

GSP Program Elements	First 20 Years of GSP Implementation																			
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
GSP Submittal and State Review																				
GSP Submittal to DWR	★																			
DWR Review/Approval																				
Administration & Finance Program																				
Administrative/Governance Planning																				
Funding Program																				
Fee Study																				
Funding Mechanism Implementation																				
Fee Collection																				
Public Outreach & Coordination																				
Adaptive Management																				
Management Action Implementation																				
Study - Policy Options																				
Study - Recycled Water Opportunities Assessment																				
Study - Farm Plan Coordination																				
Implement Recommended Actions																				
Monitoring Program & Data Gaps																				
Implementation of Monitoring																				
Data Gap Filling																				
Model Updates and Refinements																				
Project Implementation																				
Group 1 Projects																				
Voluntary Conservation																				
Planning for Other Projects																				
Stormwater Capture & Recharge - Site Investigations																				
Stormwater Capture & Recharge - Pilot																				
Stormwater Capture & Recharge - Project																				
Group 3 Projects																				
Aquifer Storage & Recovery (ASR) Feasibility Study Update																				
ASR Investigations and Pilot ⁽¹⁾																				
ASR Project Implementation ⁽¹⁾																				
Reporting																				
Annual Reports	★	★	★	★		★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Five Year Evaluation/Updates						★						★				★				★

Notes:

- DWR review period
- Milestone/Document Submittal ★
- Planning, Design, Construction Activity
- Implementation Activity

¹ Some projects, such as ASR, may be pursued on a more rapid pace by other entities involved with drought response.

Figure 7-1. Implementation Schedule

The estimated annual cost of performing annual monitoring, data evaluation, and reporting ranges from \$150,000 to \$200,000, with a cumulative 5-year cost ranging from \$750,000 to \$1,000,000.

7.2.4 Addressing Data Gaps

Through development of this GSP, a number of key data gaps have been identified in **Sections 3** through **5**. These data gaps were shared and discussed with Basin stakeholders to prioritize activities and actions needed to address the data gaps.

- Amounts, locations, and depths of groundwater pumping (rural residential, agricultural, public water systems, commercial, and industrial)
- Role of faults within and along the boundaries of the Basin
- Distribution and extent of brackish groundwater along the margins of the Baylands area
- The interconnection of streams to the shallow aquifer system, including seasonal variability and how groundwater pumping and surface water diversions affect streamflow
- Basin boundary characteristics, such as the direction and magnitude of groundwater fluxes across Basin boundaries
- Aquifer hydraulic properties, recharge and discharge mechanisms, and volumes of both the shallow and deep aquifer systems
- Three-dimensional data gaps in the monitoring network for each primary aquifer

Studies and activities planned to address these identified data gaps within the initial 5 years of GSP implementation are identified in the following sections and categorized as either studies and information gathering or monitoring network improvements.

7.2.4.1 Studies and Information Gathering

Planned studies and information gathering include the following activities.

Improve information on existing water wells and groundwater extraction. The objective of this task is to better assess the locations, depths, volumes, and timing of groundwater pumping from water-use sectors that have not historically measured and reported water use, such as rural residential, agricultural, commercial, and industrial. This will improve the assessment of potential impacts from groundwater pumping to beneficial users and uses within the Basin, including existing residential and other water wells and GDEs. The task will include the following activities, which will be performed within the initial 2 years of GSP implementation:

- Integration of parcel-specific information obtained through the planned well registration program with existing well log databases

- Assessment of available remote sensing data on actual ET to help constrain the estimates of groundwater demands for irrigation supplies

Aquifer system properties assessment: The objective of this task is to improve the understanding of the aquifer system hydrogeologic framework, the distribution and potential effects of faults on groundwater flow, and Basin boundary characteristics. Completion of this task will also improve the GSA's ability to assess potential impacts from groundwater pumping on beneficial users and uses within the Basin, including existing residential and other water wells and GDEs. As part of this task, the GSA will:

- Evaluate the airborne electromagnetic (AEM) survey results (data collection and compilation funded by DWR) and incorporate them into the existing HCM. DWR is planning to collect geophysical data from the Basin through its AEM survey program in 2021 or 2022. Additional focused geophysical surveys to refine information in key areas (that is, areas identified for potential managed aquifer recharge projects) will also be considered.
- Based on these data collection and evaluation efforts, perform aquifer testing at up to three locations. It is anticipated that the aquifer testing will be completed within the initial 3 years of GSP implementation and is planned to be completed within the initial 2 years of GSP implementation. Wells for testing will be identified using the following criteria:
 - Wells are owned by willing well owners
 - Wells have known well completion information
 - Wellheads are completed such that water elevations in wells can be monitored with data loggers
 - Wells are equipped with accurate flow meters
 - Wells have an area or system for the discharge of test water
 - Preferred wells will have nearby wells that can be monitored during the test and will be located near key data gap areas, Basin boundaries, and interconnected surface water

Baylands area voluntary water quality sampling program: The objective of this task is to improve the understanding of the distribution and extent of brackish groundwater along the margins of Baylands area and provide data to assist in the selection of locations for future RMPs needed for the seawater intrusion monitoring network. The study will be designed to supplement data collected through previous studies and monitoring programs. The task will include the following activities:

- Outreach to well owners within and near the Baylands area through the outreach activities described in Section **7.2.2**.
- Assessment of potential candidate wells for sampling.

