

**Cosumnes Groundwater Authority**  
**Special Meeting of the Board of Directors**  
**Agenda**

**When:** 9:00 am – 11:00 am, Monday, December 5, 2022

**Where:** Galt Police Department Community Room  
455 Industrial Drive  
Galt, CA 95632

**Zoom:** Via Zoom: <https://us02web.zoom.us/j/87605303781>  
Meeting ID: 876 0530 3781  
Call in Number: 1-669-900-9128

**PUBLIC COMMENT** – Any member of the public may address the Board concerning any matter on the agenda before or during its consideration of the matter. Public comment is limited to three (3) minutes per person. For good cause, the Board Chair may waive these limitations.

**ACCESSIBILITY** - If you have a disability and require a reasonable accommodation to fully participate in this event, please contact Austin Miller (CGA Secretary) before the day of the meeting via email [[info@CosumnesGroundwater.org](mailto:info@CosumnesGroundwater.org)] or telephone [916-526-5447] to discuss your accessibility needs.

1. Introductions
  - a. Determine if Quorum is Present
  - b. Agenda Overview
2. Public Comment on Non-Agenda Items - Limit of 3 minutes per speaker.  
Comment will be received for items not on the agenda, but within the jurisdiction of the agency. The Board will hear comment but may not take action on issues raised on non-agenda items.
3. Cosumnes Groundwater Authority's Grant Application for the California Department of Water Resources Sustainable Groundwater Management Grant Program Round 2 Funding
  - a. Resolution 2022.12.06 – Resolution Authorizing CGA to Submit a DWR Grant
4. Upcoming CGA Events Schedule

**Adjourn Meeting**

**Cosumnes Groundwater Authority  
Board of Directors Meeting**

Agenda Date: December 5<sup>th</sup>, 2022

Agenda Item #: 3

Agenda Item Subject: DWR Grant Application

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**Background**

Changes since last CGA meeting:

- Component 2: Groundwater Monitoring Improvement Planning
  - Added geophysics to investigate clay layer to help with well siting
  - Added stream gauge installation (moved from Component 5)
- Component 3: Conservation Demonstration Projects
  - Removed: land repurposing plan, ET Monitoring Demonstration Projects, and in-depth economic impact
- Component 4: Recharge Pilot Studies Planning
  - Reduced # of sites
  - Removed DMS/Model tasks
  - Reduced Stream Corridor Modeling and Analysis
  - Removed stream gauge installation (moved to Component 2)

The CGA DWR SGMA Implementation Grant application components are listed below.

<b>Component Name</b>	<b>Budget</b>
1 – Grant Administration	\$325,000
2 – Groundwater Monitoring Improvement Planning	\$1,150,000
3 – Conservation Demonstration Projects	\$500,000
4 – Five-Year GSP and Model Update	\$600,000
5 – Recharge Pilot Studies Planning	\$1,000,000
6 – Recharge Well Design and Implementation	\$500,000
<b>Total</b>	<b>\$3,575,000</b>

**Attachments**

- Draft Application Component
- Draft CGA Resolution
- Staff Presentation Slides

**Staff Recommendation**

- Provide direction on finalizing the Cosumnes Groundwater Authority DWR SGM Grant Program Application.

## SGMA Implementation Round 2 Grant Solicitation

<b>Organization Name*</b>	Cosumnes Groundwater Authority			
<b>Point Of Contact</b>	<b>First Name:*</b>	Stephen	<b>Last Name:*</b>	Julian
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	<b>City:*</b>	Elk Grove	<b>State:*</b>	California
	<b>Zip:*</b>	95624		
<b>Point Of Contact Position Title*</b>	Watershed Coordinator			
<b>Proposal Name*</b>	<b>Cosumnes GSP Project Planning &amp; Monitoring Update</b>			
<b>Proposal Objective*</b>	Implement aspect of the Groundwater Sustainability Plan			

Component Name	Budget
1 – Grant Administration	\$325,000
2 – Groundwater Monitoring Improvement Planning	\$1,150,000
3 – Conservation Demonstration Projects	\$500,000
4 – 5-Year GSP and Model Update	\$600,000
5 – Recharge Pilot Studies Planning	\$1,000,000
6 – Recharge Well Design and Implementation	\$500,000
<b>Total</b>	<b>\$3,575,000</b>

**ATTACHMENT 3**  
**APPLICATION WORK PLAN, BUDGET, AND SCHEDULE**

**Grant Proposal Title:** Cosumnes Subbasin GSP Update and Implementation Project

**Applicant:** Cosumnes Groundwater Authority

**A. General**

**Component 2: Groundwater Monitoring Improvement Planning**

1. Provide Project or Component Description which must include the following:

**Detailed Component Description**

The Sustainable Groundwater Management Act (SGMA) Monitoring Network is foundational to the Groundwater Sustainability Agencies' (GSAs') quantitative understanding of the groundwater basin and is required to assess the Sustainability Indicators for the basin, protect against Undesirable Results (URs), evaluate potential impacts to the beneficial uses and users of groundwater and track progress made by implemented Projects and Management Actions (PMAs). Therefore, it is critical that data gaps identified as part of the SGMA Monitoring Network be prioritized and addressed as laid out in the Cosumnes Groundwater Sustainability Plan (GSP) *Section 19.1.2, Data Gap Filling Efforts*.

The Cosumnes Subbasin (Basin) SGMA Monitoring Network consists of representative monitoring sites for each Sustainability Indicator. For each Representative Monitoring Site (RMS), the Sustainable Management Criteria (SMCs) are established, and data are routinely collected for comparison to the criteria. Additionally, the Monitoring Network relies upon supplemental sites, where SMCs are not established but data are collected to confirm the representativeness of each RMS, to support the wider understanding of the Basin hydrology and response to PMAs. The Basin's Monitoring Network currently consists of the following RMSs: 19 wells for the Chronic Lowering of Groundwater Levels (RMW-WL) and Reduction of Groundwater Storage Sustainability Indicators, 14 wells for the Degraded Water Quality (RMW-WQ) Sustainability Indicator, and nine wells (RMW-ISWs) and five stream gauges for a total of 14 RMSs for the Depletions of Interconnected Surface Water Sustainability Indicator.

To improve groundwater monitoring within the Basin this Component will include 1) filling identified data gaps amongst the current RMSs; 2) expanding the current RMSs with wells in high interest areas, such as beneath the area overlying the mapped cone of depression, Groundwater Dependent Ecosystems (GDEs), and Disadvantaged Communities (DACs); 3) expanding the supplemental monitoring network to include additional domestic and agricultural wells; and 4) expanding the RMSs for the Depletions of Interconnected Surface Water Sustainability Indicator by installing additional surface water gauges.

Data gaps in the SGMA Monitoring Network include incomplete or unavailable construction information for some of the current RMSs. As described in the California Department of Water Resources' (DWR's) Monitoring Network Best Management Practices (BMPs), if existing wells are used the perforated interval should be known in order to utilize water level or other data collected from that well ([https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-2-Monitoring-Networks-and-Identification-of-Data-Gaps\\_ay\\_19.pdf](https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-2-Monitoring-Networks-and-Identification-of-Data-Gaps_ay_19.pdf)). This Groundwater Monitoring Improvement Planning Component will include downhole video logging of current RMSs lacking information on well screen perforation intervals and total depth (16 wells), and surveying measurement point elevations and location coordinates where existing data does not meet SGMA-compliant accuracy (35 wells).

As described in *Section 17.4 Assessment and Improvement of Monitoring Network* of the GSP, dedicated monitoring wells screened at more than one depth interval of the Principal Aquifer are needed to quantify relationships between water table elevation changes and extractions from deeper water supply wells, especially near the Cosumnes River and Dry Creek and in the area overlying the mapped cone of depression (the southeastern portion of the Basin). Moreover, multi-depth monitoring sites are needed to evaluate possible perched groundwater conditions that likely support GDEs, which in some parts of the Basin also occur in areas mapped as DACs. This Component plans to expand the number of RMSs by 1 to 4 new sites. Each site will be comprised of either a single well or nested group of wells where each well is screened across a different depth interval of the aquifer. Sites will be created using existing wells, constructing monitoring wells, or a combination of both. For example, a new RMS can be established by constructing a relatively shallow well to monitor



perched groundwater conditions relevant to GDEs near existing domestic and/or deeper agricultural wells that monitor the Principal Aquifer. As part of well siting, geophysical surveys will be conducted to increase the understanding of the inferred clay bed thought to be present beneath the western third of the Basin to identify areas that need additional monitoring and to help inform optimal recharge sites and methods as part of Component 5. Water level instrumentation will be installed in the wells at the new RMS and the resulting data will be integrated into the Basin Data Management System (DMS) to support GSP implementation and refinement of the numerical model. Also described in *Section 17.4 Assessment and Improvement of Monitoring Network* of the GSP, there is inactive surface water gauges or inactive measurement and recording of flow and/or stage on Dry Creek and no surface water gauges on other streams of interest in the Basin. This Component plans to install 1 to 3 stream gauges to fill these gaps.

This Component also includes increased landowner outreach and engagement to develop a more accurate inventory of existing domestic and agricultural wells and solicit volunteers to include their wells in the monitoring network (SGMA monitoring network or supplemental network). The GSP recognizes that of all wells within the Basin, domestic wells are greatest in number and generally shallowest in depth and therefore the most vulnerable to declining water levels. Additional domestic wells will be added to the supplemental well network and their data used to confirm that the SGMA monitoring network protects the groundwater supply available to all beneficial users including SDACs, DACs and other Underrepresented Communities (URCs).

#### Component Goals, Objectives, and Needs

**Goals.** This Component's goal is to refine and expand the SGMA Monitoring Network by filling data gaps identified in the GSP and improve representation of groundwater conditions in high interest areas (beneath the area overlying the mapped cone of depression, GDEs, and URCs).

**Objectives.** Specific objectives for reaching this goal are:

- For current RMSs, collect missing or inadequate data for well screen perforation intervals, total well depth, measurement point elevations, and coordinates to fully comply with SGMA guidelines.
- Expand outreach and engagement efforts to high interest areas (landowners overlying the cone of depression, URCs and DACs) to access existing wells or access to lands to install monitoring wells.
- Increase the number of RMSs that monitor conditions (i) near DACs; (ii) potential GDEs; (iii) perched/shallow aquifers; and (iv) beneath the area overlying the mapped cone of depression.
- Install additional stream water gauges on streams that don't have existing or active gauges.
- Expand the network of supplemental domestic and agricultural wells to confirm the SGMA Monitoring Network is representative of Basin conditions.

**Needs.** The Basin relies on the RMSs to evaluate SMCs, assess the Sustainability Indicators for the Basin and to track the progress made by PMAs that are implemented. Hence, the GSAs need to ensure the SGMA Monitoring Network is as complete as possible, is representative of all beneficial users and has necessary construction information to accurately monitor Basin conditions.

#### Meeting the Component Goals, Objectives, and Needs

The goal of improving the SGMA Monitoring Network of the Basin will be met with Component 2 by filling data gaps of the current monitoring network, expanding the network as appropriate and improving the representation of groundwater conditions and users by expanding the supplemental network.

#### Communities Served, Measurable Objectives, Minimum Thresholds, Plan Implementation Timeline, and Feasibility

**Communities Served.** Groundwater is the primary source of water for drinking and other domestic needs in the Basin and supports a thriving agricultural economy. Improved monitoring of the Basin will benefit all beneficial users of groundwater including underrepresented communities (URCs), disadvantaged and severely disadvantaged communities (DACs and SDACs), Tribes, and groundwater dependent ecosystems (GDEs) to ensure all communities are being represented and adequately monitored. The GSAs will continue its active engagement with the public, stakeholders, and landowners in its planning and implementation decisions. Furthermore, as supported through CGA, the GSAs have established and maintained cooperative working relationships with each other, with CGA member districts/agencies, other districts/agencies within the Basin and with neighboring Basins. The GSAs plan to maintain these relationships and expand coordination to other interested parties through increased stakeholder outreach to identify volunteers to have their wells monitored as part of the supplemental monitoring network and through coordination of the monitoring plan with neighboring Basins to coordinate well installation sites and sampling plans.

**Measurable Objectives/Minimum Thresholds.** The monitoring network is a required component of the GSP and improves the quantitative description of the Basin Setting (hydrogeologic conceptual model, groundwater conditions, and water budget). The network also improves the data relied on to ensure the reliability of the numerical model, minimum thresholds

(MTs) and measurable objectives (MOs). Finally, the monitoring network quantitatively evaluates GSP performance achieving MOs and avoiding MTs which will improve the understanding of impacts on the different beneficial users in the Basin. Therefore, it is critical to fill the data gaps identified in the Cosumnes GSP.

**Plan Implementation Timeline.** A SGMA-compliant monitoring network is in place and is actively utilized as part of GSP implementation. The benefits from filling data gaps through video logging to determine well screen intervals and land surveying measurement point elevations at existing RMSs will therefore be realized immediately. The monitoring network expansion planned under this Component will improve representation of conditions that influence agriculture, domestic URC water supplies, and GDEs during future GSP implementation. Stakeholder engagement and public outreach activities will be a continuous area of focus during GSP implementation. Given the high demand of well drillers, bidding regarding the dedicated monitoring well(s) will occur immediately following grant execution to allow ample time for design, installation, and development.

**Feasibility.** The GSAs currently have SGMA compliant monitoring networks in place. Outcomes from this Component will enhance and improve the monitoring networks. Existing wells will be incorporated into the network where possible and in lieu of constructing monitoring wells if there are any signification delays in permitting or available drillers. As such, completion of Component 2 in accordance with the stated schedule is very feasible.

2. **2B – Planning Project/Components Only:** Description of planning project/component is well-coordinated.

**Respond to DWR Comments on GSP**

DWR has not commented on the GSP, and therefore this Component does not address DWR comments on the GSP.

**Address Data Gaps**

The current SGMA Monitoring Network includes approved wells in all of the GSAs within the Basin, and these wells are visited and sampled through coordinated efforts between the GSAs. The outreach and engagement tasks of this Component will increase coordination of monitoring within the Basin and with GSAs in adjacent basins. *Section 19.1.2 Data Gap Filling Efforts* of the GSP describes that the GSAs will prioritize and begin to fill key data gaps related to monitoring as part of GSP Implementation. This Component will do that work consistent with the plan. This Component will specifically address data gaps identified in *Section 17.4 Assessment and Improvement of Monitoring Network* of the Cosumnes GSP including incomplete or unavailable construction information for some of the current RMS wells and the need for wells that represent water table and deeper water supply conditions, especially near the Cosumnes River and Dry Creek and the need for additional surface water gauges in other streams of the Basin, besides the Cosumnes River. Furthermore, public comments received on the Public Draft of the GSP and expressed verbally at the Cosumnes Groundwater Authority (CGA) Board of Director's meetings identified the need to include additional domestic wells in the supplemental monitoring network, and this will be addressed by this Component.

**Assist in Feasibility of GSP Implementation**

By filling data gaps identified in the GSP, this Component assists with GSP implementation. As the above sections have described, filling the data gaps ensures the characterization of Basin conditions is reliable, supports the numerical model, and improves the effectiveness of MTs to protect against Undesirable Results and progress toward MOs. The GSP hinges on the ability to accurately determine its performance relative to these objective measures, and this Component supports GSP implementation feasibility and success.

3. Provide a regional and Project/Component map(s).

The Regional Map is Figure 1 in Attachment 4 and the Component Map is Figure 4 in Attachment 4.

4. Explain if the proposed Project or Component will benefit an URC, Tribe or SDAC.

**Identification of URC(s), Tribe(s), and/or SDAC(s)**

Figure 2 in Attachment 4 shows the Basin location relative to mapped Underrepresented Communities (URCs) based on the DWR's Disadvantaged Communities (DAC) Mapping Tool and CalEnviroScreen 4.0. The DACs, and SDACs shown in Figure 2 include Census tracts identified as:

- SDAC: GEOID20: 06067009503 with a median household income (MHI) of \$41,193;
- DAC: GEOID20: 06067009504 with a MHI of \$53,162;
- DAC: GEOID20: 06067009501 with a MHI of \$59,625; and
- DAC: GEOID20: 06005000303 with a MHI of \$58,958.

Portions of the City of Galt and Sacramento County GSAs are considered SDACs and DAC. Portions of GID and ACGMA GSAs are considered DACs.

The Basin is home to several Native American tribal communities: (1) Wilton Rancheria tribe located in Sacramento County in the northwestern portion of the Basin, (2) the Buena Vista Rancheria of Me-Wuk Indians tribe in Amador County in the eastern portion of the Basin, and (3) the Lone Band of Miwoks Indians tribe also located in Amador County.

### Benefits to URC, Tribe or SDAC

Benefits of Component 2 are expected to be distributed Basin-wide by contributing to the sustainability of the groundwater basin and the stabilization of the groundwater table, and therefore will benefit all URCs. By land area, 1% of the Basin is in a SDAC and 26% of the Basin is in a DAC. The identified SDACs represent 6% of the population in the Basin, or about 3,000 people. The identified DACs represent 29% of the population in the Basin, or about 14,000 people.

The Buena Vista Rancheria of Me-Wuk Indians tribe relies on groundwater as their water supply. The Wilton Rancheria tribal lands are located adjacent to the Cosumnes River. The Wilton Rancheria tribe mission statement states, "The Department of Environmental Resource shall assess, conserve, monitor, preserve, protect, and restore tribal resources to enhance the environment within the Tribe's Territory." The Cosumnes River is within the Tribe's territory and is a valuable resource to them. The Lone Band of Miwok Indians is a public water supplier within the basin and has at least two groundwater wells. By contributing to groundwater sustainability, the Component will support the water needs of these tribes.

### Amount of Grant Funding that will Benefit Tribe, URC, and/or SDAC

Benefits of Component 2 are expected to be distributed Basin-wide by contributing to the sustainability of the groundwater basin and the stabilization of the groundwater table, so approximately \$311,516 of the project budget will benefit the URCs including DACs and SDACs if calculated on a per-acre basis or \$398,715 on a population basis.

5. Describe if the proposed Project or Component will positively impact issues associated with small water systems or private shallow domestic wells (groundwater contamination vulnerability, drawdown, etc.).

From *Section 2 Sustainability Goal* of the GSP, "The Sustainability Goal of the Cosumnes Subbasin is to ensure that groundwater...continues to be a long-term resource for beneficial users and uses including urban, domestic, agricultural, industrial, environmental, and others." *Section 14.1 Undesirable Results for Chronic Lowering of Groundwater Levels* of the GSP states that "Significant and Unreasonable effects associated with Undesirable Results occur when the number of completely dewatered domestic wells exceeds the assumed natural well replacement rate projected to occur over the 20-year implementation horizon." Therefore, increasing the monitoring of domestic wells and shallower wells will identify negative effects associated with Undesirable Results before they become significant and unreasonable. Improving the monitoring network will make sure the small water systems (PM Mutual Water Company and Cosumnes River Indian Association identified in Figure 3 in Attachment 4) and private shallow domestic wells (Figure 3 in Attachment 4) are adequately monitored and will identify any positive impacts to these wells.

### Justification from Domestic Well Census and Water System Maps

Figure 3 in Attachment 4 shows the location of the domestic wells and water systems within the Basin. GSP *Section 5.1.5 Well Density per Square Mile* reports that there are 2,258 domestic wells in the subbasin, far more than the number of production (433) or public (23) wells in the subbasin. Domestic wells are typically the most vulnerable to water level decline because they are often drilled shallower due to lower water use requirements and financial constraints. Increased monitoring of domestic wells and shallow water conditions near GDEs and DACs will help identify impacts to these areas. By making the implementation of the GSP more feasible, the Component will help stabilize groundwater levels and ensure a reliable water supply for all users. Additionally under this Component, the GSAs will ensure that stakeholder outreach and engagement activities include protocols and venues accessible to domestic well users and small water systems in the Basin and suitable for their continued engagement and inclusion.

### Addresses Needs of the State Water Board's SAFER Program

The component's contribution to the stability of groundwater will also help address the needs of the Safe and Affordable Fund for Equity and Resilience (SAFER) program. SAFER prioritizes funding based on a 2022 Drinking Water Needs Assessment. Maps that accompany the 2022 assessment show that areas around Galt are at-risk for water shortage issues and that areas south of Sloughhouse and near Lone and in the southern portion of Amador County are potentially at risk for water shortage issues, as shown in Figure 3 in Attachment 4. In addition, areas near Twin Cities, south of Sloughhouse, and north of Lone are at risk for water quality issues. Filling data gaps and expanding the number of RMSs will increase the effectiveness of the SGMA Monitoring Network to protect these users from experiencing Undesirable Results.

6. Describe how the proposed Project or Component addresses the Human Right to Water.

As noted in the response to question 2, above, the Component will contribute to the feasibility of implementing the GSP, which is necessary to stabilize groundwater levels and fulfill the sustainability goal for the Basin. This will improve the Basin's ability to meet the state policy expressed in Water Code Section 106.3 that "every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." Furthermore, the State Water Board adopted a resolution in February 2016 stating in part that it would work "to ensure proper water resource allocation and efficient use, for the benefit of present and future generations." The stabilization of the groundwater table will contribute to this goal by helping sustain the estimated 2,258 domestic wells in the subbasin. Under this Component, the GSAs will continue their ongoing GSP implementation activities to operate the Basin sustainably within the defined Sustainable Yield and to prevent Undesirable Results, thereby preserving the Human Right to Water.

## **PROJECT/COMPONENT DETAILS**

### **B. Scope of Work and Deliverables**

7. Include in the Work Plan a complete description of all tasks that will be completed as part of this Component.

#### **(a) Component Administration**

##### **Task 1: Project Management**

Prepare reports detailing work completed on the Component per DWR's format requirements for inclusion in Project Quarterly Progress Reports. Sufficient information will be included for the DWR Grant Manager to understand and review backup documentation submitted with invoices. Invoices will accompany the reports with backup documentation by budget category and task.

Prepare the Draft Component Completion Report and submit it to the DWR Grant Manager for comment and review 90 days before the end date for this Component. DWR's Grant Manager will review the Draft Component Completion Report and provide comments and edits within 30 days of receipt, when possible. Prepare a Final Component Completion Report addressing the DWR Grant Manager's comments within 30 days of those comments. The report will be prepared in accordance with DWR's required report formats. All deliverables listed within the Work Plan shall be submitted with or prior to the Final Component Completion Report unless a new deliverable due date was approved by the DWR Grant Manager.

##### Deliverables:

- Component reporting to be included in Quarterly Progress Reports and Invoices
- Draft and Final Component Completion Reports.

#### **(b) Environmental / Engineering / Design**

##### **Task 1: Well Siting**

Determines the best locations for additional monitoring well(s). This task includes geophysical surveys to investigate the inferred clay bed in the western third of the Basin. Site selection will prioritize location(s) near DACs, potential GDEs, perched/shallow aquifers, the mapped cone of depression and outcomes from the geophysical surveys.

##### Deliverables:

- Geophysical survey outcomes
- Map of proposed well locations

##### **Task 2: Well Design & Permitting**

Conduct design activities associated with the monitoring well installation. Acquire any landowner access agreement(s) necessary to install monitoring wells (Task 3) and/or surface water gauges (Task 4) with adequate access for construction and maintenance. Develop and prepare specifications, final design plans, bid communications, contracting, and bid award recommendation. Acquire necessary permits required for the well installation(s) and the surface water gauge(s) installation. Prepare the required CEQA documentation if applicable. Complete a Site Health and Safety Plan to use during the installation processes.

##### Deliverables:

- Written access agreement(s), if applicable
- Final design plans
- Bid document(s), if applicable
- Awarded contract(s) and Notice Proceed, if applicable
- Required permit(s) and environmental documentation
- Site Health and Safety Plan

#### **(c) Implementation / Construction**

##### **Task 3: Well Installation**

Install and develop the monitoring wells identified in Task 2. Photo-document pre-, during, and post-construction activities. Record baseline groundwater levels from the newly installed monitoring wells. Survey well locations and measuring point elevations. Prepare and submit monitoring well logs and Well Completion Reports to the DWR Grant Manager.

Deliverables:

- Well completion report(s)
- Photo documentation included within the quarterly Progress Reports

**Task 4: Surface Water Gauge Installation**

Develop a site schematic for each surface water gauge. Install surface water gauges. Photo-document pre-, during, and post-construction activities. Record baseline measurements from the newly installed gauges.

Deliverables:

- Surface Water Gauge site schematic
- Photo documentation included within the quarterly Progress Reports

**(d) Monitoring / Assessment**

**Task 5: Well Survey and Downhole Video Logging**

Field work associated with surveying up to 35 current RMS wells, and any newly installed monitoring well(s). The well survey will be conducted by a qualified and licensed land surveyor and the horizontal coordinates, vertical reference point elevation, and ground surface elevation will meet the data and reporting standards in Title 23 of the Code of California Regulations Section 352.4 to be fully compliant with DWR's standards for the SGMA Monitoring Network. Conduct downhole video logging of up to 16 RMS wells to determine the screen perforation intervals and total well depth of each well. Well construction information will be updated in appropriate tables of the GSP.

Deliverables:

- Well survey report(s)
- Table of updated well construction data

**Task 6: Water Level Instrumentation**

After the monitoring wells are installed under Task 3 and the wells are surveyed under Task 4, water level monitoring instrumentation will be installed into the wells to measure seasonal and shorter-term water level changes (e.g. irrigation season, rainfall-run off events, etc.).

Deliverables:

- Field sheet(s) and photographs

**Task 7: DMS and Model Update**

This task includes: 1) incorporating data and evaluation results from all other tasks into the Basin DMS, including updated well coordinates, well construction data and wells added to the monitoring networks and 2) updating appropriate model input files to incorporate new RMS well locations and updated well construction data.

Deliverables:

- Table of data added to the Basin DMS
- Table of model files updated

**(e) Engagement / Outreach**

**Task 8: Landowner Outreach and Expansion of Supplemental Well Network**

This task includes: 1) outreach and engagement efforts to landowners within the Basin to improve the inventory of domestic wells in the Basin and to gain access to land and wells to expand the SGMA Representative Monitoring Network and integrate supplemental sites.

Deliverables:

- Outreach materials

**C. Budget** (maximum of 1 point possible)

8. Provide a completed budget summary table using template below.

**Component 2: GROUNDWATER MONITORING IMPROVEMENT PLANNING**

Component 2 serves a need of a DAC, SDAC, Tribe and/or Underrepresented Community?

(check all that apply): ☒DAC, ☒SDAC, ☒Tribe, and/or ☒Underrepresented Community

Budget Categories	Grant Amount
(a) Component Administration	\$100,000
(b) Environmental / Engineering / Design	\$185,000
(c) Implementation / Construction	\$640,000
(d) Monitoring / Assessment	\$195,000
(e) Engagement / Outreach	\$30,000
<b>Total:</b>	<b>\$1,150,000</b>

**D. Schedule**

9. Provide a completed schedule table using template below.

Categories	Start Date	End Date
<b>Component 2: Groundwater Monitoring Improvement Planning</b>		
(a) Component Administration	10/4/2022	4/30/2026
(b) Environmental / Engineering / Design	6/1/2023	6/1/2025
(c) Implementation / Construction	1/1/2024	1/1/2026
(d) Monitoring / Assessment	6/1/2023	4/30/2026
(e) Engagement / Outreach	10/4/2022	4/30/2026

Provide a brief description of the plan for environmental compliance and permitting, if applicable, including the following items and a status of each:

**Expected Environmental Compliance Requirements**

It is not anticipated that the monitoring well or surface water gauge installation(s) will require any environmental compliance documentation associated with California Environmental Quality Act (CEQA) obligations. CEQA provides numerous categories of exemption, including Class 6 for information collection activities that do not result in serious disturbance to an environmental resource.

**Environmental Related Permits/Entitlements**

Sacramento County requires monitoring well installation permits per Sacramento County Code Title 6, Chapter 6.28.030. Well siting will include the GSAs coordinating permanent access agreement(s) with landowner(s) and the Technical Consultant drafting site plan(s). Once access agreement(s) are in place, well installation permit(s) will be obtained from Sacramento County. Well installation permit application(s) will be submitted to Sacramento County at least 14 working days prior to proposed well installation date and will include the permit application, site plan, and Property Owner/Well Driller's authorization letter(s), as appropriate. USA will be called at least two working days, but no more than 14 working days prior to drilling activities. At least 24-hours before completing the well installation, a well inspection appointment for annular seal placement will be made with Sacramento County Environmental Management Department. The Sacramento County inspector will be on-site to observe the annular seal placement and sign off on

the well installation. As required by the Department of Water Resources (DWR), a Well Completion Report for each monitoring well will be submitted to DWR and Sacramento County Environmental Management Department within 60-days of well installation.

Per Fish and Game Code section 1602, the California Department of Fish and Wildlife (CDFW) requires notification before commencing any activity that may affect any river, stream or lake. Actions that may affect rivers, streams and lakes include diverting or obstructing natural flow, changing the bed channel or bank, using of material from, or depositing or disposing of material. Any needed permits from CDFW for the surface water gauge installations will be acquired prior to installation.

*List of Easement/Land Acquisitions*

No land acquisitions are planned. Rights of entry and access agreements will be negotiated with landowners if needed as part of Task 2.

**ATTACHMENT 3**  
**APPLICATION WORK PLAN, BUDGET, AND SCHEDULE**

**Grant Proposal Title:** Cosumnes Subbasin GSP Update and Implementation Project

**Applicant:** Cosumnes Groundwater Authority

**A. General**

**Component 3: Conservation Demonstration Projects**

1. Provide Project or Component Description which must include the following:

**Detailed Component Description: Background**

Agriculture accounts for over 80% of the groundwater use in the Cosumnes Subbasin (Basin). Reductions in groundwater use through water conservation activities (more efficient use of the water applied to existing land uses) are identified in the Cosumnes Groundwater Sustainability Plan (GSP) as projects and management actions (PMAs) that will be implemented during the first five-year phase (Phase 1) of the GSP. The Groundwater Sustainability Agencies (GSAs) plan to develop voluntary water conservation programs and Best Management Practices (BMPs) to increase water use efficiency, decrease demand, and reduce groundwater consumption as these practices can be implemented much sooner than other PMAs (such as repurposing lands and recharge projects). The GSP (*Section 18.2.3 Revenue Generation*) has set a goal for Phase 1 of achieving a net reduction in groundwater consumption of approximately 2,700 acre-feet per year (AFY). The GSP assumes that this goal could be achieved by repurposing a small portion (750 to 1,000 acres) of the high-water cropland in the Basin. Alternatively, a similar saving could be achieved if water conservation measures were widely applied to crops throughout the Basin. This Component will include conducting multiple Water Conservation Demonstration Projects that will identify water use reduction practices and accounting technologies that could be broadly applied to croplands in the Basin.

**Detailed Component Description: Water Conservation Demonstration Projects**

The GSAs have begun to identify willing participants for the demonstration projects by reaching out to landowners and conducting a survey to gauge interest in reducing production costs by decreasing water use (water conservation). The Water Conservation Demonstration Projects will help clarify questions on implementation costs; potential economic impacts on farmers, including the need for compensation and or incentives to inspire voluntary participation; and how to quantify the benefits (measurable water savings) associated with conservation strategies. Water Conservation Demonstration Projects will be conducted to quantify implementation costs (technological instrumentation, land and infrastructure improvements) and benefits (measurable water savings and landowner profitability). The Conservation practices will be site specific and can include, but are not limited to, metering groundwater production and water application, irrigation scheduling strategies, and conservation methods for high water use crops (e.g., pasture). Demonstration project results will be utilized to develop BMPs for inclusion in the GSP to help direct policy decisions that incentivize water savings and guide implementation by participating landowners.

Specifically, the GSAs are interested in evaluating the viability of applying deficit irrigation practices to pastureland by eliminating one irrigation event towards the end of the irrigation season to potentially reduce annual water use by 10%. With guidance from professional Agricultural Advisors, the GSAs will conduct a demonstration project to measure the effects of deficit irrigation on pastureland, quantify the water savings, and evaluate its impact on pasture productivity, species composition, and the nutrient value of the forage. Based on reviews of available studies and discussions with the UC Cooperative Extension office, there is a lack of information to assess potential impacts of deficit irrigation for local conditions in the Basin. To fill this data gap, a demonstration project will be conducted on a local pasture to monitor soil moisture conditions and forage value (quantity and quality) under controlled irrigation conditions.

**Component Goals, Objectives, and Needs**

**Goals.** The goal of the Conservation Demonstration Projects under Component 3 is to identify practices that reduce groundwater pumpage and thus more closely operate the Basin within its sustainable yield.

**Objectives.** The objectives of Component 3 are the following: (1) update maps of current land uses in Basin; (2) conduct continued landowner outreach efforts to assess interest in implementing conservation practices; (3) summarize expected pumping reductions under different conservation practices; (4) estimate economic impacts from conservation practices; (5) screen and rank Basin areas that are candidates for conservation practices; (6) quantify water savings from recommended



conservation practices; (7) develop BMPs to guide conservation efforts; and, (8) identify policies to recommend that can incentivize landowners to consider conservation actions.

Needs. Component 3 is needed to investigate conservation demonstration projects to reduce the demand for groundwater through conservation practices. Table WB-8 of the GSP *“Estimated Sustainable Yield for Selected Time Periods”* indicates that during 1999-2018, average annual estimated pumpage (131,2000 AFY) exceeded sustainable groundwater yield by over 10,000 AFY. Under current development conditions, and 50 years of historical climate, the yield deficit is projected to decrease slightly from 10,000 AFY to 7,400 AFY. During the past 20 years, agriculture has pumped on average about 116,000 AFY of groundwater from the Basin. PMAs described in the GSP therefore recommend pumpage reductions through conservation actions. For example, a 5% increase in water use efficiency can translate into almost 6,000 AFY savings in groundwater, representing almost 80% of the projected storage deficit under current development conditions.

#### Meeting the Component Goals, Objectives, and Needs

The goal of reducing the storage deficit in the Basin will be met with Component 3 by reducing the demand for groundwater. This will be accomplished through improved water use efficiency (conservation). Because water-use changes are undertaken by landowners on a voluntary basis, reliable guidance and BMPs will be developed by filling existing data gaps (current land use maps and water consumption estimates); outreach efforts to landowners, especially those in high priority land use areas; and demonstration projects that confirm economic feasibility and quantify expected water savings benefits.

#### Communities Served, Measurable Objectives, Minimum Thresholds, Plan Implementation Timeline, and Feasibility

Communities Served. Groundwater is the primary source of water for drinking and other domestic needs in the Basin and supports a thriving agricultural economy. Improved water use efficiency (conservation) will help stabilize water levels, which will benefit all beneficial users of groundwater including underrepresented communities (URCs), disadvantaged and severely disadvantaged communities (DACs and SDACs), Tribes, and groundwater dependent ecosystems (GDEs) to ensure all communities are being represented and adequately monitored. The GSAs will continue its active engagement with the public, stakeholders, and landowners in its planning and implementation decisions. Furthermore, as supported through CGA, the GSAs have established and maintained cooperative working relationships with each other, with CGA member districts/agencies, other districts/agencies within the Basin and with neighboring Basins. The GSAs plan to maintain these relationships and expand coordination to other interested parties throughout the implementation of the Basin's PMAs.

Measurable Objectives/Minimum Thresholds. Improved water use efficiency (conservation) in the Basin will help stabilize water levels and progress toward Measurable Objectives (MOs), which will avoid Minimum Thresholds (MTs) and protect against Undesirable Results. As a planning Component, the improved understanding of benefits from conservation practices within the Basin will be integrated into the 2027 GSP, will improve the understanding of impacts on the different beneficial users in the Basin and help guide the next phase of PMA implementation.

Plan Implementation Timeline. Landowner outreach and engagement activities to identify volunteers will be initiated by the GSAs, prior to the grant agreement, with the distribution of a landowner survey. The GSAs plan to continue outreach and develop a list of landowners willing to implement conservation activities on their lands. This way once the funding is awarded and the grant agreement is finalized the GSAs are ahead of the planning tasks and will have sufficient time to get the demonstration studies up and running to have a longer period for data collection. Stakeholder engagement and public outreach activities will be a continuous area of focus during GSP implementation.

Feasibility. Changes in water management practices to conserve water are common throughout agriculture and one of the most readily implementable means to reduce groundwater consumption. Therefore, the completion of Component 3 in accordance with the stated schedule is very feasible.

#### **2. 2B – Planning Project/Components Only:** Description of planning project/component is well-coordinated.

#### Respond to DWR Comments on GSP

DWR has not commented on the GSP, and therefore this Component does not address DWR comments on the GSP.

#### Address Data Gaps

This Component builds on the landowner outreach and engagement surveys and identifies the circumstances under which farmers are motivated to participate in water conservation practices. This Component helps advance activities designated as “Other PMAs” in Section 18.2.4 *Other PMAs* of the GSP in which the details for these projects were insufficient at the time of GSP development to enable the estimation of implementation costs and benefits, even though, as described above, they have the potential to provide signification savings in groundwater consumption throughout the Basin. The GSP notes that these activities may need to be more extensively developed for the five-year update of the GSP, especially if progress lags on larger PMAs. This Component addresses the aforementioned tasks that the GSAs said would be addressed during GSP implementation, along with filling additional data gaps with the resulting data (such as improved consumption estimates). The data developed by this Component therefore fills identified data gaps and facilitates GSP implementation

of PMAs intended to achieve the Sustainability Goal for the Basin “to ensure that groundwater in the Basin continues to be a long-term resource for beneficial users and uses”.

#### Assist in Feasibility of GSP Implementation

As noted above, reduction in groundwater consumption is a principal action during Phase 1 of GSP implementation. Changes in water management practices to conserve water are common throughout agriculture and one of the most readily implementable means to reduce groundwater consumption. Implementation is therefore feasible, and the goal is to achieve a net reduction of 2,700 AFY as described in GSP *Section 18.2.3 Revenue Generation*. The information generated from the Water Conservation Demonstration Projects will identify actions, accounting methods, and landowner incentives to achieve the net reduction goal of 2,700 AFY.

#### 3. Provide a regional and Project/Component map(s).

The Regional Map is Figure 1 in Attachment 4 and the Component Map is Figure 5 in Attachment 4.

#### 4. Explain if the proposed Project or Component will benefit an URC, Tribe or SDAC.

##### Identification of URC(s), Tribe(s), and/or SDAC(s)

Figure 2 in Attachment 4 shows the Basin location relative to mapped URCs based on the DWR’s DAC Mapping Tool and CalEnviroScreen 4.0. The DACs and SDACs shown in Figure 2 include Census tracts identified as:

- SDAC: GEOID20: 06067009503 with a median household income (MHI) of \$41,193;
- DAC: GEOID20: 06067009504 with a MHI of \$53,162;
- DAC: GEOID20: 06067009501 with a MHI of \$59,625; and
- DAC: GEOID20: 06005000303 with a MHI of \$58,958.

Portions of the City of Galt and Sacramento County GSAs are considered SDACs and DACs. Portions of GID and ACGMA GSAs are considered DACs.

The Basin is home to several Native American tribal communities: (1) Wilton Rancheria tribe located in Sacramento County in the northwestern portion of the Basin, (2) the Buena Vista Rancheria of Me-Wuk Indians tribe in Amador County in the eastern portion of the Basin, and (3) the lone Band of Miwok Indians tribe also located in Amador County.

##### Benefits to URC, Tribe or SDAC

Benefits of Component 3 are expected to be distributed Basin-wide by contributing to the sustainability of the groundwater basin and the stabilization of the groundwater table, and therefore will benefit all URCs. By land area, 1% of the Basin is in a SDAC and 26% of the Basin is in a DAC (Figure 2). The identified SDACs represent 6% of the population in the Basin, or about 3,000 people. The identified DACs represent 29% of the population in the Basin, or about 14,000 people.

The Buena Vista Rancheria of Me-Wuk Indians tribe relies on groundwater as their water supply. The Wilton Rancheria tribal lands are located adjacent to the Cosumnes River. The Wilton Rancheria tribe mission statement states, “The Department of Environmental Resource shall assess, conserve, monitor, preserve, protect, and restore tribal resources to enhance the environment within the Tribe’s Territory.” The Cosumnes River is within the Tribe’s territory and is a valuable resource to them. The lone Band of Miwok Indians is a public water supplier within the basin and has at least two groundwater wells. By contributing to groundwater sustainability, the Component will support the water needs of these tribes.

##### Amount of Grant Funding that will Benefit Tribe, URC, and/or SDAC

Benefits of Component 3 are expected to be distributed Basin-wide by contributing to the sustainability of the groundwater basin and the stabilization of the groundwater table, so approximately \$135,442 of the project budget will benefit the URCs including DACs and SDACs if calculated on a per-acre basis or \$173,354 on a population basis.

#### 5. Describe if the proposed Project or Component will positively impact issues associated with small water systems or private shallow domestic wells (groundwater contamination vulnerability, drawdown, etc.).

From *Section 2 Sustainability Goal*, of the GSP, “The Sustainability Goal of the Cosumnes Subbasin is to ensure that groundwater...continues to be a long-term resource for beneficial users and uses including urban, domestic, agricultural, industrial, environmental, and others.” *Section 14.1 Undesirable Results for Chronic Lowering of Groundwater Levels*, of the GSP states that “Significant and Unreasonable effects associated with Undesirable Results occur when the number of completely dewatered domestic wells exceeds the assumed natural well replacement rate projected to occur over the 20-year implementation horizon.” Therefore, the overall goal of the GSP is aimed at positively impacting small water systems (PM Mutual Water Company and Cosumnes River Indian Association identified in Figure 3 in Attachment 4) and protecting the shallower private domestic wells (Figure 3 in Attachment 4).

##### Justification from Domestic Well Census and Water System Maps

Figure 3 in Attachment 4 shows the location of the domestic wells, small water systems and public water systems within the Basin. GSP *Section 5.1.5 Well Density per Square Mile*, reports that there are 2,258 domestic wells in the Basin, far more

than the number of production (433) or public (23) wells in the Basin. Stable water levels ensure groundwater accessibility to existing wells and protect against pump and well failures. Domestic wells are typically the most vulnerable to water levels declining below the top of well screen because they are often drilled shallower due to lower water use requirements and financial constraints. This Component will demonstrate the benefits of implementing water conservation practices that can be implemented across the Basin to ensure a reliable water supply for all users. Additionally, under this Component, the GSAs will ensure that stakeholder and outreach engagement activities include protocols and venues accessible to domestic well users and small water systems in the Basin and suitable for their continued engagement and inclusion.

*Addresses Needs of the State Water Board's SAFER Program*

The Component's contribution to the stability of groundwater will also help address the needs of the Safe and Affordable Fund for Equity and Resilience (SAFER) program. SAFER prioritizes funding based on a 2022 Drinking Water Needs Assessment. Maps that accompany the 2022 assessment show that areas around the City of Galt are at risk for water shortage issues and that areas south of Sloughhouse and near Lone, and in the southern portion of Amador County are potentially at risk for water shortage issues, as shown in Figure 3 in Attachment 4. In addition, areas near Twin Cities, south of Sloughhouse, and north of Lone are at risk for water quality issue.

6. Describe how the proposed Project or Component addresses the Human Right to Water.

As noted in the response to question 5, above, the component will contribute to the sustainability of the groundwater basin in fulfillment of the GSP sustainability goal. This will in turn meet the state policy expressed in Water Code Section 106.3 that "every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." Furthermore, the State Water Board adopted a resolution in February 2016 stating in part that it would work "to ensure proper water resource allocation and efficient use, for the benefit of present and future generations." Water conservation practices focus on increasing water-use efficiency with the purpose of stabilizing groundwater levels and groundwater storage. The stabilization of the groundwater table will contribute to this goal by helping sustain the estimated 2,258 domestic wells in the Basin. Under this Component, the GSAs will continue its ongoing GSP implementation activities to operate the Basin sustainably within the defined Sustainable Yield and to prevent Undesirable Results, thereby preserving the Human Right to Water.

## PROJECT/COMPONENT DETAILS

### B. Scope of Work and Deliverables

7. Include in the Work Plan a complete description of all tasks that will be completed as part of this Component.

#### (a) Component Administration

##### **Task 1: Project Management**

Prepare reports detailing work completed on the Component per DWR's format requirements for inclusion in Project Quarterly Progress Reports. Sufficient information will be included for the DWR Grant Manager to understand and review backup documentation submitted with invoices. Invoices will accompany the reports with backup documentation by budget category and task.

Prepare the Draft Component Completion Report and submit it to the DWR Grant Manager for comment and review 90 days before the end date for this Component. DWR's Grant Manager will review the Draft Component Completion Report and provide comments and edits within 30 days of receipt, when possible. Prepare a Final Component Completion Report addressing the DWR Grant Manager's comments within 30 days of those comments. The report will be prepared in accordance with DWR's required report formats. All deliverables listed within the Work Plan shall be submitted with or prior to the Final Component Completion Report unless a new deliverable due date was approved by the DWR Grant Manager.

##### Deliverables:

- Component reporting to be included in Quarterly Progress Reports and Invoices
- Draft and Final Component Completion Reports.

#### (b) Environmental / Engineering / Design

##### **Task 2: Update Land Use**

Update the current land use dataset for use in identifying farms with high-water-use crops and characterize all land uses within the Basin. The updated datasets will be presented in tables and map.

##### Deliverables:

- Maps of updated land use
- Tables summarizing updated land use dataset

##### **Task 3: Identify, Rank, Select and Design Conservation Demonstration Projects**

Identify sites of willing landowners. Rank potential sites based on soil characteristics, land uses and crop types, water consumption, irrigation methods and current water management practices, and overall fitness for testing potential technologies and actions. A minimum of 3 sites will be selected to secure access for site inspections and project implementation. The site inspections will identify existing infrastructure, identify recommended site modifications, and assess the feasibility of recommended site-specific management practices. Upon satisfactory completion of the site assessments, demonstration projects will be designed and implemented at the site.

##### Deliverables:

- Maps of site locations
- Written access agreements
- Demonstration site designs and plan

##### **Task 4: Environmental Compliance**

File CEQA exemptions for demonstration project activities with State Clearinghouse, as needed.

##### Deliverables:

- CEQA exemption, as needed.

#### (c) Implementation / Construction

##### **Task 5: Construct Demonstration Project Infrastructure**

Construct any needed infrastructure at the Demonstration Sites (e.g., weirs, field modifications, supply and return ditch modifications, etc.). Conduct an inspection of the completed infrastructure, as needed, by a licensed

professional to ensure the infrastructure was constructed per design plans and specifications and that the infrastructure will provide the benefits claimed. Photo-document pre-, during, and post-construction activities.

Deliverables:

- Description of infrastructure plans for each Demonstration Project
- Photo documentation included with the quarterly Progress Reports

**Task 6: Install Monitoring Equipment**

Locate, design & construct necessary monitoring equipment to quantify benefits (e.g., meters, weather stations, sampling stations, soil moisture sensors, etc.) at the Demonstration Sites. Conduct an inspection of the completed monitoring equipment by a licensed professional to ensure the monitoring equipment was constructed, installed, and calibrated correctly. Photo-document pre-, during, and post-construction activities

Deliverables:

- Monitoring plan for each Demonstration Project
- Photo documentation included with the quarterly Progress Reports

**(d) Monitoring / Assessment**

**Task 7: Develop BMPs**

Develop BMP documents for the selected Demonstration Sites following sufficient collection of data and analyses.

Deliverables:

- BMP documents

**Task 8: DMS and Numerical Model Update**

This task includes: 1) incorporating data and evaluation results from all other tasks into the Basin DMS and 2) updating appropriate model input files to incorporate new data.

Deliverables:

- Table of data added to the Basin DMS
- Table of model files updated

**(e): Engagement / Outreach**

**Task 9: Stakeholder Engagement and Public Outreach**

Conduct outreach to landowners within the subbasin to identify parties interested in participating in conservation demonstration projects, sharing of preliminary results, provide up-to-date status reports and education.

Deliverables:

- Outreach materials

**C. Budget** (maximum of 1 point possible)

Complete the Budget Summary Table using the template provided (below). You must also include a ranking system using the template provided by the SGM Grant Program. The ranking table will not be scored, but will be used when developing the draft and final award list. You may use a maximum of 2-pages using Arial, 10-point type font, to justify the budgets provided.

8. Provide a completed budget summary table using template below.

**Component 3: CONSERVATION DEMONSTRATION PROJECTS**

Component 4 serves a need of a DAC, SDAC, Tribe and/or Underrepresented Community?

(check all that apply): ☒DAC, ☒SDAC, ☒Tribe, and/or ☒Underrepresented Community

Budget Categories	Grant Amount
(a) Component Administration	\$45,000
(b) Environmental / Engineering / Design	\$130,000
(c) Implementation / Construction	\$205,000
(d) Monitoring / Assessment	\$96,000
(e) Engagement / Outreach	\$24,000
<b>Total:</b>	<b>\$500,000</b>

**D. Schedule**

Complete the Schedule Table using the template provided (below). The Schedule Table must not exceed a TOTAL of 2 pages using a minimum Arial, 10-point type font.

9. Provide a completed schedule table using template below.

Categories	Start Date	End Date
<b>Component 4: CONSERVATION DEMONSTRATION PROJECTS</b>	<b>October 4, 2022</b>	<b>April 30, 2026</b>
(a) Component Administration	10/4/2022	4/30/2026
(b) Environmental / Engineering / Design	6/1/2023	6/1/2025
(c) Implementation / Construction	6/1/2023	6/1/2025
(d) Monitoring / Assessment	6/1/2024	4/30/2026
(e) Engagement / Outreach	10/4/2022	4/30/2026

Provide a brief description of the plan for environmental compliance and permitting, if applicable, including the following items and a status of each:

**Expected Environmental Compliance Requirements**

It is not anticipated that implementing any conservation practices at the Demonstration Project sites will require any environmental compliance documentation associated with California Environmental Quality Act (CEQA) obligations. CEQA provides numerous categories of exemption, including Class 6 for information collection activities that do not result in serious disturbance to an environmental resource.

**Environmental Related Permits/Entitlements**

It's not expected that any environmental related permits or entitlements will be needed under this Component.

List of Easement/Land Acquisitions

No land acquisitions are planned. Rights of entry and access agreements will be negotiated with landowners if needed as part of Task 3.

**ATTACHMENT 3**  
**APPLICATION WORK PLAN, BUDGET, AND SCHEDULE**

**Grant Proposal Title:** Cosumnes Subbasin GSP Update and Implementation Project

**Applicant:** Cosumnes Groundwater Authority

**A. General**

**Component 4: Groundwater Sustainability Plan (GSP) Reporting, Data Gap Filling, and SGMA Compliance Activities**

1. Provide Project or Component Description which must include the following:

**Detailed Component Description**

The Cosumnes Subbasin (herein referred to as the “Basin”) is a medium priority groundwater basin located in Sacramento and Amador Counties and is required to comply with the Sustainable Groundwater Management Act (SGMA). As shown in **Figure 1** in Attachment 4, the Basin is fully covered by seven Groundwater Sustainability Agencies (GSAs), with each being the exclusive GSA in its portion of the Basin. The GSAs are: (1) City of Galt GSA; (2) Galt Irrigation District (GID) GSA; (3) Clay Water District GSA; (4) Sloughhouse Resource Conservation District (SRCD) GSA; (5) Omochochumne-Hartnell Water District (OHWD) GSA; (6) Amador County Groundwater Management Authority (ACGMA) GSA; and (7) Sacramento County GSA. Through the formation and administration of the Cosumnes Groundwater Authority (herein referred to as “CGA”), the seven GSAs are working together to implement one coordinated Groundwater Sustainability Plan (GSP) for the Basin. Therefore, although the applicant for this Grant is CGA, this Component represents the goals, objectives and needs identified by all seven GSAs.

The GSAs adopted a GSP and submitted to the California Department of Water Resources (DWR) in January 2022. Per Title 23 of the California Code of Regulations (23 CCR) § 355.2(e), DWR has two years, or until January 2024, to evaluate and provide a written assessment of the Cosumnes GSP. While DWR evaluation is underway, the GSAs will proceed with GSP implementation, including filling key data gaps identified within the GSP. Furthermore, 23 CCR § 356.4 requires the GSAs to evaluate their GSP at least every five years and provide a written assessment to DWR describing how the implementation of the GSP and its Projects and Management Actions (PMAs) are meeting the Sustainability Goal of the Basin. Therefore, the GSAs are required to submit their first five-year GSP evaluation and update by 1 January 2027 (2027 GSP).

Component 4 will assist and enable the GSAs to improve their ongoing GSP implementation, including data gap filling, reporting, and SGMA compliance, including:

- Responding to DWR’s forthcoming evaluation of the 2022 GSP;
- Data gap filling efforts: groundwater dependent ecosystems (GDEs) analyses, and improving the Basin’s well inventory; and
- Preparation of the 2027 GSP in compliance with five-year evaluation requirements, including an update and re-calibration of the numerical model.

**Component Goals, Objectives, Needs and How They will be Met**

**Goal.** The goal of Component 4 is for the GSAs to fully comply with SGMA requirements and to operate the Basin within its Sustainable Yield, avoid Undesirable Results, fill data gaps, and provide a clear framework for demonstrating ongoing Basin sustainability.

**Objectives.** As a planning component, the objectives of Component 4 are to support continued implementation and compliance activities, stakeholder and public outreach and engagement, conducting the five-year evaluation of the GSP, addressing forthcoming DWR recommendations and comments made on the 2022 GSP, and undertaking the corresponding data gap filling efforts and technical studies needed to accomplish the abovementioned activities.

**Needs.** Component 4 supports the GSAs’ needs to satisfy all reporting and other compliance activities required by SGMA. These needs will be met by (1) integration of the required data collected by the GSAs into the Basin’s Data Management System (DMS) (such as data from the SGMA Monitoring Network monitoring, surface water deliveries, metered groundwater use where available, and stream diversions); (2) the results of this Component will be used in coordination with the regional update results of the CoSANA model (also referred to as “numerical model”; CoSANA model was developed for use in three adjoining subbasins: Cosumnes, South American, and North American) and to better refine the Cosumnes region of the model; (3) refining the Basin-wide estimated groundwater demands by obtaining remote sensing evapotranspiration data



and integrating it into the numerical model; (4) updating the Cosumnes region of the numerical model to incorporate data gap filling efforts and re-calibrating to recently collected data, and (5) preparing the 2027 GSP.

Additionally, Component 4 supports the GSAs' needs to fill key data gaps. Key data gaps identified in the GSP in which the GSAs aim to fill include:

- Uncertainty about well use (i.e., domestic, irrigation, public supply, industrial) and status (i.e., whether or not wells are active). Uncertainty regarding well use and status limits the analyses the GSA can conduct when assessing sector-specific impacts (e.g., when assessing impacts to domestic well users) and introduces uncertainty within the tools the GSA are relying upon to manage Basin groundwater conditions (e.g., the numerical model and the domestic well impact analysis). Maintaining an accurate accounting of existing well use and status is therefore critical for ongoing Basin management and GSP compliance to ensure all beneficial users of groundwater are being identified. This need will be met by conducting a well census in which wells documented within the Basin's Data Management System (DMS) and identified in DWR's Online System of Well Completion Reports (OSWCR) database are further investigated and attempted to be located. The improved well inventory will document current well use and status, or if the well cannot be located it will be identified as abandoned. Additionally, wells that are found during the census that are not contained with the Basin's DMS will be added.
- Uncertainty in conditions near GDEs. As identified in the GSP, ongoing data collection to evaluate the degree of hydraulic connection between the Principal Aquifer and shallow water-bearing zones will be critical in refining the definition of Undesirable Results, preliminary Minimum Thresholds (MTs) and Measurable Objectives (MOs). This need will be met by continued high-frequency water level data collection from the three shallow monitoring wells (wells: RMW-ISW2, RMW-ISW3, and RMW-ISW6) near the Cosumnes River. Data will be used to assess GDE response to Principal Aquifer water level conditions. To better understand environmental beneficial users of groundwater specifically around these GDE units, an updated field mapping of the GDE species and conditions will be cataloged and remote sensing data (e.g., GDE Pulse) will be assessed. Additionally, valley oak (*Quercus lobata*), an endemic species to California and dominant vegetation mapped across the Basin using DWR's Natural Communities Commonly Associated with Groundwater (NCCAG) Dataset, will be analyzed in the Basin to quantify ecosystem benefits and impacts using satellite imagery and groundwater level data. The results will not only benefit CGA's GSP development and implementation but will also be useful to other Central Valley groundwater basins, since valley oak is a prevalent vegetation mapped in the NCCAG dataset.

#### Communities Served, Measurable Objectives, Minimum Thresholds, Plan Implementation Timeline, and Feasibility

**Communities Served.** Groundwater is the primary source of water for drinking and other domestic needs in the Basin and supports a thriving agricultural economy. Component 4 will serve the entire Basin, including disadvantaged communities (DACs) and beneficial users of groundwater (e.g., the domestic users and small water systems mentioned below as well as irrigated agriculture and GDEs). The GSAs will continue their active engagement with the public, stakeholders, and landowners in planning and implementation decisions. Furthermore, as supported through CGA, the GSAs have established and maintained cooperative working relationships with each other, with CGA member districts/agencies, other districts/agencies within the Basin and with neighboring Basins. The GSAs plan to maintain these relationships and expand coordination to other interested parties through increased outreach and engagement activities.

**Measurable Objectives/Minimum Thresholds.** The modeling and data gap filling activities will feed directly into the 2027 GSP and will improve the understanding of the impacts of the Basin's operations and defined Sustainable Management Criteria (SMC) on different beneficial users. The preliminary MOs and MTs for the Depletions of Interconnected Surface Water Sustainability Indicator will be revisited based on the GDEs data analyses. SMCs for Chronic Lowering of Groundwater Levels will also be revisited based on the new data added to the Basin's DMS and the re-calibrated numerical model.

**Plan Implementation Timeline.** While the 2027 GSP update is due after the conclusion of the SGMA Implementation Round 2 Grant, the GSAs plans to accomplish most of the needed analyses, updates and improvements, and major modifications and revisions within the Grant timeline (by the end of April 2026), including all of the work funded through this grant. All data and information gathered and processed up to the end of WY 2025 will be used to update and enhance the numerical model and produce a draft 2027 GSP. The potential modifications to address DWR comments will be conducted according to their respective regulatory timelines during the life of the grant. Stakeholder engagement and public outreach activities will be a continuous area of focus during GSP implementation.

**Feasibility.** The GSAs have successfully met all SGMA-required deadlines and completed all prior SGMA-required documents in accordance with the statutory deadlines. As such, completion of Component 4 in accordance with the stated schedule is very feasible. All grant-funded work will be completed by the end of the grant term on April 30, 2026.

2. **2B – Planning Project/Components Only:** Description of planning project/component is well-coordinated.

### Respond to DWR Comments on GSP

It is anticipated that DWR will evaluate the 2022 GSP, per the requirements of 23 CCR § 355.6, within two years of the GSP submittal (by January 2024) and issue a written assessment. At a minimum, DWR's assessment will likely include recommended actions. Under this Component, the GSAs will respond to any potential DWR requests and comments in a timely, organized, and adequate manner, including coordination calls with DWR representatives and developing written responses to any possible comments on the 2022 GSP provided by DWR. In the case of a finding of inadequacy, the GSAs will update their implementation plan and modify the 2027 GSP to comprehensively respond to possible deficiencies outlined in DWR's review of the 2022 GSP within the 180-day period, per 23 CCR § 355.2.

### Address Data Gaps

Under Component 4, the GSAs will work towards filling significant data gaps identified in the GSP including well status and use and conditions near GDEs. As discussed above, these key data gap filling efforts serve multiple purposes: to update and ensure all beneficial groundwater users have been identified; to better understand and quantify the Basin's groundwater system, specifically regarding surface water and GDEs; and to provide the GSAs with the data to better inform their planning decisions, particularly regarding the development of SMCs for the Depletions of Interconnected Surface Water and Chronic Lowering of Groundwater Levels Sustainability Indicators.

### Assist in Feasibility of GSP Implementation

Component 4 will assist the GSAs with conducting regulatory required reporting and compliance activities in a timely and comprehensive manner, which in turn will lead to increased feasibility of successful implementation of the GSP and maintaining the sustainable management of the Basin. Specifically, stakeholder outreach and public engagement supported under this component will facilitate improved common understanding of conditions and resources and maintain trust in the management of the Basin. It will also increase GSAs' ability to serve all beneficial users of the Basin, as outlined in the GSP, including beneficial uses and users that are more difficult to reach, include, and serve due to socio-economic or other factors.

3. Provide a regional and Project/Component map(s).

The Regional Map is Figure 1 in Attachment 4 and the Component Map is Figure 6 in Attachment 4.

4. Explain if the proposed Project or Component will benefit an URC, Tribe or SDAC.

### Identification of URC(s), Tribe(s), and/or SDAC(s)

Figure 2 in Attachment 4 shows the Basin location relative to mapped URCs based on the DWR's DAC Mapping Tool and CalEnviroScreen 4.0. The DACs and SDACs shown in Figure 2 include Census tracts identified as:

- SDAC: GEOID20: 06067009503 with a median household income (MHI) of \$41,193;
- DAC: GEOID20: 06067009504 with a MHI of \$53,162;
- DAC: GEOID20: 06067009501 with a MHI of \$59,625; and
- DAC: GEOID20: 06005000303 with a MHI of \$58,958.

Portions of the City of Galt and Sacramento County GSAs are considered SDACs and DACs. Portions of GID and ACGMA GSAs are considered DACs.

The Basin is home to several Native American tribal communities: (1) Wilton Rancheria tribe located in Sacramento County in the northwestern portion of the Basin, (2) the Buena Vista Rancheria of Me-Wuk Indians tribe in Amador County in the eastern portion of the Basin, and (3) the Lone Band of Miwok Indians tribe also located in Amador County.

### Benefits to URC, Tribe or SDAC

Benefits of Component 4 are expected to be distributed Basin-wide by contributing to the sustainability of the groundwater basin and the stabilization of the groundwater table, and therefore will benefit all URCs. By land area, 1% of the Basin is in a SDAC and 26% of the Basin is in a DAC (Figure 2). The identified SDACs represent 6% of the population in the Basin, or about 3,000 people. The identified DACs represent 29% of the population in the Basin, or about 14,000 people.

The Buena Vista Rancheria of Me-Wuk Indians tribe relies on groundwater as their water supply. The Wilton Rancheria tribal lands are located adjacent to the Cosumnes River. The Wilton Rancheria tribe mission statement states, "The Department of Environmental Resource shall assess, conserve, monitor, preserve, protect, and restore tribal resources to enhance the environment within the Tribe's Territory." The Cosumnes River is within the Tribe's territory and is a valuable resource to them. The Lone Band of Miwok Indians is a public water supplier within the basin and has at least two groundwater wells. By contributing to groundwater sustainability, the Component will support the water needs of these tribes.

### Amount of Grant Funding that will Benefit Tribe, URC, and/or SDAC

Benefits of Component 4 are expected to be distributed Basin-wide by contributing to the sustainability of the groundwater basin and the stabilization of the groundwater table, so approximately \$162,530 of the project budget will benefit the URCs including DACs and SDACs if calculated on a per-acre basis or \$208,025 on a population basis.

5. Describe if the proposed Project or Component will positively impact issues associated with small water systems or private shallow domestic wells (groundwater contamination vulnerability, drawdown, etc.).

From *Section 2 Sustainability Goal*, of the GSP, “The Sustainability Goal of the Cosumnes Subbasin is to ensure that groundwater...continues to be a long-term resource for beneficial users and uses including urban, domestic, agricultural, industrial, environmental, and others.” *Section 14.1 Undesirable Results for Chronic Lowering of Groundwater Levels*, of the GSP states that “Significant and Unreasonable effects associated with Undesirable Results occur when the number of completely dewatered domestic wells exceeds the assumed natural well replacement rate projected to occur over the 20-year implementation horizon.” Therefore, the overall goal of the GSP is aimed at positively impacting small water systems (PM Mutual Water Company and Cosumnes River Indian Association identified in Figure 3 in Attachment 4) and protecting the shallower private domestic wells (Figure 3 in Attachment 4). The improved well inventory from Component 4 will be used to update the domestic well impact analysis which is used to evaluate the potential for well dewatering that could occur at the chosen MTs to ensure that conditions associated with the MTs would not constitute significant and unreasonable effects to this sensitive beneficial use.

*Justification from Domestic Well Census and Water System Maps*

Figure 3 in Attachment 4 shows the location of the domestic wells, small water systems and public water systems within the Basin. GSP *Section 5.1.5 Well Density per Square Mile*, reports that there are 2,258 domestic wells in the Basin, far more than the number of production (433) or public (23) wells in the Basin. Stable water levels ensure groundwater accessibility to existing wells and protect against pump and well failures. Domestic wells are typically the most vulnerable to water levels declining below the top of well screen because they are often drilled shallower due to lower water use requirements and financial constraints. This Component will improve the data and analyses to confirm the GSP is working towards the Basin’s Sustainability Goal and ensure a reliable water supply for all users. Additionally under this Component, the GSAs will ensure that stakeholder and outreach engagement activities include protocols and venues accessible to domestic well users and small water systems in the Basin and suitable for their continued engagement and inclusion.

*Addresses Needs of the State Water Board’s SAFER Program*

The Component’s contribution to the stability of groundwater will also help address the needs of the Safe and Affordable Fund for Equity and Resilience (SAFER) program. SAFER prioritizes funding based on a 2022 Drinking Water Needs Assessment. Maps that accompany the 2022 assessment show that areas around the City of Galt are at risk for water shortage issues and that areas south of Sloughhouse and near Lone, and in the southern portion of Amador County are potentially at risk for water shortage issues, as shown in Figure 3 in Attachment 4. In addition, areas near Twin Cities, south of Sloughhouse, and north of Lone are at risk for water quality issue.

6. Describe how the proposed Project or Component addresses the Human Right to Water.

As noted in the response to question 5, above, the component will contribute to the sustainability of the groundwater basin in fulfillment of the GSP sustainability goal. This will in turn meet the state policy expressed in Water Code Section 106.3 that “every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.” Furthermore, the State Water Board adopted a resolution in February 2016 stating in part that it would work “to ensure proper water resource allocation and efficient use, for the benefit of present and future generations.” Under this Component, the GSAs will continue their ongoing GSP implementation activities to operate the Basin sustainably within the defined Sustainable Yield and to prevent Undesirable Results, thereby preserving the Human Right to Water.

## PROJECT/COMPONENT DETAILS

### B. Scope of Work and Deliverables

7. Include in the Work Plan a complete description of all tasks that will be completed as part of this Component.

#### (a) Component Administration

##### Task 1: Project Management

Prepare reports detailing work completed on the Component per DWR's format requirements for inclusion in Project Quarterly Progress Reports. Sufficient information will be included for the DWR Grant Manager to understand and review backup documentation submitted with invoices. Invoices will accompany the reports with backup documentation by budget category and task.

Prepare the Draft Component Completion Report and submit it to the DWR Grant Manager for comment and review 90 days before the end date for this Component. DWR's Grant Manager will review the Draft Component Completion Report and provide comments and edits within 30 days of receipt, when possible. Prepare a Final Component Completion Report addressing the DWR Grant Manager's comments within 30 days of those comments. The report will be prepared in accordance with DWR's required report formats. All deliverables listed within the Work Plan shall be submitted with or prior to the Final Component Completion Report unless a new deliverable due date was approved by the DWR Grant Manager.

##### Deliverables:

- Component reporting to be included in Quarterly Progress Reports and Invoices
- Draft and Final Component Completion Reports.

#### (b) Environmental / Engineering / Design

Not applicable to this Component.

#### (c) Implementation / Construction

Not applicable to this Component.

#### (d) Monitoring / Assessment

##### Task 2: Update Well Inventory

Conduct well census to confirm location, status, and construction details of wells in the Basin.

##### Deliverables:

- Summary of well census

##### Task 3: Groundwater Dependent Ecosystems (GDEs) Assessment and Monitoring

Conduct an additional assessment of potential GDEs in the basin where data gaps currently exist. Perform aerial imagery and field mapping to close data gaps and confirm status of potential GDEs and use the GDE Pulse tool to evaluate. Analyze water level data from monitoring wells and pumping well records. Determine if water levels in the shallow monitoring wells may be affected by nearby pumping from the Principal Aquifer. Determine if shallow monitoring wells should be integrated into the GSP monitoring network. Detail results in an Appendix for the 2027 GSP (that will be prepared during the grant term by April 30, 2026).

##### Deliverables:

- Representative maps showing distribution of confirmed or high-likely GDEs
- Draft 2027 GSP Appendix – Report summarizing Valley Oak GDE findings

##### Task 4: Numerical Model Update and Re-Calibration

Update the CoSANA numerical model parameter values and calibration using new data to better represent the aquifer's water budget to improve understanding of underground geology, provide future refinements to the hydrogeologic conceptual model, and help identify potential areas for recharge. Incorporate data from DWR's airborne electromagnetic (AEM) surveys to integrate basin-specific and cross-basin geophysical data. Address potential model limitations identified in the GSP, including the need for additional hydrogeological conceptualization, and incorporating future data into model calibration.

##### Deliverables:

- Presentation materials on the numerical model update included in CGA Board of Directors Meeting packets

#### **Task 5: Modify GSP in Response to DWR Determination**

Under this task, the GSAs will modify the 2022 GSP, as applicable, in response to DWR's review and evaluation of the Plan. If DWR approves the GSP with recommendations, the GSAs will address and consider those recommendations in implementing the 2022 GSP. If for some reason the 2022 GSP is determined incomplete or inadequate, the GSAs will provide a comprehensive response and reasonable modifications to the Plan to successfully address DWR's concerns and will submit a modified plan within 180 days. In both cases, the GSAs will include coordination and technical support to respond to any potential DWR requests in a timely, organized, and adequate manner, including coordination calls with DWR representatives and developing written responses to any possible comments on the 2022 GSP provided by DWR.

##### Deliverables:

- As-needed written responses to any potential comments on the 2022 GSP provided by DWR
- Revised 2022 Plan, if needed

#### **Task 6: Five-Year GSP Update**

Assess progress in the years after the adoption of the Cosumnes Subbasin GSP and use the best available information and science to prepare the 2027 5-year amendment to the Cosumnes Subbasin GSP. The amendment will be updated to reflect progress towards achieving the Cosumnes Subbasin 2042 sustainability goals, project implementation, and SGMA regulations compliance.

##### Deliverables:

- Draft Five-Year GSP Update as of the end of the grant term in April 2026

#### **(e): Engagement / Outreach**

##### **Task 7: Stakeholder Engagement and Public Outreach**

Under this task, the GSAs will continue outreach and engagement efforts to the stakeholders, interested parties, and general public according to the Outreach and Engagement Plan. The GSAs will provide direct and specific engagement with key stakeholders in the form of workshops or education seminars.

##### Deliverables:

- Meeting agenda, minutes, and materials.

### C. Budget (maximum of 1 point possible)

Complete the Budget Summary Table using the template provided (below). You must also include a ranking system using the template provided by the SGM Grant Program. The ranking table will not be scored, but will be used when developing the draft and final award list. You may use a maximum of 2-pages using Arial, 10-point type font, to justify the budgets provided.

8. Provide a completed budget summary table using template below.

#### Component 4: GROUNDWATER SUSTAINABILITY PLAN (GSP) REPORTING, DATA GAP FILLING, AND SGMA COMPLIANCE ACTIVITIES

Component 4 serves a need of a DAC, SDAC, Tribe and/or Underrepresented Community?

(check all that apply): ☒DAC, ☒SDAC, ☒Tribe, and/or ☒Underrepresented Community

Budget Categories	Grant Amount
(a) Component Administration	\$50,000
(b) Environmental / Engineering / Design	\$0
(c) Implementation / Construction	\$0
(d) Monitoring / Assessment	\$500,000
(e) Engagement / Outreach	\$50,000
<b>Total:</b>	<b>\$600,000</b>

### D. Schedule

Complete the Schedule Table using the template provided (below). The Schedule Table must not exceed a TOTAL of 2 pages using a minimum Arial, 10-point type font.

9. Provide a completed schedule table using template below.

Categories	Start Date	End Date
<b>Component 4: GROUNDWATER SUSTAINABILITY PLAN (GSP) REPORTING, DATA GAP FILLING, AND SGMA COMPLIANCE ACTIVITIES</b>	<b>October 4, 2022</b>	<b>April 30, 2026</b>
(a) Component Administration	10/4/2022	4/30/2026
(b) Environmental / Engineering / Design	--	--
(c) Implementation / Construction	--	--
(d) Monitoring / Assessment	10/4/2022	4/30/2026
(e) Engagement / Outreach	10/4/2022	4/30/2026

Provide a brief description of the plan for environmental compliance and permitting, if applicable, including the following items and a status of each:

This component is believed to be exempt from the California Environmental Quality Act (CEQA) under Categorical Exemption Class 6 (CEQA Guidelines Section 15306, Information Collection). No land acquisitions are planned. Temporary rights of entry will be negotiated with landowner if needed as part of Tasks 2 and 3.

## ATTACHMENT 3

### APPLICATION WORK PLAN, BUDGET, AND SCHEDULE – RECHARGE PILOT STUDIES PLANNING

Grant Proposal Title: Cosumnes Subbasin GSP Update and Implementation Project

Applicant: Cosumnes Groundwater Authority

#### A. General

##### Component 5: Recharge Pilot Studies Planning

1. Provide Project or Component Description which must include the following:

##### Detailed Component Description: Component Overview

The Cosumnes Subbasin (herein referred to as the “Basin”) Groundwater Sustainability Plan (GSP) considered several Projects and Management Actions (PMAs) that increase groundwater recharge in *Section 18.2.4 Other PMAs*. These projects rely on surface water originating as stormwater flows to the basin to augment groundwater recharge, but at the time of GSP development project concepts were not developed enough to estimate costs and benefits. Since GSP submittal, the Groundwater Sustainability Agencies (GSAs) have used the numerical model utilized for the GSP to complete a preliminary analysis of potential water volumes available to projects that capture and infiltrate stormwater flows in surface drainages or from agricultural fields. The Recharge Pilot Studies will focus on two types of recharge studies: 1) Local Diversion Projects and 2) On-Farm Stormwater Capture Projects.

##### Detailed Component Description: Recharge Study Type 1, Local Diversion Projects

Using the numerical model, a preliminary analysis determined the amount of water potentially available for diversion from Badger, Laguna, Hadselville, Jackson, and Dry creeks. The analysis concluded that from Water Year 1990 through 2021, the amount of available water ranged from 3 to 73,000 acre-feet per year (AFY) with an average annual amount of 21,300 AFY; approximately 85% of the available water is in Dry and Laguna Creeks. Much of the flow cannot be captured and stored quickly enough without significant land acquisition and infrastructure investments, and on average it might be possible to divert up to 3,600 AFY for filtration.

The first task is to locate potential recharge sites along creeks in the Basin. The goal will be to systematically screen the creek corridors to identify suitable recharge sites. Site selection will consider location, surface/subsurface hydrogeologic conditions, and existing infrastructure to measure groundwater level changes (wells), divert runoff, convey the water from the creeks, or provide opportunities for multi-benefit floodplain rehabilitation through levee modifications or topographic modification. The sites must also have access to extraction wells so that groundwater can be used as a test source for water should permits for diversions be delayed or low rainfall conditions result in below average creek flows.

Agreements will be developed with cooperating landowners to secure access for confirmation studies for the groundwater recharge projects. Confirmation studies could include geophysical investigations, infiltration tests, aquifer tests, and water quality testing of both the groundwater and source water. The local diversion projects will be located along the surface water features of the Basin and will seek water rights permits under the California Department of Water Resources (DWR) streamlined permitting process for groundwater recharge. In addition, streambed alteration permits from CDFW and a letter of authorization from the Central Valley Flood Protection Board will be obtained. Preliminary design of the infrastructure and diversion plans to be used for future diversions will be prepared, as it is a requirement of some permits.

While the permitting process is occurring, preliminary infiltration tests will be conducted using groundwater as a source to estimate the capacity of specific fields for managed aquifer recharge. This information is especially important to understand because areas around Laguna and Dry Creeks are known to have soils with poor infiltration capacity. To this end, groundwater, drawn from agricultural wells, will be spread on small fields with and without deep ripping to assess the capacity of the local soils to infiltrate water. Estimates will be made of the number of acre feet per day that can be passed through local soils. This information will help clarify the amount of water that can be diverted for recharge at various locations along the creeks in the Basin and the types of diversion facilities that might be needed.

Once the preliminary infiltration tests are completed and geophysical data is analyzed, the design of the local diversion pilot projects will be finalized and construction of diversion and/or recharge facilities will take place. Potential recharge methods include agricultural field spreading, recharge basins, floodplain inundation, and/or dry wells. Project operations will rely on either permitted diversions or existing groundwater wells to confirm suitable infiltration rates and measure the benefits to groundwater storage indicated by water level changes. To monitor and quantify results from the pilot projects, stream

gauges will be installed as part of Component 2 on the appropriate creek reaches, and monitoring wells (either existing wells or monitoring wells constructed for the pilot study) will be established and instrumented with appropriate monitoring equipment. Once sufficient data is collected from the local diversion pilot projects, Best Management Practices (BMPs) summarizing the outcomes and lessons learned from the projects will be developed to provide guidance for future recharge projects in the Basin.

#### Detailed Component Description: Recharge Study Type 2, On-Farm Stormwater Capture Projects

On-Farm Stormwater Capture pilot projects can be constructed to increase recharge beneath areas located away from the creeks and streams. These projects will focus on capturing stormwater runoff from farmlands and conveying it to spreading basins and/or dry wells. Using soil data from the hydrogeologic conceptual model (HCM) of the GSP and runoff estimates from the numerical model, potential recharge sites will be identified. Sites will be prioritized that produce high runoff volumes and have acceptable soil conditions to optimize infiltration rates. For demonstration purposes, site selection will include properties that have access to wells, so that if stormwater is unavailable during the study period, groundwater can be used to quantify infiltration rates and obtain useful test data. Once potential recharge sites are determined, the GSAs will approve the most promising sites and develop agreements with the cooperating landowners. The GSAs will then conduct confirmation studies that may include geophysical studies and borings to confirm acceptable subsurface conditions. Once sites are confirmed one to three suitable On-Farm Stormwater Capture pilot projects will be designed. Construction of recharge facilities will occur once the above confirmatory information has been analyzed. Monitoring sites will be developed either from existing wells or newly constructed wells to track changes in the water table response and estimate storage changes from recharge events. Necessary instrumentation will be installed to measure water levels and the volumes and quality of captured water that percolates into the subsurface. Once sufficient data is collected from the On-Farm Stormwater Capture pilot projects, BMPs summarizing the outcomes and lessons learned from the projects will be developed to provide guidance for future recharge projects in the Basin.

#### Component Goals, Objectives, and Needs

**Goals.** The goal of Component 5 is to lay the groundwater for capturing and infiltrating local stormwater runoff and imported winter floodwater to augment groundwater and increase the sustainable yield of the Basin.

**Objectives.** The objectives of Component 5 are (1) identify areas with sites suitable for recharge projects; (2) identify the infiltration practices that will optimize recharge volumes; (3) utilize pilot projects to quantify the potential infiltration benefit achievable with local diversion projects and on-farm stormwater capture projects; (4) develop guidance and Best Management Practices (BMPs) to transition the pilots to permanent projects and direct the design of new projects (for example, guidance and recommendations on the use of infiltration ponds, spreading basins and fields, and/or dry wells); and, (5) recommend policies that incentivize landowners to voluntarily expand stormwater capture projects in the Basin.

**Needs.** Table WB-8 of the GSP “*Estimated Sustainable Yield for Selected Time Periods*” indicates that during 1999-2018, average annual estimated pumpage (131,200 AFY) exceeded sustainable groundwater yield by over 10,000 AFY. Under current development conditions, and 50 years of historical climate, the yield deficit is projected to decrease slightly from 10,000 AFY to 7,400 AFY. Projects and Management Actions (PMAs) described in the GSP augment groundwater sustainability by increasing recharge and demand management. This Component augments groundwater with runoff from the local watershed, and preliminary evaluations indicate on average the contribution could be 3,600 AFY and represents almost 50% of the projected yield deficit. Because the source of water for recharge is local runoff, these projects can be implemented immediately following identification of suitable sites and cooperating landowners.

#### Meeting the Component Goals, Objectives, and Needs

The goal of reducing the storage deficit in the Basin will be met with Component 5 through recharge projects to capture and infiltrate local stormwater runoff. This will be accomplished by conducting pilot projects to identify the best recharge approaches that can be implemented throughout the Basin.

#### Communities Served, Measurable Objectives, Minimum Thresholds, Plan Implementation Timeline, and Feasibility

**Communities Served.** Groundwater is the primary source of water for drinking and other domestic needs in the Basin and supports a thriving agricultural economy. Increased recharge in the Basin will help stabilize water levels, which will benefit all beneficial users of groundwater including underrepresented communities (URCs), disadvantaged and severely disadvantaged communities (DACs and SDACs), Tribes, and groundwater dependent ecosystems (GDEs). The GSAs will continue its active engagement with the public, stakeholders, and landowners in its planning and implementation decisions. Furthermore, as supported through CGA, the GSAs have established and maintained cooperative working relationships with each other, with CGA member districts/agencies, other districts/agencies within the Basin and with neighboring Basins.

**Measurable Objectives/Minimum Thresholds.** Increased recharge in the Basin will help stabilize water levels and progress toward Measurable Objectives (MOs), which will avoid Minimum Thresholds (MTs) and protect against Undesirable Results. As a planning component, the improved understanding of benefits from recharge operations within the Basin will be



integrated into the 2027 GSP, and the quantitative metrics represented by the Sustainable Management Criteria (Minimum Thresholds and Measurable Objectives) will be assessed and updated, as needed. These will improve the understanding of impacts on the different beneficial users in the Basin and help guide the next phase of PMA implementation.

*Plan Implementation Timeline.* Landowner outreach and engagement activities to identify volunteers will be initiated by the GSAs, prior to the grant agreement, with the distribution of a landowner survey. The GSAs plan to continue outreach and develop a list of landowners willing to volunteer their lands for PMA implementation activities prior to the award of the SGM Implementation Round 2 funding. This way once the funding is awarded and the grant agreement is finalized the GSAs are ahead of the planning tasks and will ensure sufficient time to get the pilot studies up and running and have a longer period of data collection. As described in the detailed project descriptions the sites must have access to extraction wells so that groundwater can be used as a test source for water, should permits for diversions be delayed or low rainfall conditions result in below average creek flows and/or if stormwater is unavailable during the study period. Furthermore, the GSAs have an existing ongoing Recharge Pilot project (LDSR) and are aware of the necessary steps and the timing of these steps to get the Recharge Pilot projects up and running. Stakeholder engagement and public outreach activities will be a continuous area of focus during GSP implementation.

*Feasibility.* As stated above, the GSAs have an existing Recharge Pilot project in the Basin which is providing positive results and is proving value to the Basin, therefore expanding likewise pilot projects to other areas of the Basin have a high likelihood for success and will provide additional value to the Basin. Completion of Component 5 in accordance with the stated schedule is very feasible.

2. **2B – Planning Project/Components Only:** Description of planning project/component is well-coordinated.

#### Respond to DWR Comments on GSP

DWR has not commented on the GSP, and therefore this Component does not address DWR comments on the GSP.

#### Address Data Gaps

Section 18 *Projects and Management Actions*, of the GSP states that the GSAs “will conduct data gap filling activities as part of the GSP implementation that may include...performing feasibility studies” such as these pilot projects. Furthermore, this Component helps advance activities designated as “Other PMAs” in Section 18.2.4 *Other PMAs* of the GSP in which the details for these projects were insufficient at the time of GSP development to enable the estimation of implementation costs and benefits, even though, as described above, they have the potential to provide a considerable amount of recharge to the Basin. The GSP notes that these activities may need to be more extensively developed for the five-year update of the GSP, especially if progress lags on larger PMAs. This Component addresses the aforementioned tasks that the GSAs said would be addressed during GSP implementation, along with filling additional data gaps during the site confirmation studies (such as infiltration rates, aquifer test results, geophysical data, water quality data, water level monitoring data, installing stream gauges, stream gauge monitoring data and access to additional wells for monitoring).

#### Assist in Feasibility of GSP Implementation

This Component assists in the feasibility of implementation of the GSP by conducting the pilot projects that will enable the evaluation of additional recharge methods to help achieve the GSP’s Sustainability Goal and developing BMPs that can be duplicated at other sites to capitalize on the potential of these recharge methods.

3. Provide a regional and Project/Component map(s).

The Regional Map is Figure 1 in Attachment 4 and the Component Map is Figure 7 in Attachment 4.

4. Explain if the proposed Project or Component will benefit an URC, Tribe or SDAC.

#### Identification of URC(s), Tribe(s), and/or SDAC(s)

Figure 2 in Attachment 4 shows the Basin location relative to mapped Underrepresented Communities (URCs) based on the DWR’s Disadvantaged Communities (DAC) Mapping Tool and CalEnviroScreen 4.0. The DACs, and SDACs shown in Figure # include Census tracts identified as:

- SDAC: GEOID20: 06067009503 with a median household income (MHI) of \$41,193;
- DAC: GEOID20: 06067009504 with a MHI of \$53,162;
- DAC: GEOID20: 06067009501 with a MHI of \$59,625; and
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The Basin is home to several Native American tribal communities: (1) Wilton Rancheria tribe located in Sacramento County in the northwestern portion of the Basin, (2) the Buena Vista Rancheria of Me-Wuk Indians tribe in Amador County in the eastern portion of the Basin, and (3) the Lone Band of Miwok Indians tribe also located in Amador County.

#### Benefits to URC, Tribe or SDAC

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The Buena Vista Rancheria of Me-Wuk Indians tribe relies on groundwater as their water supply. The Wilton Rancheria tribal lands are located adjacent to the Cosumnes River. The Wilton Rancheria tribe mission statement states, "The Department of Environmental Resource shall assess, conserve, monitor, preserve, protect, and restore tribal resources to enhance the environment within the Tribe's Territory." The Cosumnes River is within the Tribe's territory and is a valuable resource to them. The lone Band of Miwok Indians is a public water supplier within the basin and has at least two groundwater wells. By contributing to groundwater sustainability, the Component will support the water needs of these tribes.

#### Amount of Grant Funding that will Benefit Tribe, URC, and/or SDAC

Benefits of Component 5 are expected to be distributed Basin-wide by contributing to the sustainability of the groundwater basin and the stabilization of the groundwater table, so approximately \$270,883 of the project budget will benefit the URCs including DACs and SDACs if calculated on a per-acre basis or \$346,708 on a population basis.

5. Describe if the proposed Project or Component will positively impact issues associated with small water systems or private shallow domestic wells (groundwater contamination vulnerability, drawdown, etc.).

From Section 2 *Sustainability Goal*, of the GSP, "The Sustainability Goal of the Cosumnes Subbasin is to ensure that groundwater...continues to be a long-term resource for beneficial users and uses including urban, domestic, agricultural, industrial, environmental, and others." Section 14.1 *Undesirable Results for Chronic Lowering of Groundwater Levels*, of the GSP states that "Significant and Unreasonable effects associated with Undesirable Results occur when the number of completely dewatered domestic wells exceeds the assumed natural well replacement rate projected to occur over the 20-year implementation horizon." Therefore, the overall goal of the GSP is aimed at positively impacting small water systems (PM Mutual Water Company and Cosumnes River Indian Association identified in Figure 3 in Attachment 4) and protecting the shallower private domestic wells (Figure 3 in Attachment 4).

#### Justification from Domestic Well Census and Water System Maps

Figure 3 in Attachment 4 shows the location of the domestic wells, small water systems and public water systems within the Basin. GSP Section 5.1.5 Well Density per Square Mile, reports that there are 2,258 domestic wells in the Basin, far more than the number of production (433) or public (23) wells in the Basin. Stable water levels ensure groundwater accessibility to existing wells and protects against pump and well failures. Domestic wells are typically the most vulnerable to water levels declining below the top of well screen because they are often drilled shallower due to lower water use requirements and financial constraints. Recharge projects such as the pilot studies in this Component will facilitate stabilize groundwater levels and ensure a reliable water supply for all users. Additionally under this Component, the GSAs will ensure that stakeholder and outreach engagement activities include protocols and venues accessible to domestic well users and small water systems in the Basin and suitable for their continued engagement and inclusion.

#### Addresses Needs of the State Water Board's SAFER Program

The component's contribution to the stability of groundwater will also help address the needs of the Safe and Affordable Fund for Equity and Resilience (SAFER) program. SAFER prioritizes funding based on a 2022 Drinking Water Needs Assessment. Maps that accompany the 2022 assessment show that areas around Galt are at risk for water shortage issues and that areas south of Sloughhouse and near lone and in the southern portion of Amador County are potentially at risk for water shortage issues, as shown in Figure 3 in Attachment 4. In addition, areas near Twin Cities, south of Sloughhouse, and north of lone are at risk for water quality issues.

6. Describe how the proposed Project or Component addresses the Human Right to Water.

As noted in the response to question 5, above, the Component will contribute to the sustainability of the groundwater basin and the stabilization of the groundwater table in fulfillment of the GSP sustainability goal. This will in turn meet the state policy expressed in Water Code Section 106.3 that "every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." Furthermore, the State Water Board adopted a resolution in February 2016 stating in part that it would work "to ensure proper water resource allocation and efficient use, for the benefit of present and future generations." The stabilization of the groundwater table will contribute to this goal by helping sustain the estimated 2,258 domestic wells in the Basin. The pilot studies under this Component, will develop knowledge the GSAs can use in future GSP recharge implementation activities to operate the Basin sustainably within the defined Sustainable Yield and to prevent Undesirable Results, thereby preserving the Human Right to Water.

## PROJECT/COMPONENT DETAILS

### B. Scope of Work and Deliverables

7. Include in the Work Plan a complete description of all tasks that will be completed as part of this Component.

#### Category (a) Component Administration

##### Task 1: Project Management

Prepare reports detailing work completed on the Component per DWR's format requirements for inclusion in Project Quarterly Progress Reports. Sufficient information will be included for the DWR Grant Manager to understand and review backup documentation submitted with invoices. Invoices will accompany the reports with backup documentation by budget category and task.

Prepare the Draft Component Completion Report and submit it to the DWR Grant Manager for comment and review 90 days before the end date for this Component. DWR's Grant Manager will review the Draft Component Completion Report and provide comments and edits within 30 days of receipt, when possible. Prepare a Final Component Completion Report addressing the DWR Grant Manager's comments within 30 days of those comments. The report will be prepared in accordance with DWR's required report formats. All deliverables listed within the Work Plan shall be submitted with or prior to the Final Component Completion Report unless a new deliverable due date was approved by the DWR Grant Manager.

##### Deliverables:

- Component reporting to be included in Quarterly Progress Reports and Invoices
- Draft and Final Component Completion Reports.

#### Category (b) Environmental / Engineering / Design

##### Task 2: Conduct Stream Corridor Modeling and Analysis

This task includes use of appropriate modeling tools and analytical frameworks to allow a systematic, scalable approach to identify opportunities for recharge along creeks in the Basin. This will involve: coordination to collect and review the relevant existing information to execute the analysis; collecting bathymetric data, where needed to measure streambed elevations; developing the hydrologic model and hydraulic models, as needed, for data to be input into the analysis; modeling and analyzing up to four hydrologic scenarios to understand multi-benefit floodplain outcomes under future scenarios; and generating a technical report detailing the work performed.

##### Deliverables:

- Technical Report

##### Task 3: Identify, Rank and Select Project Sites

This task includes: identifying potential Local Diversion Project sites using data from the GSP and the numerical model to identify sites along creeks in the Basin based on hydraulics, channel configuration, surface/subsurface hydrogeologic conditions, and other relevant considerations from Task 2; identifying potential On-Farm Stormwater Capture Project sites throughout the Basin that have high stormwater runoff volumes and acceptable soil conditions; 3) Rank sites based on criteria to be developed by the GSAs; and Select 2 to 6 sites to secure access for confirmation studies.

##### Deliverables:

- Maps of potential project sites, ranked sites, and sites selected for confirmation studies.

##### Task 4: Confirm Site Suitability

This task includes confirming project site suitability by conducting appropriate tasks, including but not limited to geophysics surveys, infiltration tests, and source water and groundwater quality analysis and summarizing results and present findings to the GSAs and stakeholders.

##### Deliverables:

- Summary of site suitability activities and findings

##### Task 5: Design Pilot Projects

This task includes: plan and design water delivery and groundwater recharge infrastructure for Local Diversion Pilot Projects at 1 to 3 selected stream diversion sites and for On-Farm Stormwater Capture Pilot Projects at 1 to 3 selected project sites.

Deliverables:

- Pilot Project design plans and specifications

**Task 6: Environmental Review and Permitting**

This task includes: complete California Environmental Quality Act (CEQA) review and permit applications for the proposed pilot projects at a level of detail and scope sufficient to secure (1) water rights permits for any proposed stream diversions, as needed; (2) streambed alteration permits that may be required in connection any stream diversions, as needed; and (3) groundwater well permits for any proposed recharge wells that receive surface water. Approve the projects and secure the required permits.

Deliverables:

- Copies of permits and environmental documentation

**Task 7: Develop BMPs**

This task includes: develop BMP documents summarizing results and lessons learned from the pilot projects.

Deliverables:

- BMP documents

**Category (c) Implementation / Construction**

**Task 8: Construct Water Delivery and Recharge Infrastructure**

This task includes: construct water delivery and recharge infrastructure in accordance with the plans and specifications for each of the approved pilot projects at selected stream diversion and on-farm capture sites.

Deliverables:

- As-built of constructed features

**Task 9: Install Monitoring Equipment**

This task includes: locate, design & construct necessary monitoring equipment to quantify benefits (e.g., meters, monitoring wells, sampling stations, etc.) for the approved pilot projects at the selected stream diversion and on-farm capture sites.

Deliverables:

- Photographs of installed equipment

**Category (d) Monitoring / Assessment**

Not applicable to this Component

**Category (e) Engagement / Outreach**

**Task 10: Landowner Outreach**

This task includes outreach to landowners in the areas of interest (e.g., along the Dry Creek and Laguna Creek corridors and on farmlands with high volume stormwater runoff and acceptable soil conditions for capture and recharge to identify lands with existing water delivery infrastructure and willingness to participate.

Deliverables:

- Outreach materials

### C. Budget (maximum of 1 point possible)

Complete the Budget Summary Table using the template provided (below). You must also include a ranking system using the template provided by the SGM Grant Program. The ranking table will not be scored, but will be used when developing the draft and final award list. You may use a maximum of 2-pages using Arial, 10-point type font, to justify the budgets provided.

8. Provide a completed budget summary table using template below.

#### Component 5: RECHARGE PILOT STUDIES PLANNING COMPONENT

Component 5 serves a need of a DAC, SDAC, Tribe and/or Underrepresented Community?

(check all that apply): ☒DAC, ☒SDAC, ☒Tribe, and/or ☒Underrepresented Community

Budget Categories	Grant Amount
(a) Component Administration	\$100,000
(b) Environmental / Engineering / Design	\$621,000
(c) Implementation / Construction	\$262,000
(d) Monitoring / Assessment	\$0
(e) Engagement / Outreach	\$17,000
<b>Total:</b>	<b>\$1,000,000</b>

### D. Schedule

Complete the Schedule Table using the template provided (below). The Schedule Table must not exceed a TOTAL of 2 pages using a minimum Arial, 10-point type font.

9. Provide a completed schedule table using template below.

Categories	Start Date	End Date
<b>Component 5: RECHARGE PILOT STUDIES PLANNING COMPONENT</b>		
(a) Component Administration	10/4/2022	4/30/2026
(b) Environmental / Engineering / Design	6/1/2023	6/1/2025
(c) Implementation / Construction	1/1/2024	1/1/2026
(d) Monitoring / Assessment	--	--
(e) Engagement / Outreach	10/4/2022	4/30/2026

Provide a brief description of the plan for environmental compliance and permitting, if applicable, including the following items and a status of each:

#### Expected Environmental Compliance Requirements

It is not anticipated that this Component will require any environmental compliance documentation associated with California Environmental Quality Act (CEQA) obligations. CEQA provides numerous categories of exemption, including Class 6 for information collection activities that do not result in serious disturbance to an environmental resource.

#### Environmental Related Permits/Entitlements

Sacramento County requires monitoring well installation permits per Sacramento County Code Title 6, Chapter 6.28.030. Well siting will include the GSAs coordinating permanent access agreement(s) with landowner(s) and the Technical Consultant drafting site plan(s). Once access agreement(s) are in place, well installation permit(s) will be obtained from Sacramento County. Well installation permit application(s) will be submitted to Sacramento County at least 14 working days prior to proposed well installation date and will include the permit application, site plan, and Property Owner/Well Driller's authorization letter(s), as appropriate. USA will be called at least two working days, but no more than 14 working days prior to drilling activities. At least 24-hours before completing the well installation, a well inspection appointment for annular seal placement will be made with Sacramento County Environmental Management Department. The Sacramento County inspector will be on-site to observe the annular seal placement and sign off on the well installation. As required by the Department of Water Resources (DWR), a Well Completion Report for each monitoring well will be submitted to DWR and Sacramento County Environmental Management Department within 60-days of well installation.

Per Fish and Game Code section 1602, the California Department of Fish and Wildlife (CDFW) requires notification before commencing any activity that may affect any river, stream or lake. Actions that may affect rivers, streams and lakes include diverting or obstructing natural flow, changing the bed channel or bank, using of material from, or depositing or disposing of material. Any needed permits from CDFW for the surface water gauge installations will be acquired prior to installation.

#### List of Easement/Land Acquisitions

No land acquisitions are planned. Rights of entry and access agreements will be negotiated with landowners if needed as part of Task 2.

**ATTACHMENT 3**  
**APPLICATION WORK PLAN, BUDGET, AND SCHEDULE**

**Grant Proposal Title:** Cosumnes Subbasin GSP Update and Implementation Project

**Applicant:** Cosumnes Groundwater Authority

**A. General**

**Component 6: Recharge Well Design and Implementation**

1. Provide Project or Component Description which must include the following:

**Detailed Component Description: Background**

Vadose zone recharge wells are an emerging technology that could contribute to ongoing managed aquifer recharge (MAR) throughout the Central Valley. The groundwater sustainability plans (GSPs) for the South American and Cosumnes subbasins identify operation of recharge wells adjacent to the Folsom South Canal (FSC) as a promising and important approach for achieving sustainable groundwater management in these subbasins (Cosumnes GSP Section 18.2.1; SASB GSP Section 4.4.2 and 4.5.1). Such a recharge effort, supplied by winter floodwater captured in Folsom Reservoir and conveyed down the FSC, could also contribute to the ecological health of the American and Cosumnes Rivers. Benefits to the ecology of the American River would occur through groundwater substitution for municipal use where a portion of the water recharged during the winter could be extracted in the summer instead of being drawn from the river. Benefits to the ecology of the Cosumnes River would occur from enhanced baseflow where a portion of recharged water could increase the rate and duration of groundwater discharge to the river.

For recharge wells to make a significant contribution to the water budgets in these subbasins and elsewhere in the Central Valley, individual well projects must be scaled up into programs that include a large number of wells in a time-efficient and cost-effective manner. To that end, the Sacramento County Groundwater Authority (SCGA) and the Cosumnes Groundwater Authority (CGA) are coordinating their requests for GSP Implementation grant funding to create an economy of scale and answer the technical questions common to potential recharge well projects in diverse geophysical conditions.

Initial steps have been taken during the last two years to address the information needs discussed above. This recently collected information forms the foundation of the proposed work in this grant application.

- Cosumnes Subbasin: The Omochochumne-Hartnell Water District (OHWD), one of three agencies acting as a GSA in both the Cosumnes and South American subbasins, has begun conducting a recharge well pilot project on a portion of the Laguna Del Sol Resort (LDSR) located in the Cosumnes Subbasin along the FSC near its confluence with the Cosumnes River. The well site and depth was determined based on a land surface based, electrical resistivity tomography (ERT) geophysical survey. The 48-inch diameter recharge well is supplied recharge water from a nearby, previously-existing supply well. After some initial testing, the recharge well began operations in mid-October and has proved capable of sustaining an inflow of between 200 and 375 gallons per minute (gpm) over a 5-day period. A long-term, 30-day test is currently being developed. As discussed below, these initial data and the well will be used to 1) characterize hydrogeologic conditions in the FSC corridor and 2) evaluate appropriate well diameters for future well design.
- South American Subbasin: Several miles to the north at the publicly-owned Mather South property along the FSC, the SCGA has partnered with the Sacramento Area Flood Control Agency (SAFCA) and the Department of Water Resources (DWR) Sustainable Groundwater Management Office, Technical Support Services to collect subsurface data for evaluating hydrogeologic conditions related to potential recharge operations. The data consists of a land surface based, towed time-domain electromagnetic (t-TEM) geophysical survey as well as continuous sediment coring at two locations. As discussed below, these data will be used to characterize hydrogeologic conditions in the FSC corridor.

The proposed planning component includes two elements. First, recharge well design and siting guidance will be developed by furthering ongoing work at the LDSR site. Second, this guidance will be tested and refined by deploying two recharge wells at sites near the FSC along its lower reach north of Laguna Creek.

**Detailed Component Description: Recharge Well Design and Siting Guidance**

A range of site selection and recharge well design investigations will be performed at the LDSR site as follows:

- With respect to site selection, the investigative work will focus on developing and testing a method to interpret the geophysical surveys. Developing the interpretive method will include correlating geophysical survey data and continuous sediment core data from the LDSR and Mather South sites; using available drilling logs from the United States Bureau of Reclamation (USBR) construction planning for the FSC and other readily-available information on the local geology to further refine interpretation of the geophysical survey results; and developing a framework for interpreting sediment type and structure from ERT and t-TEM geophysical surveys.
- Testing the interpretive method will entail constructing new wells at the LDSR site at a location selected based on geophysical survey data and comparing well performance with expectations from the interpretation of the geophysical data. With respect to well design, the new recharge wells installed at the LDSR site will include a combination of large- and small-diameter wells (approximately 48 and 4 inches, respectively). The small-diameter wells will be constructed at the existing recharge location. Construction of recharge wells at a second LDSR location will be based upon data collected from the proposed small-diameter wells and the existing large-diameter well. The performance of these wells will be compared based on sustained infiltration rate and water level increase in the wells over the one-year testing period to determine whether lower cost small-diameter wells could serve as an alternative to the standard large-diameter recharge well design.

#### Detailed Component Description: Recharge Well Deployment Outside the LDSR Site

Based on the results of the investigative work at the LDSR site, two sites for recharge well pilot testing will be identified in the lower 9-mile reach of the FSC corridor south of the Cosumnes River and north of Laguna Creek. Outreach will be conducted so site selection can focus on landowners who have an interest in collaboration, land available for well construction, and supply wells with sufficient capacity (e.g., production rates exceeding 300 gpm) to provide temporary sources of water for recharge well testing. Several potential sites have already been identified and outreach to the landowners will occur in the first year while the well configuration research occurs at the LDSR site. Based on this screening approach, well site locations will be selected and depths specified for recharge well installation at two locations. The design of these wells will be modified, as appropriate, to improve hydraulic performance and cost-effectiveness based on observations from the first year of operations at the LDSR site. Well piping and instrumentation will be temporary and easily removable to accommodate management practices of the landowner. The constructed recharge wells will be pilot tested during the winter period (November to March).

#### Component Goals, Objectives, and Needs

**Goals.** The goal of the recharge well project is to proactively address technical uncertainties and develop a streamlined process for site selection and facility design/construction. The information and experiences gained through the development and implementation of these recharge wells will be utilized by both the Cosumnes and South American Subbasins and improve regional understanding of recharge capabilities.

#### **Objectives.**

- Hydrogeology of potential recharge well sites: Characteristics key to the viability of recharge operations include sediment type and structure conducive to rapid and deep infiltration as well as space availability for storing recharged water. Such aspects of potential recharge sites must be understood so the at time-efficient screening can be conducted regarding 1) the value of installing a well at a particular site and 2) the required well depth for bypassing impediments to downward flow through the unsaturated zone.
- Well design for acceptable recharge rates: In addition to depth, well diameter is an important performance and cost driver. The tradeoff between well diameter, available space in the well for head buildup, and infiltration rate must be understood to select the smallest appropriate well diameter for cost-effectively achieving reasonable recharge rates.
- Source water quality characteristics: Understanding characteristics of the water used for recharge (e.g., total suspended solids load, inorganic constituent content including hardness, bacterial load, and potential for contaminants) is essential for the success of any recharge effort. This information relates to the potential need for pretreatment and maintenance requirements/frequency that drive costs.

**Needs.** We propose to develop guidance on these issues that will inform future work in the South American and Cosumnes subbasins. This recharge well guidance will make it possible to achieve recharge at scale in these subbasins and will likely be beneficial to other GSAs working to develop recharge well projects in other subbasins.

Initial steps have been taken during the last two years to address the information needs discussed above. This recently collected information forms the foundation of the proposed work in this grant application.

- **Cosumnes Subbasin:** The Omoichumne-Hartnell Water District (OHWD), one of three agencies acting as a GSA in both the Cosumnes and South American subbasins, has begun conducting a recharge well pilot project on a



portion of the Laguna Del Sol Resort (LDSR) located in the Cosumnes Subbasin along the FSC near its confluence with the Cosumnes River. The well site and depth was determined based on a land surface based, electrical resistivity tomography (ERT) geophysical survey. The 48-inch diameter recharge well is supplied recharge water from a nearby, previously-existing supply well. After some initial testing, the recharge well began operations in mid-October and has proved capable of sustaining an inflow of between 200 and 375 gallons per minute (gpm) over a 5-day period. A long-term, 30-day test is currently being developed. As discussed below, these initial data and the well will be used to 1) characterize hydrogeologic conditions in the FSC corridor and 2) evaluate appropriate well diameters for future well design.

- South American Subbasin: Several miles to the north at the publicly-owned Mather South property along the FSC, the SCGA has partnered with the Sacramento Area Flood Control Agency (SAFCA) and the Department of Water Resources (DWR) Sustainable Groundwater Management Office, Technical Support Services to collect subsurface data for evaluating hydrogeologic conditions related to potential recharge operations. The data consists of a land surface based, towed time-domain electromagnetic (t-TEM) geophysical survey as well as continuous sediment coring at two locations. As discussed below, these data will be used to characterize hydrogeologic conditions in the FSC corridor.

#### Meeting the Component Goals, Objectives, and Needs

The goal of reducing the storage deficit in the Basin will be met with Component 6 through recharge projects to develop cost effective recharge wells that will capture and infiltrate local and/or imported winter floodwaters. This will be accomplished by conducting pilot projects to identify the best recharge approaches that can be implemented throughout the Basin.

#### Communities Served, Measurable Objectives, Minimum Thresholds, Plan Implementation Timeline, and Feasibility

*Communities Served.* Groundwater is the primary source of water for drinking and other domestic needs in the Basin and supports a thriving agricultural economy. Increased recharge in the Basin will help stabilize water levels, which will benefit all beneficial users of groundwater including underrepresented communities (URCs), disadvantaged and severely disadvantaged communities (DACs and SDACs), Tribes, and groundwater dependent ecosystems (GDEs). The GSAs will continue its active engagement with the public, stakeholders, and landowners in its planning and implementation decisions. Furthermore, as supported through CGA, the GSAs have established and maintained cooperative working relationships with each other, with CGA member districts/agencies, other districts/agencies within the Basin and with neighboring Basins.

*Measurable Objectives/Minimum Thresholds.* Increased recharge in the Basin will help stabilize water levels and progress toward Measurable Objectives (MOs), which will avoid Minimum Thresholds (MTs) and protect against Undesirable Results. As a planning component, the improved understanding of benefits from recharge operations within the Basin will be integrated into the 2027 GSP, and the quantitative metrics represented by the Sustainable Management Criteria (Minimum Thresholds and Measurable Objectives) will be assessed and updated, as needed. These will improve the understanding of impacts on the different beneficial users in the Basin and help guide the next phase of PMA implementation.

*Plan Implementation Timeline.* Landowner outreach and engagement activities to identify volunteers will be initiated by the GSAs, prior to the grant agreement. The GSAs plan to continue outreach and develop a list of landowners willing to volunteer their lands for PMA implementation activities prior to the award of the SGM Implementation Round 2 funding. This ensures that the GSAs are ahead of the planning tasks and will allow sufficient time to initiate recharge well planning and construction and have a longer period of data collection. As described in the detailed project descriptions the sites must have access to extraction wells so that groundwater can be used as a test source for water. Stakeholder engagement and public outreach activities will be a continuous area of focus during GSP implementation.

*Feasibility.* As stated above, this component builds off an existing Recharge Pilot project in the Basin which is providing positive results and is proving value to the Basin, therefore expanding this project and likewise pilot projects to other areas of the Basin have a high likelihood for success and will provide additional value to the Basin. Completion of Component 6 in accordance with the stated schedule is very feasible.

2. **2B – Planning Project/Components Only:** Description of planning project/component is well-coordinated.

#### Respond to DWR Comments on GSP

DWR has not commented on the GSP, and therefore this Component does not address DWR comments on the GSP.

#### Address Data Gaps

Section 18 *Projects and Management Actions*, of the GSP states that the GSAs “will conduct data gap filling activities as part of the GSP implementation that may include...performing feasibility studies” such as these pilot projects. The data generated in this component will inform the design and implementation of the aquifer recharge projects identified in the Cosumnes GSP (Section 18.2.1, 18.2.4) to improve groundwater levels and storage volumes and enhance attainment of

sustainability goal in GSP Section 2 which is in part “to ensure that groundwater in the Basin continues to be a long term-resources for beneficial users and uses.” Flood-MAR is also a Project and Management Action in the SASb GSP. This component is a necessary pilot project for Flood-MAR and is being coordinated between the two subbasins, with entirely separate scopes of work that will complement one another and leverage the results for the most cost-effective results if both SGM proposals are funded. This component will help inform recharge well siting, which information will be directly applicable to the SASb grant proposal if that proposal is funded.

This component will test recharge well infiltration rates and recharge water quality implications. SAFCA Flood-MAR is in the American River Basin Integrated Regional Water Management Plan and the federally-funded American River Basin Study. Flood-Mar also is compatible with goals of the Central Valley Flood Protection Plan, the state Flood-MAR initiative, the state Water Resilience Portfolio, and Governor Newsom’s Executive Order N-10-19.

This Component addresses the aforementioned tasks that the GSAs said would be addressed during GSP implementation, along with filling additional data gaps during the site confirmation studies (such as infiltration rates, aquifer test results, geophysical data, water quality data, water level monitoring data, installing stream gauges, stream gauge monitoring data and access to additional wells for monitoring).

#### Assist in Feasibility of GSP Implementation

This Component assists in the feasibility of implementation of the GSP by conducting the pilot projects that will enable the evaluation of additional recharge methods to help achieve the GSP’s Sustainability Goal and developing BMPs that can be duplicated at other sites to capitalize on the potential of these recharge methods.

3. Provide a regional and Project/Component map(s).

The Regional Map is Figure 1 in Attachment 4 and the Component Map is Figure 8 in Attachment 4.

4. Explain if the proposed Project or Component will benefit an URC, Tribe or SDAC.

#### Identification of URC(s), Tribe(s), and/or SDAC(s)

Figure 2 in Attachment 4 shows the Basin location relative to mapped Underrepresented Communities (URCs) based on the DWR’s Disadvantaged Communities (DAC) Mapping Tool and CalEnviroScreen 4.0. The DACs, and SDACs shown in Figure # include Census tracts identified as:

- SDAC: GEOID20: 06067009503 with a median household income (MHI) of \$41,193;
- DAC: GEOID20: 06067009504 with a MHI of \$53,162;
- DAC: GEOID20: 06067009501 with a MHI of \$59,625; and
- DAC: GEOID20: 06005000303 with a MHI of \$58,958.

Portions of the City of Galt and Sacramento County GSAs are considered SDACs and DACs. Portions of GID and ACGMA GSAs are considered DACs.

The Basin is home to several Native American tribal communities: (1) Wilton Rancheria tribe located in Sacramento County in the northwestern portion of the Basin, (2) the Buena Vista Rancheria of Me-Wuk Indians tribe in Amador County in the eastern portion of the Basin, and (3) the lone Band of Miwok Indians tribe also located in Amador County.

#### Benefits to URC, Tribe or SDAC

Benefits of Component 6 are expected to be distributed Basin-wide by contributing to the sustainability of the groundwater basin and the stabilization of the groundwater table, and therefore will benefit all URCs. Figure 2 in Attachment 4 shows a map of URCs in the subbasin. By land area, 1% of the Basin is in a SDAC and 26% of the Basin is in a DAC. The identified SDACs represent 6% of the population in the Basin, or about 3,000 people. The identified DACs represent 29% of the population in the Basin, or about 14,000 people.

The Buena Vista Rancheria of Me-Wuk Indians tribe relies on groundwater as their water supply. The Wilton Rancheria tribal lands are located adjacent to the Cosumnes River. The Wilton Rancheria tribe mission statement states, “The Department of Environmental Resource shall assess, conserve, monitor, preserve, protect, and restore tribal resources to enhance the environment within the Tribe’s Territory.” The Cosumnes River is within the Tribe’s territory and is a valuable resource to them. The lone Band of Miwok Indians is a public water supplier within the basin and has at least two groundwater wells. By contributing to groundwater sustainability, the Component will support the water needs of these tribes.

#### Amount of Grant Funding that will Benefit Tribe, URC, and/or SDAC

Benefits of Component 6 are expected to be distributed Basin-wide by contributing to the sustainability of the groundwater basin and the stabilization of the groundwater table, so approximately \$XXX,XXX of the project budget will benefit the URCs including DACs and SDACs if calculated on a per-acre basis or \$XXX,XXX on a population basis.

5. Describe if the proposed Project or Component will positively impact issues associated with small water systems or private shallow domestic wells (groundwater contamination vulnerability, drawdown, etc.).

From Section 2 *Sustainability Goal*, of the GSP, “The Sustainability Goal of the Cosumnes Subbasin is to ensure that groundwater...continues to be a long-term resource for beneficial users and uses including urban, domestic, agricultural, industrial, environmental, and others.” Section 14.1 *Undesirable Results for Chronic Lowering of Groundwater Levels*, of the GSP states that “Significant and Unreasonable effects associated with Undesirable Results occur when the number of completely dewatered domestic wells exceeds the assumed natural well replacement rate projected to occur over the 20-year implementation horizon.” Therefore, the overall goal of the GSP is aimed at positively impacting small water systems (PM Mutual Water Company and Cosumnes River Indian Association identified in Figure 3 in Attachment 4) and protecting the shallower private domestic wells (Figure 3 in Attachment 4).

#### Justification from Domestic Well Census and Water System Maps

Figure 3 in Attachment 4 shows the location of the domestic wells, small water systems and public water systems within the Basin. GSP Section 5.1.5 Well Density per Square Mile, reports that there are 2,258 domestic wells in the Basin, far more than the number of production (433) or public (23) wells in the Basin. Stable water levels ensure groundwater accessibility to existing wells and protects against pump and well failures. Domestic wells are typically the most vulnerable to water levels declining below the top of well screen because they are often drilled shallower due to lower water use requirements and financial constraints. Recharge projects such as the pilot studies in this Component will facilitate stabilize groundwater levels and ensure a reliable water supply for all users. Additionally, under this Component, the GSAs will ensure that stakeholder and outreach engagement activities include protocols and venues accessible to domestic well users and small water systems in the Basin and suitable for their continued engagement and inclusion.

#### Addresses Needs of the State Water Board’s SAFER Program

The component’s contribution to the stability of groundwater will also help address the needs of the Safe and Affordable Fund for Equity and Resilience (SAFER) program. SAFER prioritizes funding based on a 2022 Drinking Water Needs Assessment. Maps that accompany the 2022 assessment show that areas around Galt are at risk for water shortage issues and that areas south of Sloughhouse and near Lone and in the southern portion of Amador County are potentially at risk for water shortage issues, as shown in Figure 3 in Attachment 4. In addition, areas near Twin Cities, south of Sloughhouse, and north of Lone are at risk for water quality issues.

#### 6. Describe how the proposed Project or Component addresses the Human Right to Water.

As noted in the response to question 5, above, the Component will contribute to the sustainability of the groundwater basin and the stabilization of the groundwater table in fulfillment of the GSP sustainability goal. This will in turn meet the state policy expressed in Water Code Section 106.3 that “every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.” Furthermore, the State Water Board adopted a resolution in February 2016 stating in part that it would work “to ensure proper water resource allocation and efficient use, for the benefit of present and future generations.” The stabilization of the groundwater table will contribute to this goal by helping sustain the estimated 2,258 domestic wells in the Basin. The pilot studies under this Component, will develop knowledge the GSAs can use in future GSP recharge implementation activities to operate the Basin sustainably within the defined Sustainable Yield and to prevent Undesirable Results, thereby preserving the Human Right to Water.

## PROJECT/COMPONENT DETAILS

### B. Scope of Work and Deliverables

7. Include in the Work Plan a complete description of all tasks that will be completed as part of this Component.

#### (a) Component Administration

##### **Task 1: Project Management**

Prepare reports detailing work completed on the Component per DWR's format requirements for inclusion in Project Quarterly Progress Reports. Sufficient information will be included for the DWR Grant Manager to understand and review backup documentation submitted with invoices. Invoices will accompany the reports with backup documentation by budget category and task.

Prepare the Draft Component Completion Report and submit it to the DWR Grant Manager for comment and review 90 days before the end date for this Component. DWR's Grant Manager will review the Draft Component Completion Report and provide comments and edits within 30 days of receipt, when possible. Prepare a Final Component Completion Report addressing the DWR Grant Manager's comments within 30 days of those comments. The report will be prepared in accordance with DWR's required report formats. All deliverables listed within the Work Plan shall be submitted with or prior to the Final Component Completion Report unless a new deliverable due date was approved by the DWR Grant Manager.

##### Deliverables:

- Component reporting to be included in Quarterly Progress Reports and Invoices
- Draft and Final Component Completion Reports.

#### (b) Environmental / Engineering / Design

##### **Task 2: Gather Continuous Sediment Core Data**

Use sonic drilling methods to obtain one continuous sediment core immediately adjacent to the existing recharge well at the LDSR site.

##### Deliverables:

- One continuous core sample obtained at a depth of up to 350 feet

##### **Task 3: Correlate Sediment Core and Geophysical Survey Data**

Correlate the sediment core data from the LDSR site with electromagnetic resistivity tomography (ERT) survey data previously gathered at the site and compare the results to a similar correlation of sediment core and geophysical survey data gathered at the Mather South site in the SASb. Prepare a summary report on interpreting geophysical survey data.

##### Deliverables:

- Summary report on interpreting geophysical survey data.

##### **Task 4: Select Locations for Additional Recharge Wells at the LDSR Site**

Using the approach outlined in the summary report, conduct a geophysical survey of the area around the irrigation well at the LDSR site, interpret the survey data, and select locations to install one large diameter and one small diameter recharge well.

##### Deliverables:

- Map of new recharge well locations at the LDSR site

##### **Task 5: Design Recharge Wells**

Based on the performance of the existing large (48 inch diameter) recharge well at the LDSR site, design the new large recharge well to be installed at the site and coordinate with the SAWS Unit (UC Davis) as they design two small (4 to 8 inch) recharge wells for installation near the existing large (48 inch) recharge well and the new large recharge well. Work by SAWS itself is not a part of the grant scope or budget.

##### Deliverables:

- Plans and specifications for the new large recharge well at LDSR.

#### **Task 6: Secure Two Sites for Recharge Well Installation Outside LDSR**

Secure appropriate rights of entry agreements for access to the selected sites and use of the groundwater wells at these sites.

##### Deliverables:

- Rights of entry agreements

#### **Task 7: Environmental Permitting**

This task includes: complete California Environmental Quality Act (CEQA) review and permit applications for the proposed pilot projects at a level of detail and scope sufficient to secure (1) water rights permits for any proposed stream diversions, as needed; (2) streambed alteration permits that may be required in connection any stream diversions, as needed; and (3) groundwater well permits for any proposed recharge wells that receive surface water. Approve the projects and secure the required permits.

##### Deliverables:

- Copies of permits and environmental documentation

### **(c) Implementation / Construction**

#### **Task 8: Install and Operate Recharge Wells**

Issue request for bids to construct the new recharge wells at the LDSR site based on the plans and specifications prepared under Task 5. Manage construction contract. Upon completion of construction, operate each recharge well for 90 to 100 consecutive days for two consecutive years during the winter season (November 15 to March 15). Based on the performance of these wells, design two recharge wells for installation at the sites secured for this purpose under Task 6; prepare plans and specifications for these wells; issue a request for bids to construct these wells; and award a construction contract. Upon completion of construction, operate each recharge well for 90 to 100 consecutive days for two consecutive years during the winter season (November 15 to March 15).

##### Deliverables:

- As-built documents for each recharge well

### **(d) Monitoring / Assessment**

#### **Task 9: Monitor Recharge Well Infiltration Capacity**

Use flowmeters to measure the volume of water entering each recharge well; pressure transducers to monitor the water level in each well as a function of time; and dataloggers and a cellular phone system to monitor flow rates, water levels and the cumulative volume of water infiltrated into the ground over a 90 to 100-day period.

##### Deliverables:

- Estimate of the rate of infiltration of recharge wells under different geophysical conditions

#### **Task 10: Monitor Movement of Infiltrated Water Through the Vadose Zone**

Use electrical resistivity tomography (ERT) survey equipment to monitor the movement of the water infiltrated by the recharge wells at each site through the vadose zone.

##### Deliverables:

- Estimate of the movement of infiltrated water through the vadose zone.

#### **Task 11: Prepare Summary Assessment**

Prepare a report (1) summarizing the lessons learned and providing guidance on recharge well design and site selection and (2) describing the results of the recharge pilot tests at the LDSR site and the two selected sites outside LDSR including estimated infiltration rates under differing geophysical conditions and the movement of the infiltrated water through the vadose zone at each site.

##### Deliverables:

- Summary Report

### **(e) Engagement / Outreach**

**Task 12: Outreach to Landowners**

Correlate areas suitable for recharge wells with land ownership and existing groundwater wells in the vicinity of FSC. Reach out to landowners and identify those willing to make their wells available during the winter season for the project.

**Deliverables:**

- Outreach materials

**C. Budget** (maximum of 1 point possible)

Complete the Budget Summary Table using the template provided (below). You must also include a ranking system using the template provided by the SGM Grant Program. The ranking table will not be scored, but will be used when developing the draft and final award list. You may use a maximum of 2-pages using Arial, 10-point type font, to justify the budgets provided.

8. Provide a completed budget summary table using template below.

**Component 6: RECHARGE WELL DESIGN AND IMPLEMENTATION**

Component 6 serves a need of a DAC, SDAC, Tribe and/or Underrepresented Community?

(check all that apply): ☒DAC, ☒SDAC, ☒Tribe, and/or ☒Underrepresented Community

Budget Categories	Grant Amount
(a) Component Administration	\$
(b) Environmental / Engineering / Design	\$40,000
(c) Implementation / Construction	\$530,000
(d) Monitoring / Assessment	\$213,000
(e) Engagement / Outreach	\$
<b>Total:</b>	\$

**D. Schedule**

Complete the Schedule Table using the template provided (below). The Schedule Table must not exceed a TOTAL of 2 pages using a minimum Arial, 10-point type font.

9. Provide a completed schedule table using template below.

Categories	Start Date	End Date
<b>Component 6: RECHARGE WELL DESIGN AND IMPLEMENTATION</b>	<b>October 4, 2022</b>	<b>April 30, 2016</b>
(a) Component Administration	10/4/2022	4/30/2026
(b) Environmental / Engineering / Design	08/01/2023	07/15/2024
(c) Implementation / Construction	11/15/2023	03/15/2025
(d) Monitoring / Assessment	03/15/2024	03/15/2026
(e) Engagement / Outreach	10/4/2022	4/30/2026

Provide a brief description of the plan for environmental compliance and permitting, if applicable, including the following items and a status of each:

Expected Environmental Compliance Requirements

It is not anticipated that this Component will require any environmental compliance documentation associated with California Environmental Quality Act (CEQA) obligations. CEQA provides numerous categories of exemption, including Class 6 for information collection activities that do not result in serious disturbance to an environmental resource.

Environmental Related Permits/Entitlements

Sacramento County requires monitoring well installation permits per Sacramento County Code Title 6, Chapter 6.28.030. Well siting will include the GSAs coordinating permanent access agreement(s) with landowner(s) and the Technical Consultant drafting site plan(s). Once access agreement(s) are in place, well installation permit(s) will be obtained from Sacramento County. Well installation permit application(s) will be submitted to Sacramento County at least 14 working days prior to proposed well installation date and will include the permit application, site plan, and Property Owner/Well Driller's authorization letter(s), as appropriate. USA will be called at least two working days, but no more than 14 working days prior to drilling activities. At least 24-hours before completing the well installation, a well inspection appointment for annular seal placement will be made with Sacramento County Environmental Management Department. The Sacramento County inspector will be on-site to observe the annular seal placement and sign off on the well installation. As required by the Department of Water Resources (DWR), a Well Completion Report for each monitoring well will be submitted to DWR and Sacramento County Environmental Management Department within 60-days of well installation.

Per Fish and Game Code section 1602, the California Department of Fish and Wildlife (CDFW) requires notification before commencing any activity that may affect any river, stream or lake. Actions that may affect rivers, streams and lakes include diverting or obstructing natural flow, changing the bed channel or bank, using of material from, or depositing or disposing of material. Any needed permits from CDFW for the surface water gauge installations will be acquired prior to installation.

#### List of Easement/Land Acquisitions

No land acquisitions are planned. Rights of entry and access agreements will be negotiated with landowners if needed as part of Task 6.



**BOARD OF DIRECTORS  
COSUMNES GROUNDWATER AUTHORITY**

**RESOLUTION NO. 2022-\_\_\_\_\_**

**RESOLUTION AUTHORIZING COSUMNES GROUNDWATER AUTHORITY  
TO SUBMIT A GRANT PROPOSAL FOR THE COSUMNES SUBBASIN ON  
BEHALF OF ITS MEMBER GROUNDWATER SUSTAINABILITY AGENCIES**

**WHEREAS**, the California Department of Water Resources (DWR) manages the Sustainable Groundwater Management (SGM) Grant Program; and

**WHEREAS**, DWR has over \$200 million available from the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018 (Proposition 68) and the California Budget Act of 2021 (Stats. 2021, ch. 240, § 80) (2021 Budget Act) for the SGM Grant Program; and

**WHEREAS**, DWR has solicited grant proposals for the SGM Grant Program due November 30, 2022; and

**WHEREAS**, eligible applicants for the SGM Grant Program include Groundwater Sustainability Agencies (GSAs), member agencies of GSAs, or an entity that represents a GSA, among others; and

**WHEREAS**, DWR will only accept one SGM Grant Program proposal per groundwater subbasin; and

**WHEREAS**, GSAs within the Cosumnes Subbasin formed the Cosumnes Groundwater Authority (CGA) to implement the Cosumnes Subbasin Groundwater Sustainability Plan; and

**WHEREAS**, for this purpose, CGA has a strong interest in submitting one or more projects, called “components” by the SGM Grant Program, to DWR in an SGM Grant Program for potential funding; and

**WHEREAS**, CGA has the capability to complete and submit a proposal to DWR on behalf of the GSAs in the subbasin, and those entities have requested CGA’s assistance.

**NOW, THEREFORE, BE IT RESOLVED**, by the CGA Board of Directors as follows:

1. The Cosumnes Groundwater Authority Administrator is hereby authorized to act as the applicant, on behalf of any or all of the Groundwater Sustainability Agencies within the Cosumnes Subbasin, in preparing and submitting a grant proposal to the California Department of Water Resources Sustainable Grant Program for the Cosumnes Subbasin.
2. That an application be made to the Department of Water Resources to obtain a grant under the 2021 Sustainable Groundwater Management (SGM) Grant Program SGMA Implementation Grant pursuant to the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018 (Pub.

Resources Code, § 80000, et seq.) and the Budget Acts of 2021 and 2022. Be it further resolved that the Cosumnes Groundwater Authority has the authority and shall enter into a funding agreement with the Department of Water Resources to receive a grant for the: <Application Name>.

3. The Cosumnes Groundwater Authority Administrator, or designee, is hereby authorized and directed to prepare the necessary data, conduct investigations, file such application, execute a funding agreement, and any future amendments thereto, submit invoices, and submit any reporting requirements with the Department of Water Resources.

Passed and adopted by the Cosumnes Groundwater Authority Board of Directors, State of California this \_\_\_\_ day of \_\_\_\_\_ 2022, by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

I do hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the Cosumnes Groundwater Authority held on \_\_\_\_\_, 2022.

\_\_\_\_\_  
Clerk of the Board of Directors

\_\_\_\_\_  
Chair of the Board of Directors

# DWR SGMA Implementation Grant - Components

1

## Ranking

1. Grant Administration
2. Groundwater Monitoring Improvement Planning
3. Conservation Demonstration Projects
4. 5-Year GSP and Model Update
5. Recharge Pilot Studies Planning
6. Recharge Well Design and Implementation

2

## Summary of Changes since 11/21 CGA Board Meeting

- 1) Grant Administration
- 2) Groundwater Monitoring Improvement Planning
  - Added geophysics to investigate clay layer to help with well siting
  - Added stream gauge installation (moved from Component 5)
- 3) Conservation Demonstration Projects
  - Removed: land repurposing plan, ET Monitoring Demonstration Projects, and in-depth economic impact
- 4) 5-Year GSP and Model Update
- 5) Recharge Pilot Studies Planning
  - Reduced # of sites
  - Removed DMS/Model tasks
  - Reduced Stream Corridor Modeling and Analysis
  - Removed stream gauge installation (moved to Component 2)
- 6) Recharge Well Design and Implementation

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## Budgets

Component Name	Budget
1 – Grant Administration	\$325,000
2 – Groundwater Monitoring Improvement Planning	\$1,150,000
3 – Conservation Demonstration Projects	\$500,000
4 – 5-Year GSP and Model Update	\$600,000
5 – Recharge Pilot Studies Planning	\$1,000,000
6 – Recharge Well Design and Implementation	\$500,000
<b>Total</b>	<b>\$3,575,000</b>

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