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5 PLAN IMPLEMENTATION

5.1 Estimate of GSP Implementation Costs

This subsection provides an estimate of the cost to implement the Groundwater Sustainability Plan (GSP or Plan) and a general description of how the Santa Cruz Mid-County Groundwater Agency (MGA) plans to meet those costs. Implementation cost considerations include MGA administration, management actions, monitoring protocols, data management, maintaining a prudent fiscal reserve, and other costs estimated over a twenty-year time horizon. The estimated costs of projects and management actions are presented in this section. The funding sources and mechanisms and an estimated schedule for GSP implementation are also presented.

As noted in prior Sections of the GSP, the MGA Board is in agreement that the individual MGA member agencies will principally lead the implementation of projects and management actions. A major rationale for this decision was the long-standing engagement of MGA member agencies in groundwater management and water supply reliability planning work. The City of Santa Cruz and the Soquel Creek Water District (SqCWD) have evaluated a number of supplemental supply options over the last five years, and in several cases work has proceeded far enough to make it significantly more efficient for these agencies to continue their efforts rather than switching project implementation actions to the MGA.

5.1.1 Estimate of Ongoing Costs by Major Category

This subsection presents estimates of costs by the major categories. Presented are the estimated annual cost of ongoing activities as well as the estimated cost of events for activities that do not occur annually but are anticipated within the next five years. This approach enables calculating the 5-year total cost estimate which is annualized to better inform the MGA's general estimate of the costs by the major categories. Since the costs are based on the best estimates at the time of this report, actual costs may vary from those used in the projections below.

5.1.1.1 Agency Administration and Operations

This category includes the costs related to the administration of the MGA, including administrative staff support, finance staff support and related expenses, insurance, organizational memberships and conferences, miscellaneous supplies and materials. The estimated costs are presented in Table 5-1.

The MGA uses a collaborative staffing model to accomplish its work. Professional and technical staff from MGA member agencies provide staff leadership, management, work products, and administrative support for the MGA. Since 2016, the MGA has contracted with the Regional Water Management Foundation (RWMF), a subsidiary of the Community Foundation of Santa Cruz County, to provide core staff support to the MGA for planning and administration. As the MGA shifts from GSP development into implementation starting in 2020, the staffing support needs will be further evaluated to determine the ongoing administrative and management

framework. It is anticipated staffing needs will be evaluated annually during the early years of GSP Implementation as a clearer understanding of the support required evolves over time.

Table 5-1. Estimated Agency Costs by Major Category

Category	Annual Cost	Event Cost	5-Year Total	Annualized Cost (5-Years)
Agency Administration & Operations				
Administrative Staff Support	\$150,000	\$0	\$750,000	\$ 150,000
Treasurer & Finance Staff	\$12,000	\$0	\$60,000	\$ 12,000
Accounting and other software	\$2,500	\$0	\$12,500	\$ 2,500
Annual financial audit	\$9,000	\$0	\$45,000	\$ 9,000
Professional organizations	\$2,500	\$0	\$12,500	\$ 2,500
Insurance	\$1,000	\$0	\$5,000	\$ 1,000
Office supplies, materials, misc. expenses	\$2,500	\$0	\$12,500	\$ 2,500
Legal	\$20,000	\$0	\$100,000	\$ 20,000
Management & Coordination				
Technical Work: Groundwater Model	\$20,000	\$100,000	\$200,000	\$ 40,000
Technical Work: Consultants	\$15,000	\$0	\$75,000	\$ 15,000
Planning/Program Staff Support	\$25,000	\$0	\$125,000	\$ 25,000
Data Collection, Analysis, & Reporting				
Monitoring: Groundwater Elevation	\$10,000	\$160,000	\$210,000	\$ 42,000
Monitoring: Groundwater Quality ¹	\$0	\$0	\$0	\$ 0
Monitoring: Groundwater Extractions	\$15,000	\$15,000	\$90,000	\$ 18,000
Monitoring: Streamflow	\$12,500	\$80,000	\$142,500	\$ 28,500
Data Collection: Offshore AEM Surveys	\$0	\$150,000	\$150,000	\$ 30,000
Data Collection: Other	\$10,000	\$0	\$50,000	\$ 10,000
Data Management	\$20,000	\$50,000	\$150,000	\$ 30,000
GSP Reporting				
Annual Reports	\$25,000	\$0	\$125,000	\$ 25,000
5-year GSP Evaluations	\$0	\$100,000	\$100,000	\$ 20,000
Outreach & Education	\$20,000	\$0	\$100,000	\$ 20,000
Contingency (10%)	\$37,200	\$65,500	\$251,500	\$ 50,300
TOTAL	\$409,200	\$720,500	\$2,766,500	\$ 553,300
1. Groundwater quality monitoring is conducted by the individual member agencies				

The SqCWD Finance Manager serves as MGA Treasurer and is responsible, with support from the SqCWD Finance staff, for the accounting and billing functions of the MGA. This budget category includes finance related costs for accounting software and the annual financial audit. Also included is the annual membership dues for the Association of California Water Agencies (ACWA) and the annual insurance costs from Association of California Water Agencies Joint Powers Insurance Authority (ACWA/JPIA).

5.1.1.2 Legal Services

The MGA receives legal services from the County of Santa Cruz (County) on an as-needed basis. If legal services are needed on issues requiring specific expertise on groundwater, the Sustainable Groundwater Management Act (SMGA), other specific matters as necessary, or if there is a conflict of interest for County Counsel, the MGA will employ other counsel. The estimated cost of legal services is presented in Table 5-1.

5.1.1.3 Management and Coordination

5.1.1.3.1 Technical Work: Groundwater Model Simulations and Updates

The Basin groundwater model informs the management activities and ongoing performance assessment of the sustainable management criteria. Periodic updates to the groundwater model will be required to continue to refine and improve its capabilities and maintain ongoing functionality. This includes incorporating new model tools and features, updates to data, and related work to support ongoing simulations of projects and management actions. The model will be an important tool to inform the evaluation of Basin management strategies over time. This task will be performed by technical consultants. The estimated cost of this task is presented in Table 5-1.

5.1.1.3.2 Technical Work: Consultants

It is anticipated the MGA will have an ongoing need for technical support to inform Basin management. The specific needs and costs are yet to be identified but it is expected, as the initial GSP implementation efforts proceed, that these needs will become evident. Examples of technical consultant support are potential tasks such as: hydrologic technical support (not groundwater model specific); economic (e.g., cost-benefit analysis) and programmatic assessment of funding mechanisms; supplemental studies to address data gaps; vulnerability assessments for climate change and sea-level rise; additional assessment of managed aquifer recharge opportunities; among other tasks. In recognition of the potential need for technical support, the funding for this category is included in Table 5-1.

5.1.1.3.3 Planning/Program Staff Support

This category is broadly intended to include various planning and programmatic support to the MGA for ongoing GSP and SGMA related requirements.

5.1.1.4 Data Collection, Analysis, and Reporting

The MGA's proposed monitoring program is presented in the monitoring section (Section 3.3). The individual member agencies will continue to lead the semi-annual monitoring of groundwater elevation and water quality within their jurisdictions to inform the management of their respective agencies. It is anticipated that costs resulting from improvements to or expansion of existing monitoring networks necessary to evaluate the Sustainable Management Criteria (SMC), or otherwise added at the request of the MGA, will be funded by the MGA. Individual member agencies conduct streamflow monitoring. It is anticipated the MGA will assume responsibility to coordinate and fund streamflow monitoring within the Basin and this is to be a phased transition over the next five years.

5.1.1.4.1 Monitoring: Groundwater Elevation

There is a combined network of 174 wells in the Basin monitored at least twice a year. This network is made up of individual member agency wells combined into the Groundwater Management Plan (GMP) monitoring network, as described in Section 2.1.2: Water Resources Monitoring and Management Programs. This existing network is sufficient to evaluate short-term, seasonal, and long-term trends in groundwater elevations for groundwater management purposes. Each individual member agency will continue to use its own resources to monitor its wells as the GSP is implemented. Monitoring is described in detail in Section 3.1.1.1 Groundwater Level Monitoring Network.

Deep Wells: Section 3.3.4.1 presents the Groundwater Level Monitoring Data Gaps. To fill an identified data gap to improve the ability to monitor seawater intrusion requires installation of two new deep coastal monitoring wells. One of these is a deep Tu-Unit monitoring well is within the City of Santa Cruz service area and the other is a Purisima AA-Unit at the site where existing monitoring well SC-3 is located within the Soquel Creek Water District's service area. The well data will inform groundwater management by the respective member agencies within the Basin. It is anticipated the construction and operation of these wells will be funded the respective member agencies, not the MGA.

Shallow Wells: As discussed in Section 3.3.4.1, the addition of up to eight new shallow monitoring wells is proposed to improve the ability to monitor surface water/groundwater interactions. These wells will serve to inform the performance assessment of the sustainable management criteria for depletion of interconnected surface waters, as required under SGMA. The proposed eight shallow monitoring wells are anticipated to be installed in a phased approach at prioritized locations within the next 5 years. The MGA will continue to assess the prioritization and schedule for new shallow well locations as the network expands. Because this is monitoring that would not otherwise be conducted by the individual member agencies, the MGA will assume the costs associated with this monitoring. The MGA's cost to improve the monitoring network with the addition up to 8 new shallow monitoring wells. This includes costs related to site assessment, planning, design, construction, and instrumentation. These are approximate cost estimates as there are uncertainties such as site-specific considerations,

construction bid environment as well as a variety of other factors that will ultimately determine the cost to install and operate each well.

5.1.1.4.2 Monitoring: Groundwater Quality

Each MGA member agency has its own network of dedicated monitoring wells and production wells that monitor groundwater quality in their service area or area of jurisdiction. These are described in detail in Section 3.1.1.2 Groundwater Quality Monitoring Network. Each agency will use its own resources to continue to sample these wells as the GSP is implemented. No new MGA-specific groundwater quality monitoring wells are proposed at this time. Monitoring for seawater intrusion will continue; the cost of the efforts is captured under groundwater elevation and other categories. The future need for new MGA groundwater quality monitoring wells will continue to be periodically evaluated as project and management actions are implemented.

5.1.1.4.3 Groundwater Extraction Monitoring

5.1.1.4.3.1 Metered Groundwater Extraction Public and Small Water Systems

Each MGA municipal water agency meters its own groundwater extraction by individual well and utilizes Supervisory Control and Data Acquisition (SCADA) systems to record groundwater extraction data. Each individual member agency will continue use its own resources to monitor these wells as the GSP is implemented.

As described in Section 3.1.1.3, small water systems with 5 to 199 connections and other applicable businesses/operations are required to be metered and report annually to Santa Cruz County. The cost to meter and report will continue to be the responsibility of the individual small water system and the applicable businesses/operations.

5.1.1.4.3.2 Metered Groundwater Extraction Non-De *Minimis* Users

The MGA will initiate a new well metering program to collect volumetric data on groundwater usage in the Basin that will inform the assessment and refinement of the sustainable yield of the Basin. The program will apply to two categories of users: (1) all non-de minimis pumping operations expected to extract more than 5 acre-feet per year, and (2) all non-de minimis pumping operations expected to extract more than 2 acre-feet per year that may impact seawater intrusion or an interconnected stream where groundwater dependent ecosystems are identified in Section 3.9. The boundaries of these zones will be established when the enabling ordinances are developed, but it is anticipated the zones will include the areas along the coast where groundwater is less than 50 feet above sea level and areas within 500 -1000 feet of Soquel Creek.

The costs to implement the metering program include: program administration; coordination of program set-up and implementation; participant tracking; and coordination of annual reporting by the participants. The MGA will initiate planning in 2020 to develop the program. It is anticipated the participating users are responsible for the all costs related to the purchase, installation, calibration, and operation of the meters as well as annual reporting to the MGA.

5.1.1.4.4 Monitoring: Streamflow

As detailed in Section 3.1.1.4, streamflow monitoring is conducted by the MGA member agencies and partners to assess possible streamflow depletion related to groundwater extractions, monitor stream conditions related to fish habitat, and help preserve other beneficial uses of surface water.

To inform the assessment of the performance of the SMC, there are up to five new streamflow gauges associated with shallow monitoring wells that need to be installed by the MGA. The paired wells and gauges (adjacently located) are to evaluate a potential correlation between streamflow, shallow groundwater level and groundwater extraction.

The MGA estimated cost to install, calibrate and maintain the streamflow gauges are presented in Table 5-1. This includes one-time costs related to the initial establishment of the five new stations. The cost estimate includes planning, site selection, designs/specifications, and related pre-installation tasks. It includes the cost to install the monitoring instrumentation, conduct surveys and related work to establish each monitoring site. It includes costs to develop a rating curve to establish a stream stage-discharge relationship for each site. It includes the costs of routine data collection and station maintenance. The assignment of roles and responsibilities (consultants and agency staff) will be evaluated as implementation proceeds.

It is anticipated the new monitoring locations will be installed over in a phased approach over the next five years. The MGA's Proposition 1 GSP Planning grant is providing \$125,000 towards funding at least one streamflow and/or shallow groundwater elevation monitoring installation. The MGA will seek additional grant funding available from the Department of Water Resources (DWR) and consider other state and federal programs to partially fund the installation of new streamflow gauges and related monitoring.

5.1.1.4.5 Data Collection: Offshore Airborne Electromagnetics Geophysical Surveys

In May 2017, the MGA successfully completed an offshore Airborne Electromagnetic (AEM) geophysical survey to assess groundwater salinity levels and map the approximate location of the saltwater/freshwater interface in the offshore groundwater aquifers. This important data will inform the assessment of the extent and progress of seawater intrusion into the Basin and the management responses. The MGA anticipates repeating the AEM survey on a five-year interval (2022) to identify movement of the interface and assess seawater intrusion. The estimated cost is presented in Table 5-1.

5.1.1.4.6 Data Collection: Other

Additional data collection costs include a funding contribution toward a countywide fish and stream habitat monitoring program. Since 2006, this multi-agency partnership between the County and local water agencies has measured juvenile steelhead population density at more than 40 sites throughout the San Lorenzo, Soquel, Aptos, and Pajaro watersheds. The program also assesses habitat conditions for steelhead and coho salmon and helps inform conservation priorities throughout the County. These data are anticipated to generally inform the MGA's

ongoing consideration of potential groundwater management impacts to groundwater dependent ecosystems.

5.1.1.4.7 Data Management

The MGA's anticipated initial costs in this category include engaging a consultant to conduct a data management assessment and develop a data management plan that is based upon the monitoring protocols outlined in Section 3 and leverages the existing data management efforts of the member agencies. Ongoing costs in this category includes maintaining a data management system (DMS) that provides necessary functions and capabilities for data, such as: input, organization, storage, accessibility; quality assurance/quality control; security and redundancy; report outputs; and data sharing.

The City of Santa Cruz and Soquel Creek Water District Groundwater utilize a data management system (DMS) based upon the commercial software platform Water Information Systems by KISTERS (WISKI). This DMS is used for management and analyses of groundwater elevation, groundwater quality, groundwater extractions, streamflow, precipitation / weather data. For data management consistency, it is anticipated the MGA will also use WISKI as its principal data management platform. The platform options will be evaluated further. The anticipated MGA costs for data management are presented in Table 5-1. Costs include software purchase and license, set-up and configuration, software annual support and maintenance.

5.1.1.5 GSP Reporting to DWR

5.1.1.5.1 Annual Reports

SGMA regulations require the MGA submit annual reports to DWR on status the GSP Implementation. The reporting requirements are presented in Section 5.3. It is anticipated these reports will be prepared by technical consultants in coordination with the MGA member agency staff. The estimated cost of the annual reports is presented in Table 5-1.

5.1.1.5.2 Periodic (5-year) Evaluations

SGMA regulations require the MGA evaluate the GSP at least every 5 years and whenever the Plan is amended. The reporting requirements of the periodic evaluation are presented in Section 5.3. The initial 5-year GSP evaluation is due to DWR in 2025. The roles and responsibilities for the preparation of the updated GSP are not yet determined. In recognition that this mandatory requirement will be completed by the MGA, for the purposes of estimating the costs, the estimated cost for the preparation of the document by technical consultants is presented in Table 5-1.

5.1.1.6 Community Outreach & Education

In 2018, the MGA Board approved a Communication and Engagement Plan that outlined a phased approach to conducting stakeholder outreach, engagement, and education activities. Ongoing activities in the GSP Implementation phase starting in 2020 are anticipated to include outreach such as: maintaining the MGA website and related online/social media through the member agencies (e.g., Facebook; Nextdoor); electronic newsletter; promoting and conducting

community meetings, workshops, events; coordination with the Water Conservation Coalition of Santa Cruz County; conducting informational surveys; youth engagement efforts; developing brochures and print materials; and similar engagement activities. The estimated costs are presented in Table 5-1.

5.1.1.7 Financial Reserves and Contingencies

Prudent financial management requires that the MGA carry a general reserve in order to manage cash flow and mitigate the risk of expense overruns due to unanticipated expenditures and in case actual expenses are greater than anticipated in the annual budget. General reserves have no restrictions on the types of expenses they can be used to fund. The ending balance in general reserves becomes the beginning balance of cash reserves for the next fiscal year.

The MGA annual budget includes a contingency amount in recognition that the MGA and the GSP implementation is new and there is the potential for unanticipated expenses. Since 2016, the MGA’s contingency fund been set annually at either 5% or 10% of the total annual operating budget. For the purposes of conservatively estimating the cost to implement the GSP, the budget estimate includes a 10% contingency based upon the annual fiscal year budget estimate.

5.1.2 Activities of the MGA Member Agencies

5.1.2.1 Monitoring Activities

The individual MGA member agencies conduct groundwater, streamflow and watershed monitoring activities in the Basin that inform the management of their respective agencies. The MGA does not contribute towards these individual monitoring efforts and these costs are not included in the MGA’s estimate of the cost to implement the GSP. However, the results of monitoring activities relevant to the MGA will be included in the DMS. The costs are provided below for reference and to provide context for the extent of relevant monitoring activities that are conducted within Basin.

Table 5-2. Member Agency Groundwater Elevation and Quality Monitoring Annual Costs in Basin

AGENCY	Equipment	Data Mgmt & Software	Lab/ Analytical	Personnel	Estimated Total ¹
Soquel Creek Water District	\$ 7,500	\$ 7,500	\$ 20,000	\$ 65,000	\$ 100,000
City of Santa Cruz ²	\$ 3,000	\$ 5,000	\$ 10,000	\$ 37,000	\$ 55,000
Central Water District	\$ 1,000	\$ 1,000		\$ 1,000	\$ 3,000
County of Santa Cruz	\$ 1,000	\$0	\$0	\$ 10,000	\$ 11,000

1. Costs estimates based upon FY 2018-19 amounts
 2. City’s Live Oak Groundwater Monitoring Program

Table 5-3. Member Agency Streamflow, Precipitation, and Fish Monitoring Annual Costs in Basin

AGENCY	Services ¹	Site Use	Fish Monitoring	Personnel	Estimated Total ²
Soquel Creek Water District	\$17,000	\$1,500	\$12,000	\$4,500	\$35,000
County of Santa Cruz			\$10,000	\$10,000	\$20,000

1. Consultants and USGS; 2. Costs estimates based upon FY 2018-19 amounts; 3. These are approximate costs within the MGA Basin only; 4. City of Santa Cruz contributes to Fish Monitoring program in Soquel Creek and groundwater impacts monitoring.

5.1.2.2 Member Agency Projects

The MGA’s individual member agencies are implementing projects and management actions. This includes the continuation of existing programs, such as demand management and water conservation programs that have been in place for many years and proven effective in reducing per capita demand in the region to among the lowest levels in the state. Also included are specific existing and proposed projects of the individual member agencies to provide supplemental supply to the Basin. It is largely the projects and management actions of individual agencies, rather than any direct actions taken by the MGA, that will collectively determine the sustainable management of the Basin. While these program and project costs are not included the MGA’s budget, the costs outlined in Table 5-4 provide context for the level of investment in the Basin’s long-term sustainability.

Table 5-4. Member Agency Projects

Project	Agency	Cost Considerations
Aquifer Storage and Recovery (ASR)	SCWD	Approximate cost of this project within the Purisima aquifer locations only is \$21M.
Water Transfers / In Lieu Groundwater Recharge and	SCWD; SqCWD	To be determined after the pilot project is complete. This will need to consider Prop. 218 if/when the City provides water to the District to determine appropriate cost for the water.
Pure Water Soquel	SqCWD	Projected cost is \$90 million to permit and construct. The project will be funded entirely through water rates and/or low interest loans or grant funds; at no direct costs are anticipated to the MGA.
Distributed Storm Water Managed Aquifer Recharge (DSWMAR)	County; SqCWD	A report developed for the County estimates costs per acre-foot of water infiltrated over a 20 year project lifespan varied between \$1,649 and \$2,786 per acre-foot for the specific projects evaluated. Project development costs for initial project installation were estimated at \$450,000 (Los Altos) and \$650,000 (14th Fairway) (MME, 2019).

5.1.3 Total Estimated Implementation Costs Through 2040

The estimated total cost to implement the GSP over the 20-year planning horizon is \$15,866,700 (Table 5-5). This projection uses the 2020 annualized cost (5-Year) for the baseline. The estimated cost is presented by major budget category, which includes: Agency Administration and Operations; Legal; Management and Coordination; Data Collection, Analysis, and Reporting; GSP Annual and Periodic (5-Year) Reporting to DWR; and, Outreach and Education. The annual costs include a 10% contingency and an annual rate of inflation of 3.0%. These estimated costs are based on the best available information at the time of Plan preparation. Grant awards may offset some costs. This represents the current understanding of Basin conditions and the current roles and responsibilities of the MGA under SGMA.

Table 5-5. Groundwater Sustainability Plan Estimated Implementation Cost Through 2040

Fiscal Year	Agency Administration & Operations	Legal	Management & Coordination	Data Collection, Analysis, & Reporting	GSP Reporting (Annual & 5-Year)	Outreach & Education	10% Contingency	Total
2020	\$179,500	\$20,000	\$80,000	\$158,500	\$45,000	\$20,000	\$50,300	\$553,300
2021	\$184,885	\$20,600	\$82,400	\$163,255	\$46,350	\$20,600	\$51,809	\$569,899
2022	\$190,432	\$21,218	\$84,872	\$168,153	\$47,741	\$21,218	\$53,363	\$586,996
2023	\$196,144	\$21,855	\$87,418	\$173,197	\$49,173	\$21,855	\$54,964	\$604,606
2024	\$202,029	\$22,510	\$90,041	\$178,393	\$50,648	\$22,510	\$56,613	\$622,744
2025	\$208,090	\$23,185	\$92,742	\$183,745	\$52,167	\$23,185	\$58,311	\$641,426
2026	\$214,332	\$23,881	\$95,524	\$189,257	\$53,732	\$23,881	\$60,061	\$660,669
2027	\$220,762	\$24,597	\$98,390	\$194,935	\$55,344	\$24,597	\$61,863	\$680,489
2028	\$227,385	\$25,335	\$101,342	\$200,783	\$57,005	\$25,335	\$63,719	\$700,904
2029	\$234,207	\$26,095	\$104,382	\$206,807	\$58,715	\$26,095	\$65,630	\$721,931
2030	\$241,233	\$26,878	\$107,513	\$213,011	\$60,476	\$26,878	\$67,599	\$743,589
2031	\$248,470	\$27,685	\$110,739	\$219,401	\$62,291	\$27,685	\$69,627	\$765,897
2032	\$255,924	\$28,515	\$114,061	\$225,983	\$64,159	\$28,515	\$71,716	\$788,873
2033	\$263,602	\$29,371	\$117,483	\$232,763	\$66,084	\$29,371	\$73,867	\$812,540
2034	\$271,510	\$30,252	\$121,007	\$239,745	\$68,067	\$30,252	\$76,083	\$836,916
2035	\$279,655	\$31,159	\$124,637	\$246,938	\$70,109	\$31,159	\$78,366	\$862,023
2036	\$288,045	\$32,094	\$128,377	\$254,346	\$72,212	\$32,094	\$80,717	\$887,884
2037	\$296,686	\$33,057	\$132,228	\$261,976	\$74,378	\$33,057	\$83,138	\$914,521
2038	\$305,587	\$34,049	\$136,195	\$269,836	\$76,609	\$34,049	\$85,632	\$941,956
2039	\$314,754	\$35,070	\$140,280	\$277,931	\$78,908	\$35,070	\$88,201	\$970,215
2040	\$324,197	\$36,122	\$144,489	\$286,269	\$81,275	\$36,122	\$90,847	\$999,321
Total	\$5,147,429	\$573,530	\$2,294,119	\$4,545,223	\$1,290,442	\$573,530	\$1,442,427	\$15,866,700

1. Assumes inflation factor of 3% annually

5.1.4 Funding sources and mechanisms

Initial GSP Implementation Phase (2020 – 2025)

The initial funding for GSP implementation will be obtained from the annual contributions of the four MGA member agencies. MGA bases annual member contributions on estimated Basin sustainability impacts. Costs are currently allocated 70% to Soquel Creek Water District and 10% each to the County, the City, and Central Water District. This funding approach has been used since the MGA's formation in 2016. This cost allocation may change as the MGA learns more about Basin sustainability impacts through GSP data collection and the beneficial impacts of agency projects and management actions that improve sustainability. The annual contribution total and individual agency amounts are assessed annually based upon the MGA's annual budget. In 2017, the MGA was awarded a \$1.5M grant from DWR's Sustainable Groundwater Management Program to fund, in part, the development of the GSP. The MGA will continue to pursue funding from state and federal sources to support GSP planning and implementation.

Ongoing GSP Implementation (2026 – 2040)

SGMA authorizes groundwater sustainability agencies to charge fees necessary to fund the costs of groundwater management, pumping, permitting, and other groundwater sustainability programs. A public finance consulting firm prepared a detailed memorandum outlining the funding mechanisms, necessary policies, and data required to develop a fee program that is equitable, complies with SGMA and California's complex public finance laws. This detailed memorandum from Raftelis is included for reference only as Appendix 5-A. In its memorandum Raftelis:

1. Presents a suite of options to recover MGA costs from large private groundwater pumpers based on geographic location, proximity to surface water and the coast, volume of water pumped, and other criteria;
2. Calculates fees using preliminary data based on parcels, acreage, and volumetric production of water
3. Assesses the costs and benefits of each fee structure and mechanism for implementing each fee
4. Relates the implications of each fee type to the requirements of Proposition 218 and Proposition 26
5. Describes the conditions, if any, whereby de-minimis users can be charged for a fair share of MGA costs

As initial GSP implementation proceeds, the MGA will further evaluate funding mechanisms, potential application of fees, and fee criteria. The MGA may perform a cost-benefit analysis regarding fee collection to build upon the initial funding mechanism assessment and to better inform its evaluation of fee alternatives.

5.2 Schedule for Implementation

The final GSP was presented to the MGA Board for adoption at its November 21, 2019 meeting and will be submitted to DWR no later than January 31, 2020. Figure 5-1 provides an overview of the preliminary schedule for agency administration, management and coordination activities, GSP reporting, and community outreach and education. Many of these categories consist of ongoing tasks and efforts that will continue throughout GSP Implementation.

Management & coordination in the schedule at Figure 5-1 includes data collection, analysis, and reporting. This category includes the installation of stream gages and development of associated shallow wells to fill data gaps for depletions of interconnected surface water monitoring discussed in Section 3.3.4.1 and 3.3.4.2. MGA has applied for and been awarded grant funds that include both grant and match funding to make these improvements to the monitoring network. In early 2020 MGA will release a request for proposal (RFP) to acquire land access and conduct installation of stream gages and shallow monitoring wells. MGA staff expects the work included in the RFP to begin prior to October 2022.

The timing of periodic events, such as offshore aerial electromagnetics (AEM) surveys of the freshwater-saline water interface, are best estimates and may shift as GSP Implementation proceeds based upon the needs at the time. GSP reporting will occur on an annual and a 5-year basis as required under SGMA. Annual reports will be submitted to DWR by April 1 of each year. Periodic reports (every 5-years or following substantial GSP amendments) will be submitted to DWR by April 1 at least every 5 years (2025, 2030, 2035, and 2040). The contents of Annual and Periodic reports are described in the following Sections 5.3 and 5.4.

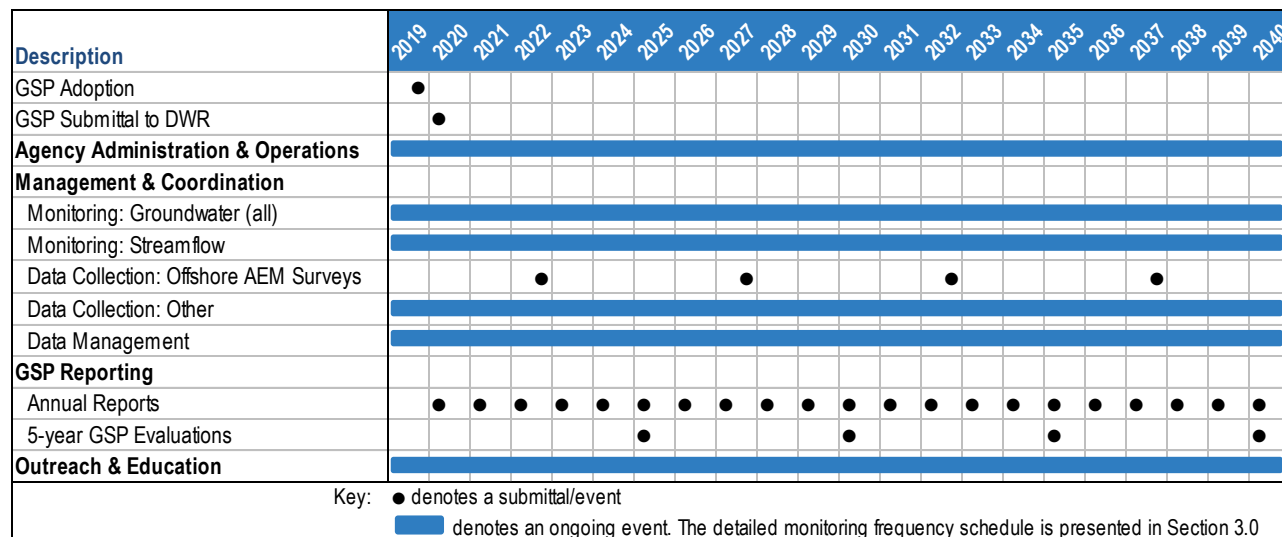


Figure 5-1. GSP Implementation Schedule

5.2.1 Projects and Management Actions

The estimated schedule for the individual MGA member agency projects and management actions is presented in Figure 5-2. The Group 1 Baseline projects are anticipated to be evaluated through the GSP planning and implementation horizon of 50 years. All of these efforts will be periodically assessed as part of an ongoing adaptive management approach.

The Group 2 estimated schedules for the individual member agency projects are also provided. These schedules are based upon current estimates. Some projects, such as Distributed Stormwater Managed Aquifer Recharge include multiple individual projects at separate locations, thus the overlap in the phases of development and implementation. Each of the projects is dependent upon individual factors such as permitting, approval, and funding that may impact the estimated general timeline presented below.

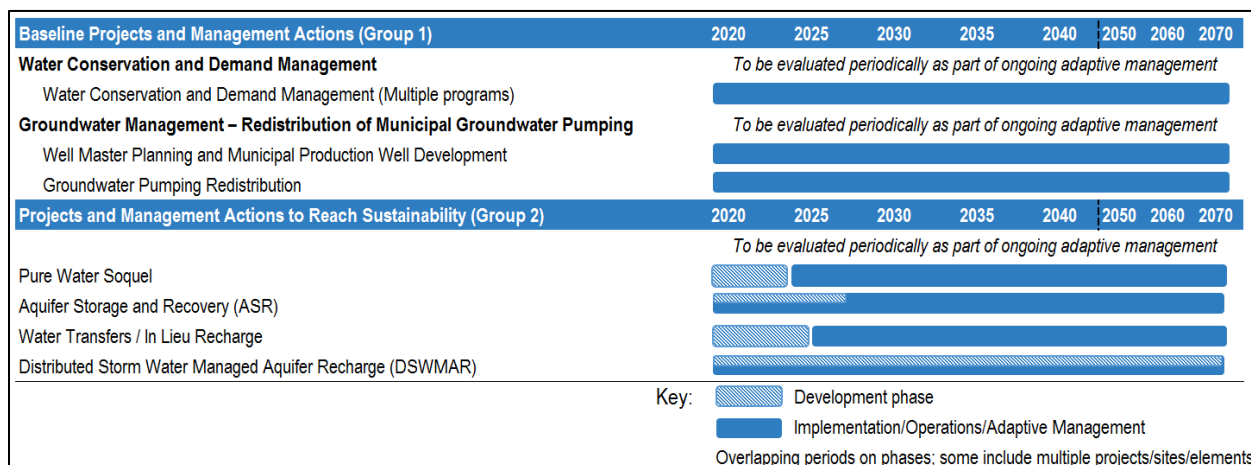


Figure 5-2. Member Agency Projects and Management Actions Estimated Timeline

5.3 Annual Reporting

SGMA regulations require the submittal of an annual report on the implementation of the GSP to DWR (Water Code 10727.2, 10728, and 10733.2). An outline of the procedural and substantive requirements for the annual reports is presented below.

The MGA shall submit an annual report to DWR by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

1. General information, including an executive summary and a location map depicting the basin covered by the report.
2. A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

- a. Groundwater elevation data from monitoring wells identified in the monitoring network shall be analyzed and displayed as follows:
 - i. Groundwater elevation contour maps for each principal aquifer in the basin illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions.
 - ii. Hydrographs of groundwater elevations and water year type using historical data to the greatest extent available, including from January 1, 2015, to current reporting year.
 - b. Groundwater extraction for the preceding water year. Data shall be collected using the best available measurement methods and shall be presented in a table that summarizes groundwater extractions by water use sector, and identifies the method of measurement (direct or estimate) and accuracy of measurements, and a map that illustrates the general location and volume of groundwater extractions.
 - c. Surface water supply used or available for use, for groundwater recharge or in-lieu use shall be reported based on quantitative data that describes the annual volume and sources for the preceding water year.
 - d. Total water use shall be collected using the best available measurement methods and shall be reported in a table that summarizes total water use by water use sector, water source type, and identifies the method of measurement (direct or estimate) and accuracy of measurements. Existing water use data from the most recent Urban Water Management Plans or Agricultural Water Management Plans within the basin may be used, as long as the data are reported by water year.
 - e. Change in groundwater in storage shall include the following:
 - i. Change in groundwater in storage maps for each principal aquifer in the basin.
 - ii. A graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.
3. A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report.

5.4 Periodic (5-Year) Evaluations

SGMA regulations require the MGA to evaluate this GSP at least every five years and whenever the Plan is amended, and provide a written assessment to the DWR. (Water Code Sections 10727.2, 10728, 10728.2, 10733.2, and 10733.8). An outline of the procedural and substantive requirements for the periodic evaluations reports is presented below.

To comply with the regulations, the MGA's assessment shall describe whether the Plan implementation, including implementation of projects and management actions, are meeting the sustainability goal in the Basin, and shall include the following:

1. A description of current groundwater conditions for each applicable sustainability indicator relative to measurable objectives, interim milestones, and minimum thresholds.
2. A description of the implementation of any projects or management actions, and the effect on groundwater conditions resulting from those projects or management actions.
3. Elements of the GSP, including the Basin setting, management areas, or the identification of undesirable results and the setting of minimum thresholds and measurable objectives, shall be reconsidered and revisions proposed, if necessary.
4. An evaluation of the Basin setting in light of significant new information or changes in water use, and an explanation of any significant changes. If the MGA's evaluation shows that the Basin is experiencing overdraft conditions, the MGA shall include an assessment of measures to mitigate that overdraft.
5. A description of the monitoring network within the Basin, including whether data gaps exist, or any areas within the Basin are represented by data that does not satisfy the requirements of Sections 352.4 and 354.34(c). The description shall include the following:
 - a. An assessment of monitoring network function with an analysis of data collected to date, identification of data gaps, and the actions necessary to improve the monitoring network, consistent with the requirements of Section 354.38.
 - b. If the MGA identifies data gaps, the Plan shall describe a program for the acquisition of additional data sources, including an estimate of the timing of that acquisition, and for incorporation of newly obtained information into the Plan.
 - c. The Plan shall prioritize the installation of new data collection facilities and analysis of new data based on the needs of the basin.
6. A description of significant new information that has been made available since Plan adoption or amendment, or the last five-year assessment. The description shall also include whether new information warrants changes to any aspect of the Plan, including

the evaluation of the basin setting, measurable objectives, minimum thresholds, or the criteria defining undesirable results.

7. A description of relevant actions taken by the MGA, including a summary of regulations or ordinances related to the Plan.
8. Information describing any enforcement or legal actions taken by the MGA in furtherance of the sustainability goal for the basin.
9. A description of completed or proposed Plan amendments.
10. Where appropriate, a summary of coordination that occurred between multiple agencies in a single basin, agencies in hydrologically connected basins, and land use agencies.
11. Other information the MGA deems appropriate, along with any information required by the DWR to conduct a periodic review as required by Water Code Section 10733.