January 2022

Atascadero Basin Groundwater Sustainability Plan

Executive Summary

In 2014, the state of California enacted the Sustainable Groundwater Management Act (SGMA). This law requires groundwater basins that are designated as medium- or high-priority by the California Department of Water Resources (DWR) to be managed sustainably. Satisfying the requirements of SGMA includes formation of a Groundwater Sustainability Agency (GSA), development and implementation of a Groundwater Sustainability Plan (GSP), and regular reporting to DWR to demonstrate movement toward sustainability.

The Atascadero Basin (the Basin) is currently recognized by DWR as very-low priority and is not required to mandatorily comply with SGMA. However, local agencies formed a GSA and the governing body decided to continue proactively managing the basin's groundwater resources with development of a GSP. The GSP describes the basin and local groundwater conditions, develops quantifiable management objectives that account for the interests of beneficial groundwater uses and users, and identifies a group of projects and management actions that will allow the Basin to maintain sustainability in the future.

This Executive Summary provides a brief overview of the primary sections of the GSP and describes the activities conducted to inform the final contents presented in the plan.

GSP Sections 1—4: Establishing the Basin Setting

A common understanding of the groundwater basin and its surroundings are presented in **Sections 1 through 4** of the GSP. These sections, summarized below, were developed based on existing information and released for public comment in 2019.

Section 1. Introduction to Salinas Valley Subbasin Atascadero Area GSP

Section 1 introduces the purpose of the GSP and provides a brief description of the basin including information about the basin's prioritization.

The Atascadero Basin is identified by DWR in Bulletin 118 as Subbasin No. 3-004.11. The Basin is part of the greater Salinas Valley Basin in the Central Coast region of California. It was subdivided from the Paso Robles Area Subbasin in 2016 based on information that showed the Rinconada Fault is a significant barrier to groundwater flow. The Paso Robles Formation makes up most of the water-bearing sediments for both subbasins. The Basin includes the incorporated cities of Paso Robles and Atascadero, as well as the unincorporated census-designated places of Santa Margarita and Templeton.

Section 2. Agency Information

Section 2 provides information about the agencies that prepared the GSP including agency names, mailing addresses, organization and management structures, authorities, and contact information.

The Atascadero Basin GSA is comprised of four forming parties and six participating parties. The organization and management structures of each of the parties are presented in Section 2 of the GSP. The extent of the GSP area and the GSA parties are provided in **Figure ES-1**. The parties are listed in **Table ES-1**.

Figure ES-1. Extent of GSP Plan Area and GSA Parties

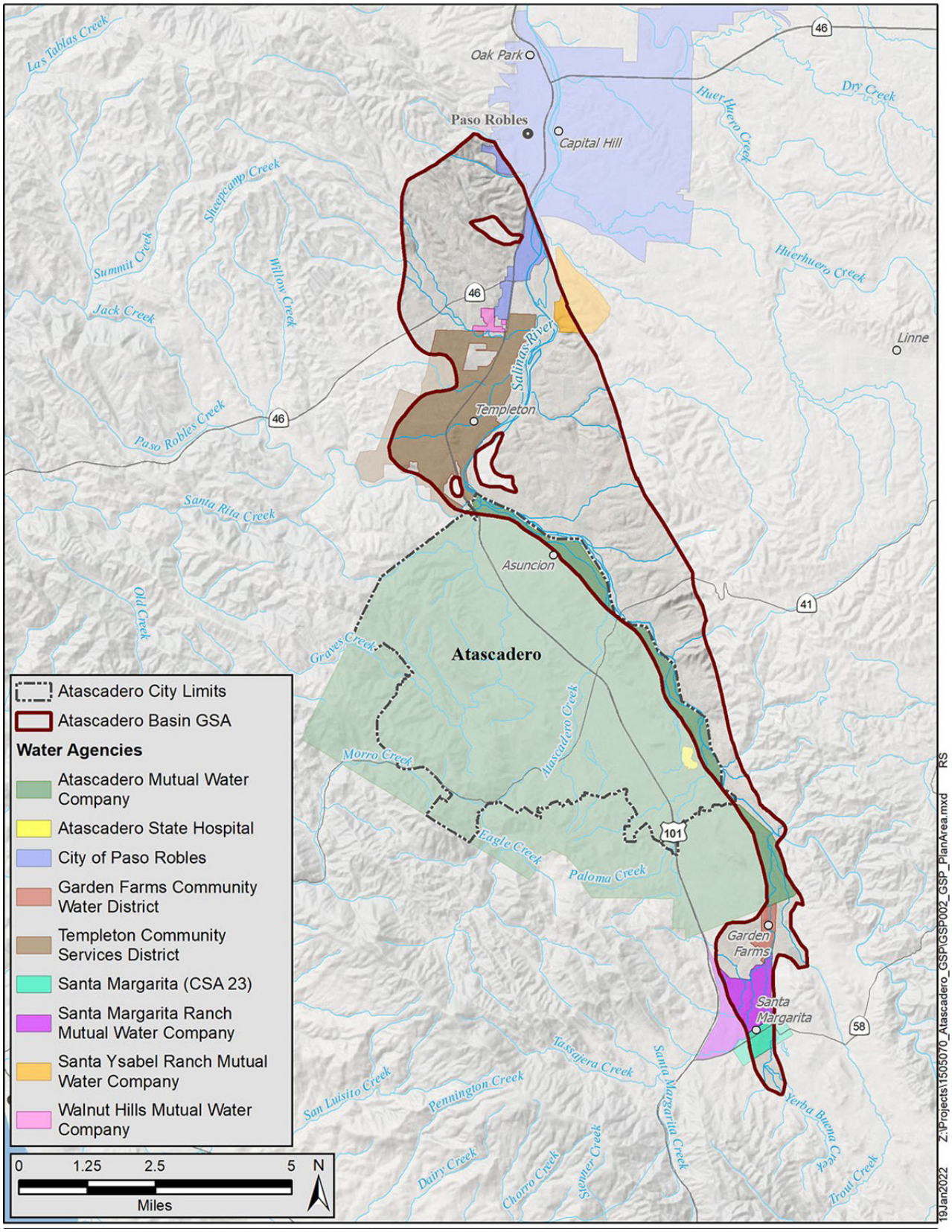


Table ES-1. Atascadero Basin GSA Parties

Forming Parties	Participating Parties
City of Atascadero	Atascadero Mutual Water Company
City of Paso Robles	Atascadero State Hospital
County of San Luis Obispo	SMR Mutual Water Company
Templeton Community Services District	Santa Ysabel Ranch Mutual Water Company
	Walnut Hills Mutual Water Company
	Garden Farms Water District

The parties entered into a Memorandum of Agreement (MOA) to establish a single GSA, develop a GSP, and following the adoption thereof, take actions necessary to implement the GSP. The MOA establishes the Executive Committee, a nine-member body, to conduct activities related to GSP development and SGMA implementation.

Section 3. Description of GSP Area

Section 3 provides a description of the GSP area including details about adjudicated areas (none), jurisdictional areas, land use, density of wells, existing monitoring and conjunctive use programs, and land use plans. Section 3 would describe management areas, if established, for the Atascadero Basin; however, there are no management areas at this time.

The Atascadero Basin is approximately 19,800 acres in size. It extends north along the Salinas River from the community of Santa Margarita to the southern limits of Paso Robles. The basin is comprised of flatlands ranging in elevation from approximately 700 to 1,400 feet above mean sea level (ft/msl) that are bordered to the west by the Santa Lucia Range southern Coast Ranges. The average annual precipitation ranges from 13 to 23 inches. The Salinas River is the primary surface water feature within the basin. Land use information for the GSP was collected by DWR and San Luis Obispo County's Agricultural Commissioner Offices. Current land use in the basin is summarized by category in **Table ES-2** (see Section 3 of the GSP for a more detailed description of land uses in the Basin).

Table ES-2. Land Use in Atascadero Basin

Land Use Category	Acres
Agricultural	4,016
Urban	2,592
Native Vegetation	13,192
Total	**19,800**

Section 4. Basin Setting

Section 4 describes the basin setting – a hydrogeologic conceptual model (HCM) of the basin – which is a summary of the relevant aspects of the basin hydrogeology that influence groundwater sustainability.

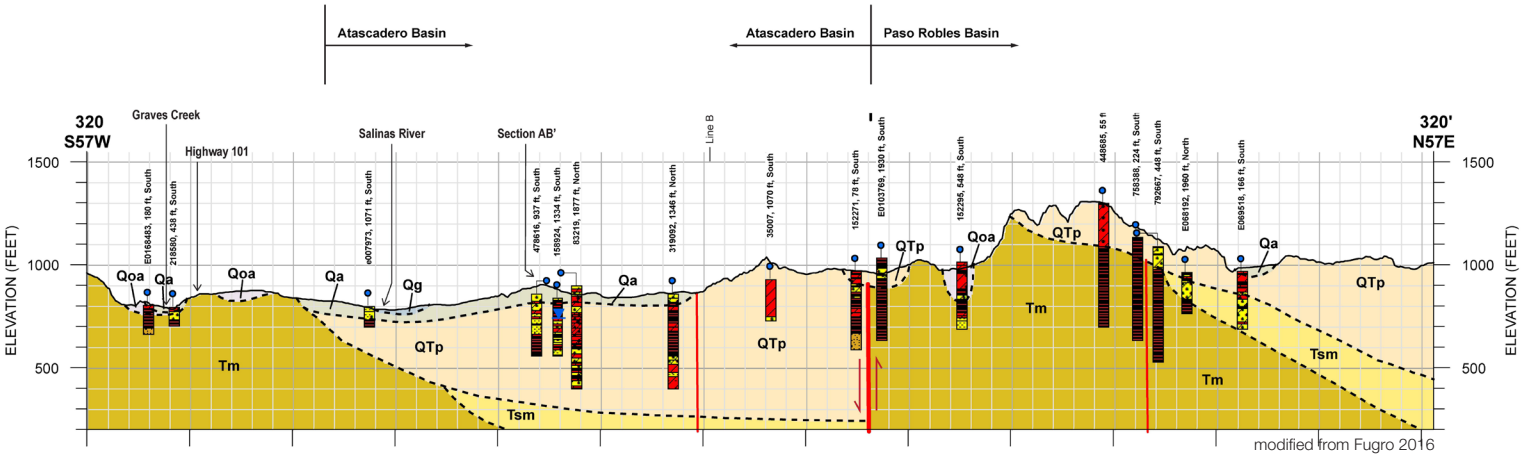
Section 4 draws upon previously published studies, primarily hydrogeologic and geologic investigations prepared by Fugro for the San Luis Obispo County Flood Control and Water Conservation District in 2002 and 2005 (Fugro and Cleath 2002; Fugro et. al. 2005) and the Atascadero Basin's Basin Boundary Modification Application report (BBMR) (Fugro 2016).

Two aquifers exist in the Basin. The **Alluvial Aquifer** is a relatively continuous aquifer comprising alluvial sediments that underlie the Salinas River and tributary streams. The **Paso Robles Formation Aquifer** is an interbedded aquifer comprised of sand and gravel lenses in the Paso Robles Formation.

The primary groundwater users in the Basin include municipal, agricultural, rural residential, small community water systems, and small commercial entities. Municipal, domestic, and agricultural demands in the Basin currently rely almost entirely on groundwater.

The HCM provides maps illustrating the topography, soil characteristics, geologic structures and formations, principal aquifers, groundwater use and quality, recharge and discharge areas, and surface water bodies in the basin. It also includes geologic cross-sections that illustrate the relationship of the geologic formations that comprise the basin and the geologic formations that underlie and bound the basin.

Figure ES-2. Example Cross-Section



The Hydrogegologic Conceptual Model includes geologic cross-sections as the one above that illustrate the relationship of the geologic formations in and around the Atascadero Basin.

GSP Sections 5–7: Examining Local Groundwater Conditions

Assessments of the groundwater conditions within the basin are presented in **Sections 5 through 7**.

Section 5. Groundwater Conditions

Section 5 focuses on the current and historical groundwater conditions in the basin: elevations, changes in storage, subsidence, interconnected surface water, potential groundwater dependent ecosystems, and groundwater quality distribution and trends.

The assessment of groundwater elevation conditions was based largely on data from the SLOFCWCD groundwater monitoring program. Water levels in wells in the Alluvial Aquifer were found to be relatively stable, exhibiting little seasonal fluctuation and rapid recovery with any substantial rainfall. Groundwater elevations in the Paso Robles Formation Aquifer were generally lower in the Atascadero area during the recent the drought period (2011–2015) but increased between spring 2015 and spring 2017. This recovery is likely related to decreased groundwater production in 2015 and 2016, percolation of a nearly full allocation of Nacimiento Water Project (NWP) water in 2015, and above average precipitation in 2017.

Groundwater quality samples are collected in the basin on a regular basis for compliance with regulatory programs. In general, the quality of groundwater in the basin is good and water quality trends are dominantly stable.

Section 6. Water Budgets

Section 6 provides an overview of how the basin's water budget was developed, the data sources and model used, and a detailed historical, current, and future water budget.

Historical, current, and future water budgets were developed using the following computer models of the Basin's hydrogeologic conditions: a watershed model, a soil water balance model, and a groundwater flow model (collectively designated as the "basin model").

The **historical groundwater budget** includes a summary of the estimated groundwater inflows, groundwater outflows, and change in groundwater in storage. Over the 31-year historical base period (1981–2011), a net gain of groundwater storage of about 42,300 AF occurred. The average annual groundwater storage gain was approximately 1,400 AFY.

Over the 5-year **current water budget** period (2012–2016), the annual average groundwater storage loss, or the difference between outflow and inflow to the Basin, was approximately 2,500 AFY; reflecting the drought conditions that prevailed during the current water budget period.

The **projected future groundwater budget** period (2020–2042) shows the Basin to be generally in balance, with projected groundwater inflows of about 18,000 AFY and projected groundwater outflows of about 17,200 AFY. The projected future surplus indicates an average annual increase in groundwater in storage of 800 AFY.

Section 7. Monitoring Networks

Section 7 details the ways in which the GSA will monitor for the SGMA sustainability indicators, the GSA's monitoring objectives, data management, and established monitoring networks.

The approach for establishing the monitoring network is to leverage existing monitoring programs and incorporate additional locations that have been made available by cooperating entities.

The **groundwater level** (and storage) monitoring network consists of 26 wells (12 completed in the Alluvial Aquifer; 14 completed in the Paso Robles Formation Aquifer). There are two data gap areas identified in the Paso Robles Formation Aquifer and one data gap area identified in the Alluvial Aquifer. The GSP identifies potential monitoring well locations that may be added to the network in the future to fill these gaps.

The **groundwater quality** monitoring network includes 54 municipal wells, 73 Irrigated Lands Regulatory Program (IRLP) wells, and 55 monitoring wells associated with open/active State Water Board Geotracker contamination sites within the GSP area.

Land subsidence is monitored using interferometric synthetic-aperture radar (InSAR) data provided by DWR. The groundwater level monitoring network contains all of the non-confidential wells used to evaluate **interconnected surface water**. The Basin is isolated from the Pacific Ocean; therefore, the GSP does not provide monitoring for the **seawater intrusion** sustainability indicator.

SGMA-related data for the Atascadero Basin will be incorporated into the county-wide DMS currently under development for San Luis Obispo County as part of another project. The Atascadero Basin GSA and entities that collect and report data within the Basin will have access and authorization to enter their data into the County DMS.

GSP Sections 8–10: Maintaining Sustainability

Sections 8 through 10 describe how the GSA plans to continue managing the Atascadero Basin in a sustainable manner.

Section 8. Sustainable Management Criteria

Section 8 provides the Atascadero Basin's Sustainable Management Criteria (SMC) including a sustainability goal, definition of undesirable results, measurable objectives, and minimum thresholds for the SGMA sustainability indicators.

SMC for the Basin were developed using information from public input received in public surveys, public meetings, and comment forms; hydrogeologic analysis of Basin conditions; and meetings with GSA staff and Executive Committee members.

The sustainability goal is as follows:

> *The goal of the Atascadero Basin GSP is to sustainably manage groundwater resources over the long term for the benefit of Basin stakeholders. This GSP outlines the approach using information developed for this GSP to achieve a sustainable groundwater resource and continue to avoid undesirable results throughout the 20 year SGMA implementation horizon and beyond, while meeting the water supply needs of Basin stakeholders. In adopting this GSP, it is the express goal of the GSA to balance the needs of all groundwater uses and users in the Basin. We have been and will continue to integrate projects and management actions with the natural system in the Basin to operate the Basin sustainably.*

Undesirable results (locally defined), minimum thresholds, and measurable objectives were developed for five of the six sustainability indicators: chronic lowering of groundwater levels, reduction of storage, land subsidence, degradation of water quality, and surface water depletion. Seawater intrusion has not occurred in the past and is unlikely to occur in the future and therefore SMC were not established for this sustainability indicator.

Section 9. Projects and Management Actions

Section 9 provides projects and management actions considered for the Atascadero Basin.

Because the Basin is currently managed sustainably, as evidenced by historical groundwater levels, there are no projects or management actions required to achieve sustainability. Future projects and management actions may assist in improving the understanding of the groundwater system to enhance the overall water management capability in the Basin or to continually meet existing and new requirements and accountability for improved and more efficient water management. The projects and management actions outlined in the GSP (**Table ES-3**) will be implemented with an as-needed, adaptive-management approach, with decisions based largely on funding availability and identified need.

Table ES-3. GSP Projects and Management Actions

Activity	Status	Implementation Timing/ Criteria for Implementation
PROJECTS		
Supplement the Monitoring Network	Ongoing	As needed
Groundwater Levels	Ongoing	Near-term. To occur within first 5 years
Groundwater Quality	Ongoing	Near-term. To occur within first 5 years
New Monitoring Well Identification and installation	As Needed	Near-term. To occur within first 5 years
Develop a Groundwater Model	Planned	Near-term. To occur within the first 5 years
MANAGEMENT ACTIONS (BASINWIDE)		
De Minimis Self Certification	Planned	Near-term. To occur within the first 5 years
Non-De Minimis Extraction and Reporting Program	Planned	Near-term. To occur within the first 5 years
Annual Reports	Planned to comply with SGMA requirements.	Near-term. To occur each year
5-Year GSP Updates and Amendments	Planned to comply with SGMA requirements.	Near-term. To occur within the first 5years
Develop Public Data Portals and Coordinate on Data	Ongoing	Near-term. To occur Each year
Continued GDE Evaluation	Planned	Near-term. To occur within the first 5 years
Estimation of Groundwater Uses	Planned	Near-term. To occur within the first 5 years
MANAGEMENT ACTIONS (AREA-SPECIFIC)		
Supplemental Supplies from NWP	Ongoing	To occur each year as part of normal operations; may be modified to address drought conditions

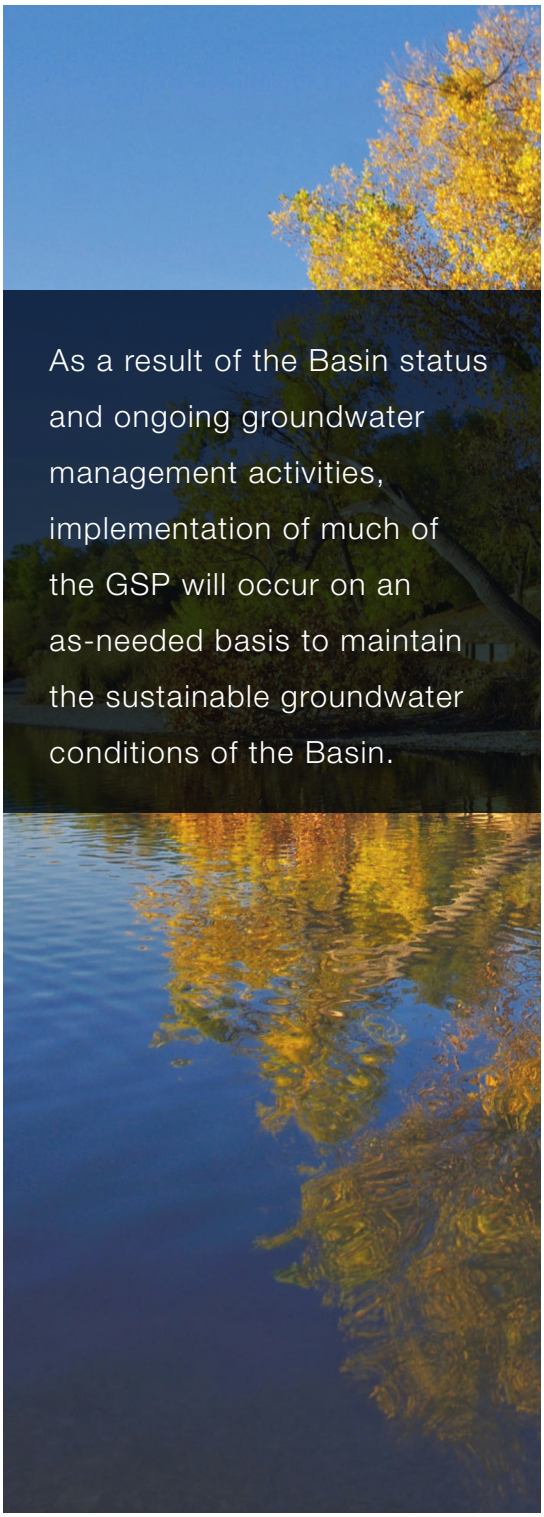
Section 10. GSP Implementation

Section 10 describes the how the GSP will be implemented, managed, and reported by the GSA as well as potential funding support and implementation effects.

The Basin was actively managed for many years prior to the signing of the SGMA in 2014 and is currently a very-low priority basin based on the 2019 DWR Basin Prioritization. As a result of the Basin status and ongoing groundwater management activities, implementation of much of the GSP will occur on an as-needed basis to maintain the sustainable groundwater conditions of the Basin. Several projects and management actions are scheduled to be fully or partially completed within the first 5 years.

Reporting to be performed as part of GSP implementation includes development of annual reports and 5-year evaluations, which could lead to updates of the GSP. As part of implementation, adaptive management strategies will be considered for implementation if designated trigger events occur.

Implementation of the GSP is estimated to cost approximately between $100,000 and $200,000 per year for the first 5 years. Development of the initial groundwater model is estimated to total $200,000 to $300,000. Estimates of future annual implementation costs will be developed during future updates of the GSP. The costs of specific projects and management actions will vary by year and may potentially add between zero dollars to $300,000 per year or more. Some of these costs are already being incurred through existing groundwater management efforts by GSA participants in their existing operational budgets. While the GSA has the powers and authority to impose fees and assessments, other funding sources (e.g., grants) will be sought to reduce the local financial burden.



GSP Sections 11–13: Documenting the GSP

Sections 11 through 13 and the Appendices provide supporting information to document the GSP process and findings.

Section 11. Notice and Communications

Section 11 describes the notice and communications given to the public throughout GSP development and the opportunities that were provided for public participation.

The GSA developed a website, www.atacaderobasin.com, and facilitated a stakeholder survey to introduce interested parties and the public to the GSP process, invite participation, and to inquire about their values, thoughts, and concerns. These results were used to inform development of the GSP as well as a Communication & Engagement Plan which set the course for active outreach to over 800 interested parties throughout GSP development.

The GSA conducted a total of 12 public meetings focused on SGMA plus a public workshop and stakeholder survey focused on SMC. They published ten draft sections of the GSP throughout the development period and collected comments from interested parties and the public as chapters were released. To invite participation in these activities the GSA sent e-blasts, direct mail, and bill inserts. Appendices provided with Section 11 include copies of the communications materials.

Section 12. Interagency Agreements

The Atascadero GSA directed the development of a single GSP that covers the entire basin. Therefore, no interagency agreements are necessary to implement the GSP.

Section 13. References

References are provided by GSP section.

Appendices

Appendices are provided based on the section of the GSP to which they pertain. For example, **Section 2. Agency Information**, refers to an MOA – or memorandum of agreement. A copy of the MOA is provided as Appendix 2A. Below is a list of the appendices provided with the Atascadero Basin GSP.

- Appendix 2A Memorandum of Agreement
- Appendix 3A Groundwater Basin Management Plan
- Appendix 5A Hydrographs
- Appendix 5B Groundwater Dependent Ecosystems tech memo
- Appendix 6A Models and Comparison of Previous and Current Water Budgets
- Appendix 6B Groundwater Inflows and Outflows for the Historical Base Period
- Appendix 7A Known Well Completion Reports, With Redacted Ownership Information
- Appendix 7B SLOFCWCD Monitoring and Reporting Protocols
- Appendix 7C Locations of Non-Confidential Wells
- Appendix 8A Results of SMC Public Survey
- Appendix 8B Alluvial Aquifer Hydrographs
- Appendix 8C Paso Robles Formation Aquifer Hydrographs
- Appendix 11A Engagement Plan
- Appendix 11B Direct Mail
- Appendix 11C Surveys
- Appendix 11D COVID Outreach
- Appendix 11E Public Comments
- Appendix 11F Meetings
- Appendix 11G eBlasts
- Appendix 11H Pre-SGMA Outreach

Thank you

Thank you to the Atascadero GSA Parties and all of the interested stakeholders who participated in the GSP process. We look forward to communicating with you throughout GSP implementation. Visit atascaderobasin.com to stay up-to-date on future GSA activities.