	
Subsidence	\$27,000 annually during years with no 5-Year Update	
Annual Report Documentation	\$67,000 annually during years with no 5-Year Update	
<b>5-Year Update</b>		
Threshold Evaluation and Updating	\$238,000 every five years (across two years to develop)	Includes model runs and refinement
Numerical Model Updates and Coordination	\$390,000 every five years (across two years to develop)	
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)	

Activity	Estimated Cost	Assumptions
<b>Coordination</b>		
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
<b>Data Management System (DMS) Maintenance</b>		
Data Quality Control	\$45,000 annually	
DMS Cleanup/Maintenance	\$24,000 annually	
<b>Budget and Schedule Monitoring</b>	\$53,000 annually	
<b>Grant Tracking and Administration</b>		
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	
<b>General Administration</b>		
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	
<b>Legal Support</b>	\$88,000 annually	For litigation, Joint Powers Authority (JPA) formation, and coordination with outside counsel
<b>Total - during Annual Report years (2020-2024)</b>	<b>\$1,458,000 annually</b>	
<b>Total - during 5-Year Update years (2024-2025)</b>	<b>\$2,479,000 annually</b>	

## 8.2.1 GSP Implementation and Funding

Costs associated with GSP implementation and Northern and Central Delta-Mendota Regions GSAs and Plan Administrator operations include the following:

- **GSP-associated administration:** Overall program management and coordination activities
- **Stakeholder/Board engagement:** Monthly Northern and Central Delta-Mendota Activity Agreement Management Committee meetings for first two (2) years, then quarterly thereafter; monthly Delta-Mendota Subbasin Coordination Committee meetings for first two (2) years, then quarterly thereafter; and semi-annual public workshops
- **Outreach:** Email communications, newsletters, and website management
- **GSP implementation program management:** Program management and oversight of project and management action implementation, including coordination among GSAs, Plan Administrator staff and stakeholders, coordination of GSA implementation technical activities, oversight and management of consultants, budget tracking, schedule management, and quality assurance/quality control of project implementation activities
- **Monitoring:** Groundwater level monitoring, groundwater quality monitoring, and land surveying at subsidence benchmarks; collect publicly available subsidence monitoring data and stream gauge data; conduct quality control checks on and manage data; summarize and/or estimate other data sets required for annual reporting
- **Data Management:** Ongoing management of Data Management System (DMS), including data uploads and system improvements

Implementation of this GSP is projected to run between approximately \$1.5 million and \$2.5 million per year, with projects and management actions adding an additional \$6.6 million to \$40 million per year over the 20-year planning horizon. Development of this GSP (and the other five Delta-Mendota Subbasin GSPs) was funded through a Proposition 1 Sustainable Groundwater Planning Grant along with contributions from Subbasin GSA member agencies. Although implementation of this GSP is anticipated to require contributions from the GSAs it represents (and whom are funded through water rates, property taxes, or other public funds), additional funding may be required to implement the GSP. Funding through grants or loans have varying levels of certainty and may be available for some GSP implementation activities (including project implementation). As such, the Northern and Central Delta-Mendota Regions GSAs may choose one or more of the following financing approaches to supplement anticipated GSP implementation costs:

- **Assessments:** Assessments could be levied using a fee-based assessment on land area or irrigated acreage. Two possible methods for implementing an assessment based on acreage include assessing a fee for all acres in the Plan area (approximately 316,000 acres). Under this scenario, to fund the GSP implementation, assessments would range between approximately \$5 and \$8 per acre per year and this assessment would not distinguish between land use types. A second option would be to assess a fee only on irrigated acres (approximately 197,000 acres during the current conditions water year [2013]). This type of assessment (based on irrigated acreage) would range between \$8 and \$13 per acre per year. An assessment solely on irrigated acreage could affect agricultural operations and contribute to land use conversions, which could, in turn, affect the overall assessment amount.
- **Pumping Fees:** Pumping fees are typically a charge for pumping that would be used to fund GSP implementation activities. In the absence of other sources of funding (i.e., grants, loans, or combined with assessments), fees would range between \$11 and \$25 per acre-foot (AF) of water pumped per year (based on projected baseline pumping on an average annual basis from 2020 to 2025 and 2020 to 2070, respectively). To meet the funding needs of the GSP, a tiered approach may be used where fees would be lower when groundwater elevations are higher, and be more when groundwater elevations are lower to encourage conservation or a modified fee structure implemented based on the type of pumping (domestic vs agricultural vs municipal).

- **Combination of fees and assessments:** This approach would combine pumping fees and assessments to moderate the effects of either approach on the economy in the Northern & Central Delta-Mendota Region GSP. This approach would likely include an assessment that would apply to all acres within the Plan area, rather than just to irrigated acreage (thereby accounting for a shared regulatory compliance cost), coupled with a pumping fee to account for those properties that extract more groundwater than others.

Ultimately, it will be up to the individual GSAs to determine the means by which they achieve both the Delta-Mendota Subbasin sustainability goal and financial goals for GSP implementation. However, prior to implementing any fee or assessment program, the Northern & Central Delta-Mendota Region GSP Group should agree on the approach, which may include completion of a rate assessment study and other analyses consistent with the requirements of Proposition (Prop) 218, Prop 26, and/or other California regulations, in order to facilitate the public review process across the GSP Plan area.

If grants or loans are secured for project implementation, potential pumping fees and assessments may be adjusted to align with operating costs of ongoing GSP implementation activities. Potential grant or low-interest loan programs that may be used for GSP implementation are summarized in **Table 8-2** along with an assessment of their respective certainty that the funding source could be obtained to help finance GSP implementation.

**Table 8-2. Potential Funding Sources for GSP Implementation**

Funding Source	Certainty
<b>Ratepayers</b> (within Project Proponent service area or area of project benefit)	<b>High</b> – User rates pay for operation and maintenance (O&M) of a utility’s system. Depends upon rate structure adopted by the project proponent and the Prop 218 rate approval process, which is dependent upon the structure of the GSA and its authority to collect rates from users. Can be used for project implementation as well as project O&M.
<b>General Funds or Capital Improvement Funds</b> (of Project Proponents)	<b>High</b> – General or capital improvement funds are set aside by agencies to fund general operations and construction of facility improvements. Depends upon agency approval.
<b>Special taxes, assessments, and user fees</b> (within Project Proponent service area or area of project benefit)	<b>High</b> - Monthly user fees, special taxes, and assessments can be assessed by some agencies should new facilities directly benefit existing customers. Depends upon the rate structure adopted by the project proponent and the Prop 218 rate approval process, which is dependent upon the structure of the GSA and its authority to collect taxes/assessments/fees from users.
<b>Clean Water State Revolving Fund (CWSRF) Loan Program</b> administered by the California State Water Resources Control Board (SWRCB)	<b>Medium</b> – Historically, the SWRCB has had \$200 to \$300 million available annually for low-interest loans (typically ½ of the General Obligation Bond Rate) for water recycling, wastewater treatment, and sewer collection projects. During recent years, available funding has become limited due to high demand. Success in securing a low-interest loan depends on demand of the CWSRF Program and available funding. Applications are accepted on a continuous basis. SWRCB prepares a fundable list for each fiscal year. In order to receive funding, a project must be on the fundable list. Full applications must be submitted by the end of the calendar year to be considered for inclusion on the following year’s fundable list.



Funding Source	Certainty
<b>Water Recycling Funding Program (WRFP) – Planning and Construction Grants</b> from SWRCB	<b>High</b> (planning) / <b>Low</b> (construction) – WRFP grants are funded by Prop 1, as well as the general CWSRF Program. Planning grants (for facilities planning) are available and can fund 50% of eligible costs, up to \$75,000. Construction grants have been exhausted. Low-interest loans through the CWSRF program are available and while limited, recycled water projects receive priority over wastewater projects (which are also eligible under CWSRF, the umbrella program for the WRFP).
<b>Drinking Water State Revolving Fund Loan Program</b> administered by the SWRCB Division of Drinking Water	<b>High</b> – Approximately \$100 to \$200 million is available on an annual basis for drinking water projects. Low-interest loans are available for project proponents should they decide to seek financing. Funding has become more limited; however, applicants are encouraged to apply.
<b>Water &amp; Waste Disposal Loan &amp; Grant Program in California</b> administered by the United States Department of Agriculture (USDA), Rural Development	<b>High</b> – Long-term, low-interest loans and grants available to fund clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and storm water drainage to household and businesses in eligible rural areas (areas or towns with populations of 10,000 or less). Funds may be used to finance the acquisition, construction, or improvement of drinking water sourcing, treatment, storage, and distribution as well as storm water collection, transmission, and disposal, for example Eligible applicants include most state and local governmental entities, private nonprofits, and federally-recognized tribes. Applications are accepted year-round.
<b>Community Facilities Direct Loan &amp; Grant Program in California</b> administered by USDA, Rural Development	<b>High</b> – Low interest direct loans and grants available to provide affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of the community in a primarily rural area and does not include private, commercial, or business undertakings. Funding priorities include small communities with a population of 5,500 or less and low-income communities having a median household income below 80% of the state nonmetropolitan median household income.
<b>Infrastructure State Revolving Fund Loan Program</b> administered by the California Infrastructure and Economic Development Bank (I-Bank)	<b>High</b> – Low-interest loans are available from I-Bank for infrastructure projects (such as water distribution). Maximum loan amount is \$25 million per applicant. Applications are accepted on a continuous basis.
<b>Title XVI Water Recycling and Reclamation / Water Infrastructure Improvements for the Nation (WIIN) Program – Construction Grants</b> administered by the United States Bureau of Reclamation (USBR)	<b>Medium</b> – Grants up to 25% of project costs or \$20 million, whichever is less, are available from USBR for water recycling projects. A Title XVI Feasibility Study must be submitted to and approved by USBR to be eligible. USBR solicits grants annually.
<b>WaterSMART Grant Programs</b> administered by USBR	<b>Medium</b> – During Fiscal Year 2019, \$34 million was appropriated to WaterSMART grant programs. Examples of WaterSMART grant programs include Water and Energy Efficient Grants and Small-Scale

Funding Source	Certainty
	Water Efficiency Projects. Both grant programs can help fund projects such as canal lining/piping, municipal metering, and supervisory control and data acquisition (SCADA) systems.
WaterSMART Title XVI Water Recycling and Reclamation Program – Feasibility Study Grants administered by USBR	<b>Low</b> – Grants up to \$150,000 have been available in the past for preparation of Title XVI Feasibility Studies. It is possible future rounds may be administered.
<b>Bonds</b>	<b>Medium</b> – Revenue bonds can be issued to pay for capital costs of projects allowing for repayment of debt service over 20- to 30- year timeframe. Depends on the bond market and the existing debt of project proponents.
<b>Integrated Regional Water Management (IRWM) implementation grants</b> administered by DWR	<b>High</b> (San Joaquin River Funding Area) / <b>Medium</b> (Tulare-Kern Funding Area) – The Westside-San Joaquin IRWM Region, the primary IRWM region overlapping the Delta-Mendota Subbasin, will pursue grant funding through the Prop 1, Round 1 IRWM Implementation Grants. Applications are expected to be due in Fall 2019 through late 2019, depending on the Funding Area. Approximately \$28 million will be available in the San Joaquin River Funding Area and approximately \$30 million will be available in the Tulare-Kern Funding Area over two rounds of grant awards.
<b>Proposition 68 grant programs</b> administered by various state agencies	<b>Medium</b> – Grant programs funded through Proposition 68, which was passed by California voters in June 2018, administered by various state agencies are expected to be applicable to fund GSP implementation activities. These grant programs are expected to be competitive, where \$74 million has been set aside for Groundwater Sustainability statewide.
<b>Disadvantaged Community (DAC) Involvement Program</b>	<b>Medium</b> – The Westside-San Joaquin IRWM Region will receive funding through DWR’s DAC Involvement Program for the San Joaquin River Funding Area (which was awarded a total of \$3.1 million for the Funding Area as a whole) and the Tulare/Kern Funding Area (which was awarded a total of \$3.4 million for the Funding Area). This funding has been secured by the respective Funding Areas. Funding may be used to help develop a project within the Westside-San Joaquin IRWM Region in order to advance it toward implementation. This program is not guaranteed to be funded in the future.

**8.2.2 Projects and Management Actions**

Costs for projects and management actions are described in **Chapter 7** of this GSP. Financing of the projects and management actions vary depending on the activity and timing. Potential financing for projects and management actions are provided in **Table 7-3** in **Section 7.1 Projects and Management Actions**, though other financing may be pursued as opportunities arise or as appropriate.

## 8.3 ANNUAL REPORTS

Annual reports must be submitted by April 1<sup>st</sup> of each year following GSP adoption, per the GSP Emergency Regulations § 356.2 Annual Reports. Each of the six Delta-Mendota Subbasin GSP Groups will be responsible for compiling information relevant to annual reports for their respective GSP Group consistent with the GSP Emergency Regulations. San Luis & Delta-Mendota Water Authority, as Plan Administrator, will compile the annual report information received from each GSP Group for the submission of a single annual report for the Delta-Mendota Subbasin to DWR. Annual reports must include three key sections as follows:

- General Information
- Basin Conditions
- Plan Implementation Progress

A general outline of what information will be provided in each of these sections of the annual report is included below. Annual reporting would be completed in a manner and format consistent with § 356.2 of the GSP Emergency Regulations, including that the annual report covers the prior water year (October 1 to September 30).

At present, there is no specific format for annual reports as required by DWR. As annual reporting continues, it is anticipated that this outline will change to reflect State requirements, Subbasin conditions, and GSA priorities.

### 8.3.1 General Information

General information will include an executive summary that highlights the key content of the annual report. As part of the executive summary, this section will include a map of the Subbasin, description of the sustainability goal, and provide a description of GSP projects and their progress, as well as an annual update to the GSP implementation schedule. Key components as required by the GSP Emergency Regulations include:

- Executive Summary
- Map of the Basin

### 8.3.2 Subbasin Conditions

Subbasin conditions will describe the current groundwater conditions and monitoring results. This section will include an evaluation of how conditions have changed in the Subbasin over the previous year and compare groundwater data for the water year to historical groundwater data. Pumping data, effects of project implementation (e.g., recharge data, conservation, etc., if applicable), surface water flows, total water use, and groundwater storage will be included. Key components as required by the GSP Emergency Regulations include:

- Groundwater elevation data from the monitoring network, including seasonal high and seasonal low contour maps for each principal aquifer
- Hydrographs of elevation data at representative monitoring locations
- Groundwater extraction data
- Surface water supply data by sector and source
- Total water use data
- Change in groundwater storage, including maps for each principal aquifer
- Subsidence rates and survey data

### 8.3.3 Plan Implementation Progress

Progress toward successful Plan implementation will be included in the annual report. This section of the annual report will describe the progress made toward achieving interim milestones as well as implementation of projects and management actions. Key components as required by GSP Emergency Regulations include:

- Plan implementation progress, including any proposed changes to the Plan
- Progress toward the Subbasin sustainability goal

### 8.3.4 Data Handling and Coordinated Data Management System

As required in §352.6 Data Management System of the GSP Emergency Regulations, each GSA is required to develop and maintain a DMS that is capable of storing and reporting information relevant to the development or implementation of the GSP(s). Additionally, per §354.4 Reporting Monitoring Data to the Department, all monitoring data is to be stored in a DMS with copies of the monitoring data included in the annual report and submitted electronically on forms provided by DWR. Recognizing that GSP implementation, including annual reporting, will require some efforts at the subbasin level, the 23 GSAs overlying the Delta-Mendota Subbasin have chosen to develop a coordinated DMS that can be utilized by each GSP Group for management of their data, which will allow for the required compendium of data sets for preparation of Subbasin annual reports.

It will be the responsibility of each GSP Group and their respective GSA member agencies to conduct their monitoring programs and associated data collection, including data quality assurance and control, for ensuring that these data are available at the Subbasin-level for analysis in annual reports. **Figure 8-2** shows the general flow of data collected from the Delta-Mendota Monitoring programs. **Figure 8-3** shows the roles and responsibilities of each GSA and GSP Group in the collecting, processing, and reporting of data for the GSP monitoring networks. Additionally, it is the responsibility of each GSP Group, including their respective GSAs, to maintain the monitoring network and, as appropriate, revise and/or expand the monitoring networks to fill identified data gaps. For more information about monitoring networks in the Northern & Central Delta-Mendota Region GSP, refer to **Section 7.2 Monitoring** of the *Sustainability Implementation* chapter.

#### 8.3.4.1 DMS Development and Functionality

Leading up to the development of the Subbasin-wide DMS, the Delta-Mendota Subbasin GSP Groups used an ad hoc working group of the Delta-Mendota Subbasin Coordination Committee to develop a conceptual design for the DMS software requirements. Following the development of a conceptual design, the software vendor (Houston Engineering, Inc.) created wireframes to communicate the functionality of the DMS.

During the process of DMS development, the ad hoc working group developed data standards for each data type to make data aggregation at the Subbasin-level feasible. The DMS includes permissions and business rules so each Delta-Mendota GSP Group can upload data for only their GSP based upon usernames and roles. The GSP Groups are also not allowed to see data uploaded by other GSP Groups until all annual reporting has been completed, reviewed, and accepted by the Plan Manager.

The DMS developed for the Delta-Mendota Subbasin is a secured web-based application hosted on Amazon Web Services (AWS). The DMS focuses on five (5) core business requirements, which include: centralized data warehouse, security of data, permissioned-based access, data visualization, and reporting. Other goals of the DMS focus on improving data collection/aggregation processes, creating data standards, gaining efficiencies in reporting, and improving data sharing.

The coordinated Subbasin DMS is designed to aggregate data through import processes by GSP Groups to support data visualization and annual report generation. Underlying the web application is a relationship database used to store the information aggregated from GSP Groups across primary data types. These data types include groundwater extractions, surface water deliveries, groundwater storage, groundwater elevations, groundwater quality, interconnected surface water, and land subsidence. The web application functionality includes an embedded Geographic Information System (GIS) viewer, screens to view tables of time series data, and charting capabilities for hydrographs. The embedded GIS viewer contains functionality to store map layers such as reference data, GSA and GSP boundaries, and derived information such as groundwater elevation contours.

In order to facilitate data synthesis, the GSP Groups agreed on the following frequencies for monitoring data collection to be uploaded to the Subbasin-wide DMS:

- **For groundwater elevations** – Twice per year, with seasonal high groundwater elevation data collected between February and April, and seasonal low groundwater elevation data collected between September and October
- **For interconnected surface water** – Twice per year in conjunction with groundwater level monitoring
- **For groundwater quality** – Once per year during irrigation season, typically between May and July
- **For land subsidence/elevations** – Publicly available subsidence data will be used along with locally-collected data. At a minimum, three data points will be collected within the first five years of GSP implementation, with a baseline value from 2019 or a date prior to that.

Additionally, the GSP Groups will utilize agreed-upon monitoring protocols, which may be the same as, or equal to, data collection protocols (i.e. industry standards and best management practices) to ensure the collection of comparable data using comparable methods. The Northern and Central Delta-Mendota Regions have additionally agreed to use a more detailed monitoring protocol described in the Quality Assurance Program Plan (QAPP) included in **Appendix F** to ensure that the data were collected in a consistent and coordinated fashion.

In order to be able to track data by location, each monitoring location is assigned a unique identifier in the DMS. The number system is in a format of ##-####, where the first two digits indicates which GSA the monitoring location is associated with and the subsequent four digits indicate which specific monitoring location in that GSA area. As shown in **Figure 8-3**, the general methodology agreed upon for data import and management is as follows:

- Each GSA collects their respective data per agreed-upon monitoring protocols and transmits it to the GSA Representative.
- Each GSA Representative then compiles the data and conducts a quality control check.
- The GSA Representative then transmits the compiled data set to the GSP Lead or Representative, who then aggregates the data from all GSAs and conducts a second quality control check.
- The GSP Lead or Representative then uploads the data set into the DMS using import wizards designed specifically for this process.
- The Subbasin Plan Manager then uses the data in the DMS to compile information as required for the annual report.

Compiled data sets from the DMS are then augmented with required maps generated externally to produce the required annual report. Mapping prepared outside the DMS are subsequently imported into the DMS as GIS files to ensure all data are kept in one place and to allow for access by GSAs and other Subbasin stakeholders.

The DMS will be maintained by the San Luis & Delta-Mendota Water Authority, while acting as the Plan Manager, with a contract with the software vendor for hosting, maintenance and future maintenance. Each GSP will pay a maintenance fee for the continued hosting and support of the Subbasin coordinated DMS.

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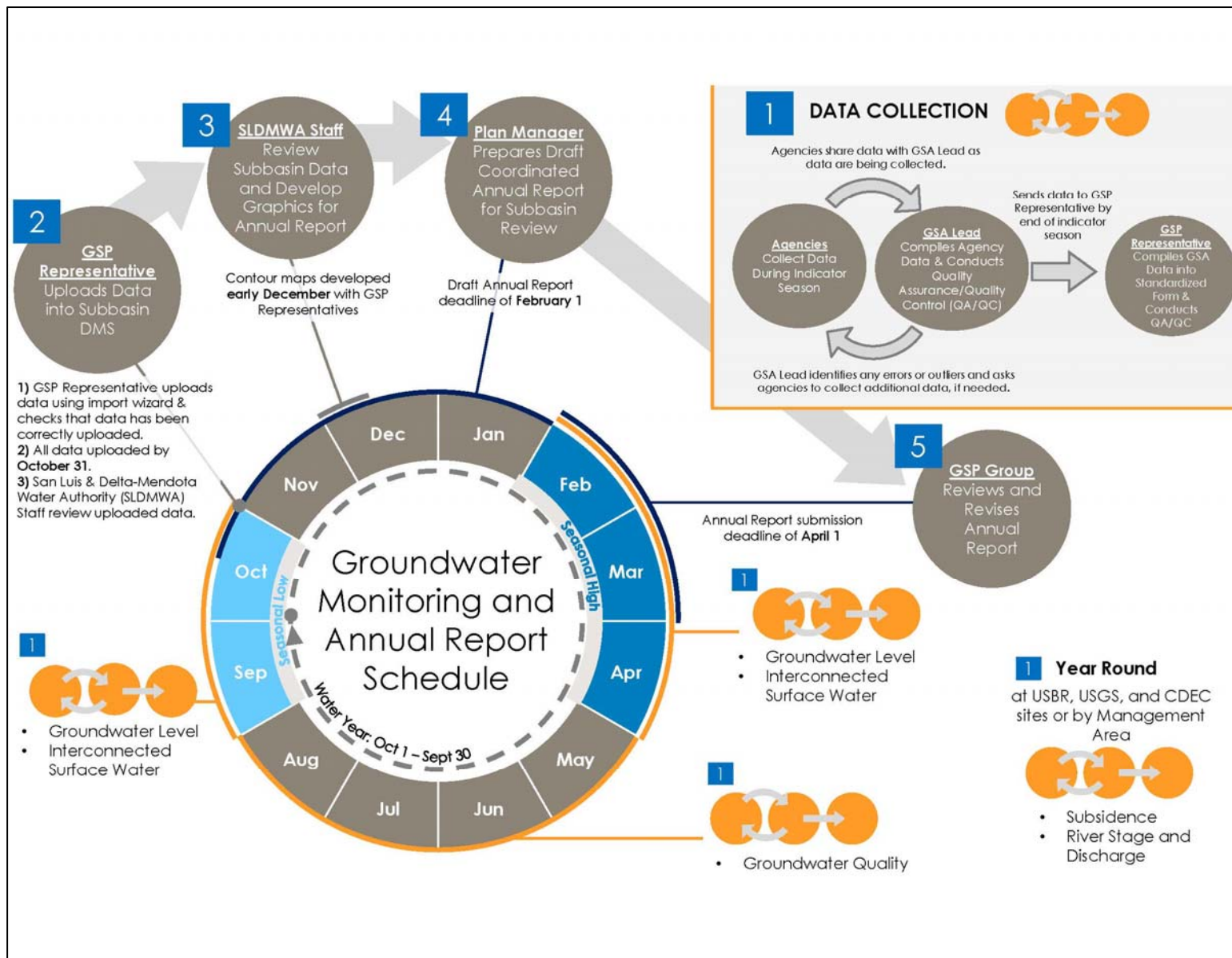


Figure 8-2. Data Flow in Delta-Mendota Subbasin



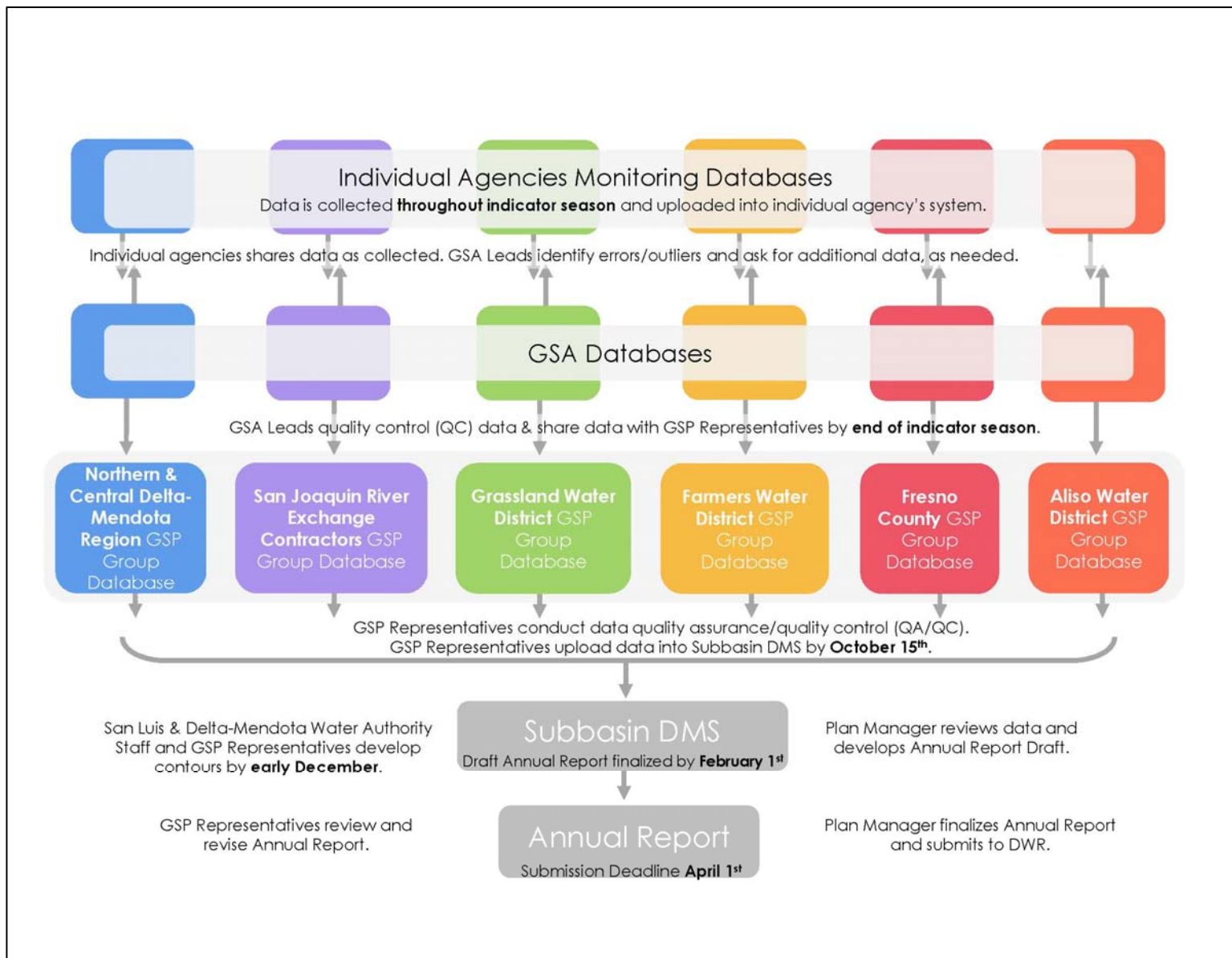


Figure 8-3. Delta-Mendota Subbasin Monitoring and Data Management Roles and Responsibilities



## **8.4 FIVE-YEAR ASSESSMENT REPORT**

SGMA requires an evaluation of GSPs, assessing their progress toward meeting the approved Subbasin sustainability goal, at least every five years or sooner whenever the Plan is amended. SGMA also requires developing a written assessment and submittal of this assessment to DWR. A description of the information that will be included in the five-year assessment report (or periodic evaluation assessment report) and GSP update is provided in the subsequent subsections. All five-year assessment reports (5-Year updates) or periodic evaluation assessment reports will be prepared in a manner consistent with § 356.4 of the GSP Emergency Regulations.

### **8.4.1 Sustainability Evaluation**

This section will contain a description of current groundwater conditions for each applicable sustainability indicator and will include a discussion of overall Subbasin sustainability. Progress toward achieving interim milestones and measurable objectives will be included, along with an evaluation of groundwater elevations (i.e., those being used as direct or proxy measures for the sustainability indicators) in relation to minimum thresholds. If any of the adaptive management triggers are found to be met during this evaluation, a plan for implementing adaptive management described in the GSP would be included.

### **8.4.2 Plan Implementation Progress**

This section will describe the current status of project and management action implementation and report on whether any adaptive management action triggers had been activated since the previous 5-Year Plan update. An updated project implementation schedule will be included, along with any new projects developed to support the sustainability goal of the Subbasin and a description of any projects that are no longer included in the GSP. The effect on groundwater conditions resulting from projects or management actions that have been implemented will be included, and updates on projects and management actions that are underway at the time of the 5-Year Plan update will also be reported.

### **8.4.3 Reconsideration of GSP Elements**

Part of the 5-Year GSP assessment will include a reconsideration of GSP elements. As additional monitoring data are collected during GSP implementation, land uses and community characteristics change over time, and GSP projects and management actions are implemented, it may become necessary to reconsider elements of this GSP and revise the Plan as appropriate. Plan elements to be reassessed may include Subbasin setting, management areas, undesirable results, minimum thresholds, and measurable objectives. If appropriate, the revised GSP completed at the end of the 5-year assessment period will include revisions informed by the outcomes of the monitoring network and changes in the Subbasin, including changes to groundwater uses or supplies and outcomes of project implementation. Additionally, if an evaluation of a GSP shows that the Subbasin is experiencing overdraft conditions or not on the path to achieving an interim goal, an assessment of measures to mitigate the condition will be included.

### **8.4.4 Monitoring Network Description**

A description of the monitoring network will be provided in the 5-Year update to the GSP. Data gaps, or areas of the Subbasin that are not monitored in a manner commensurate with the requirements of Sections 352.4 and 354.34(c) of the GSP Emergency Regulations will be identified. An assessment of the monitoring network's function will also be provided, along with an analysis of data collected to date. If data gaps are identified, the GSP will be revised to include a program for addressing these data gaps, along with an implementation schedule for addressing gaps and how the Delta-Mendota Subbasin GSP Groups will incorporate updated data into their respective GSPs. At this time, the Regions intend to develop a more detailed plan for addressing identified data gaps in 2020, including a scope of services and schedule for addressing those data gaps. This plan will be available upon request following completion.

#### **8.4.5 New Information**

New information that becomes available during the 5-year implementation period will be considered and incorporated into the 5-Year Plan assessment. If the new information should warrant a change to the GSP, this would also be included, as described in **Section 8.4.3**.

#### **8.4.6 Regulations or Ordinances**

The 5-Year assessment of GSP implementation will include a summary of the regulations or ordinances related to the GSP that have been implemented by DWR since the previous report and address how these may require updates to the GSP.

#### **8.4.7 Legal or Enforcement Actions**

Enforcement or legal actions taken by the Subbasin GSAs or their member agencies in relation to the GSP will be summarized in this section along with how such actions support sustainability in the Subbasin.

#### **8.4.8 Plan Amendments**

A description of amendments to the GSP will be provided in the 5-year Plan assessment, including adopted amendments, recommended amendments for future updates, and amendments that are underway during development of the 5-Year Update to the GSP.

#### **8.4.9 Coordination**

Ongoing coordination will be required by the GSAs comprising the Northern & Central Delta-Mendota Region GSP Group for plan implementation, in addition to coordination with other GSAs within the remaining five Delta-Mendota Subbasin GSP Groups, neighboring subbasins, and GSAs in neighboring subbasins. This section of the 5-year assessment report will describe coordination activities between these entities, such as meetings, joint projects, or data collection efforts. If additional neighboring GSAs have been formed, existing GSAs have been modified, or changes in neighboring basins have occurred since the previous report that result in a need for new or additional coordination within or outside the Subbasin, such coordination activities would also be included and discussed.

#### **8.4.10 Reporting to Stakeholders and the Public**

Any outreach activities associated with the GSP assessment and any resultant updates should be documented in this section of the 5-Year assessment report.