**Attachment 3**

**Application Work Plan, Budget, and Schedule – Template**

|  |  |
| --- | --- |
| **Grant Proposal Title:**  |  |
| **Applicant:** |  |

1. **General** (maximum of 22 points possible)

Provide a Project Description that addresses the requested information identified below. The description must not exceed 4 pages per Component (not including tables and figures) using a minimum Arial, 10-point type font.

1. (4 points) Provide Project or Component Description which must include the following:
* A complete, detailed description of the overall proposed Project or Component;

**[proponent should provide]**

Projects that increase groundwater recharge are identified in the GSP under “Other PMAs.” These projects rely on surface water originating as stormwater flows or imported to the basin to augment groundwater recharge, but project concepts were insufficiently developed to estimate costs and benefits. Since GSP submittal, the GSAs have initiated an ongoing Recharge Pilot Project (Laguna Del Sol Resort [LDSR] pilot recharge project]) to guide design decisions and quantify likely benefits when applied in other areas of the basin. Augmented recharge will contribute substantially toward stable groundwater levels and implementation efforts to avoid dropping below Minimum Thresholds (MT’s) and meet Measurable Objectives (MO’s). Groundwater is the main source of water in the basin, and therefore all users benefit from greater recharge. This includes drinking water for domestic users and municipalities (City of Galt), irrigation for agriculture, and support for environment uses (instream flows and groundwater dependent ecosystems). The LDSR pilot recharge project complements similar projects in the adjacent South American Subbasin currently in various planning and implementation phases. Hence, the component is an expansion of existing activities and therefore has a high likelihood for success and value to the basin.

**Recharge Well Design and Deployment Project**

The GSAs have partnered with the Sacramento Area Flood Control Agency (SAFCA) in conducting a Recharge Pilot Project on a portion of LDSR located in the Basin along the Folsom South Canal (FSC) near its confluence with the Cosumnes River. The project is led by Omochumne-Hartnell Water District (OHWD) GSA, a GSA in both the Cosumnes Subbasin and South American Subbasin. This ongoing project is testing the infiltration capacity of a 48-inch diameter recharge well installed at a location and depth (50 feet) selected based on an electrical resistivity tomography (ERT) survey of the site. Building on the accomplishments of this project, the GSAs plan a series of activities that would address key geologic characterization and recharge well design issues essential to scaling up the deployment of recharge wells in other areas of the basin (e.g., the FSC corridor, near natural drainages like Laguna Creek, or for on-farm implementation as part of local stormwater capture projects). In addition to the requested grant funds, this effort will take advantage of in-kind services provided by the Sustainable Agricultural Water Systems (SAWS) Unit operating out of the United States Department of Agriculture’s (USDA’s) Agricultural Research Service office at University of California, Davis (UC Davis). This unit has been conducting field studies on the use of recharge wells to enhance groundwater infiltration at several locations in the Central Valley. They are particularly interested in testing the performance of low-cost, small diameter recharge wells by comparison to the more standard large diameter wells that are more widely used in stormwater capture and groundwater infiltration applications. The SAWS Unit includes experienced soil scientists and hydrogeologists equipped with an array of geophysical survey and monitoring tools (tTEM, NMR, and ERT) which they propose to make available to support the proposed grant funded activities.

The Recharge Well Design task would first compile and review literature on recharge well design and siting, and a range of in-situ investigations aimed at developing site selection and recharge well design guidance for deployment in the basin. The guidance shall address geologic characterization, site selection, recharge well design, and management of potential water quality concerns.

The second task, Recharge Well Deployment will deploy recharge wells at sites outside LDSR where landowners with suitably sized groundwater wells are willing to make their facilities recharge well installation and testing. Up to two sites are planned in the Cosumnes subbasin along the lower four miles of the FSC. Funding for these deployments is included in this grant application. Four sites are planned in the South American subbasin along the four-mile stretch of the FSC extending north from the Cosumnes River. Funding for these latter deployments is being requested in the GSP Implementation grant for the South American subbasin.

Outreach to well owners will occur while design refinement activity is going on at the LDSR site. Where wells and land are made available, CGA will arrange for appropriate geophysical surveys following the guidance developed through the design refinement process and select the most promising sites for recharge well construction and testing. As at the LDSR site, the installation will include both a large diameter and a small diameter recharge well, with the design of each well being informed by the results of the design refinement task. The installed wells will be operated during the winter period (November to March) so as not interfere with the use of the supply wells for seasonal farming or other land management activities. Well connections and instrumentation will be temporary and easily removable to accommodate land management.

* An explanation of communities served,

**[proponent should identify** Grantwriter will flesh out]

* measurable objectives, minimum thresholds, plan implementation timeline, and feasibility. (If any of these areas are NOT applicable, state which area and why.);

[Grantwriter will fill out]

* A description of the proposed Project or Component’s goals, objectives, and needs;

**[proponent should provide]**

The Goal of the Recharge Pilot Studies component is to construct and operate recharge projects to provide 1,000 AF per year or more additional recharge to the basin from the capture and infiltration of local stormwater.

The Objectives of the Recharge Pilot Studies component is to construct operating recharge projects to quantify expected benefits, develop Best Management Practices (BMPs), and transition to permanent recharge projects that rely on infiltration from natural drainages, constructed basins, and/or dry wells.

The Needs of the Recharge Pilot Studies component includes conducting pilot studies to demonstrate benefit to the basin and help direct BMPs and provide implementation costs for expansion into other parts of the basin.

* A description of how the Project or Component’s goals, objectives, and needs will be met by the proposed Project or Component.

**[proponent should provide bullet points;** Grantwriter will flesh out]

1. (4 points) NOTE: FOR IMPLEMENTATION PROJECT/COMPONENTS FOLLOW 2A BELOW; FOR PLANNING PROJECT/COMPONETS FOLLOW 2B BELOW (4 points maximum will be given for **2A OR 2B**).

2A – **Implementation Project**/Components Only: Quantifiable benefits expected to be realized from the proposed Project or Component.

* Include an explanation of the benefits that are expected to be realized from the proposed Project or Component.

Quantifiable benefits from the Recharge Pilot Studies component includes: 1) Stabilized water levels due to augmented recharge. Water levels will be monitored at Representative Monitoring Sites (RMS) wells and monitoring infrastructure constructed at the project site specifically to measure local benefits from the project; 2) Demonstrate project effectiveness and provide BMPs to guide expansion of new projects into other parts of the basin; and 3) Data collected to determine site suitability and characterize subsurface conditions will guide identification and prioritization of additional recharge projects, and will be used to refine the Hydrogeologic Conceptual Model (HCM) for the basin.

* Describe how the claimed benefits will be evaluated and quantified.

**[proponent should provide bullet points**; grantwriter will flesh out]

* Assure industry standard units of measurements are used to in measurement of benefits.

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

* If activities are addressing DWR comments on GSP, explain how the proposed activity fully addresses comments and if not, which comments are not addressed and why.
* Explain if the proposed activities will help fill data gaps or other areas in the GSP that was known to be lacking.
* Explain how the activities assist in the feasibility of implementation of the GSP or Alternative.

 **[proponent should provide bullet points**; grantwriter will flesh out]

1. (2 points): Provide a regional and Project/Component map(s).

**[proponent should provide]**

* Provided map(s) clearly depict the site location, current conditions, and benefitting areas as Attachment 4. **DO NOT INCLUDE IN WORK PLAN!**
1. (4 points) Explain if the proposed Project or Component will benefit an URC, Tribe or SDAC.
* Clearly explanation if the proposed Project or Component will benefit an URC, Tribe or SDAC.
* Identify the URC(s), Tribe(s), and/or SDAC(s) that the proposed Project or Component will be benefiting.

[Proponent should identify any they know about; otherwise, grantwriter will complete]

* Provide map(s) depicting the URC(s), Tribe(s), and/or SDAC(s) that the proposed Project or Component will be benefiting. Add these maps to Attachment 4 to ensure the maps are not counted against the page number allotment.

[grantwriter will complete]

* Provide the amount of grant funding per Component (if no Components, per the Project) that will benefit the Tribe, Underrepresented Community, and/or SDAC.

[grantwriter will contact proponent to complete]

1. (4 points) 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.).

**[proponent should provide bullet points if they know of benefits**; grantwriter will flesh out]

* + Provide justification such as domestic well census results, water system maps, service area maps, etc.
	+ Describe if the Project or Component will help address the needs of the State Water Board’s SAFER Program.

[grantwriter will complete]

1. (4 points) Describe how the proposed Project or Component addresses the Human Right to Water (AB 685 Section 106.3) and supports the established policy of the State that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking and sanitary purposes.

[grantwriter will complete]

**Project/Component Details**

1. **Scope of Work and Deliverables** (maximum of 4 points possible)

Descriptions of the anticipated tasks necessary to complete the proposal. **Tasks should be organized by the five budget categories, as indicated in the Budget and Schedule (below).** Include only tasks and deliverables that are being potentially funded by grant funds from this solicitation only. The work plan should also identify the anticipated deliverables for each task. Each task identified in the proposal must have a minimum of one deliverable. Deliverables should be actual work products that can be submitted to DWR. Include the percent (0 – 100%) completed.  The scope of work and deliverables must not exceed 2 pages per component using a minimum Arial, 10-point type font.

If awarded, this information will be used to develop the Grant Agreement. Follow the Agreement template provided at the following link: [www.water.ca.gov/sgmgrants.](http://www.water.ca.gov/sgmgrants.) Examples of past funded agreements are provided on the website to provide more instructions on how to develop this Scope of Work and Deliverables portion of the Work Plan. The Work Plan must include a scope of work to allow reviewers to understand the level of effort of the work being performed and to substantiate the cost estimates in the Budget.

1. (4 points) Include in the Work Plan a complete description of all tasks that will be completed as part of this grant Project or Component. Tasks associated with the Project or Component but not funded by potential grant funds from this solicitation should not be included.
	* Tasks should be organized by the five budget categories, as indicated in the Budget and Schedule (below).
	* Identify all necessary and reasonable deliverables. List at least one deliverable per task (see notes below).
	* Assure that all tasks and deliverables follow general outline of the example agreement and agreement template (see link above).

**a. Scope of Work**

The scope of work must list and concisely describe the necessary task(s) to complete the project. The Project Details of the Work Plan should identify how the interested parties including groundwater users, stakeholders, and the general public, will be informed about the proposed project progress and how relevant reports and data will be disseminated to these groups. The scope of work must identify tasks associated with the project.

**[proponent should provide]**

**(a) Component Administration**

**Task 1. Project Management**

Task 1 includes general component management tasks, such as invoicing, budget tracking, schedule management, staff assignments, and subconsultant coordination and management.

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

**Task 1 Geologic Characterization**

Task 1 includes *Recharge Well Design Refinement Guidance* work: Use sonic boring methods to create a continuous sediment coring at LDSR site at a location near the existing recharge well at the site, Correlate the sediment coring data with the data from a previously performed electrical resistivity tomography (ERT) geophysical survey at the site, Compare the correlated data to a similar set of correlated data from the tTEM survey and continuous sediment coring at the Mather South site and develop guidance for interpreting geophysical survey results without the benefit of continuous coring data

**Task 2 Site Selection**

Task 2 includes *Recharge Well Design Refinement Guidance* work: Perform geophysical surveys (ERT or tTEM depending on site conditions), and Interpret the results of the surveys (without sediment coring) using available drilling logs from USBR construction of the FSC in the Cosumnes and South American subbasins and other existing data on subbasin geology.

**Task 3 Recharge well design**

Task 3 includes *Recharge Well Design Refinement Guidance*work: Test the comparative performance of large diameter versus small diameter (lower cost) recharge well designs, Install one or more small diameter recharge wells (5 to 10 cm) nearby and at the same depth of the existing large diameter well (+/- 120 cm) that is connected to the domestic well located on the eastern portion of the LSDR property near the FSC, Perform geophysical surveys on the western portion of the LSDR site in the vicinity of the irrigation well on the property, Install one or more small diameter recharge wells and one large diameter recharge well at equal depths (based on the results of the geophysical surveys) at selected sites near the irrigation well, Connect the newly installed wells to the irrigation well, Install appropriate instrumentation for measuring the flow and volume of water entering each new recharge well, Record infiltration data for continuous 24/7 operation over a 90 to 100-day period and Compare the results of the small and large diameter recharge wells at the two sites to infiltration data previously recorded from a similar operation of the existing large recharge well.

**Task 4 Water Quality Management**

Task 4 Water Quality Management includes *Recharge Well Design Refinement Guidance* work: Conduct water quality monitoring in the FSC upstream and downstream of its intersection with the Freeport Canal during the period when winter floodwater could be available for release to the FSC (November through March), Identify the sediment and pollutant loads found in the canal water and evaluate the potential for these substances to adversely affect recharge well performance and/or groundwater quality, Consider design alternatives for mitigating such adverse effects and Prepare a report summarizing the findings of this effort.

**Task 5 Site Selection**

Task 5 includes *Recharge Well Deployment* work: Perform geophysical surveys (ERT or tTEM depending on site conditions) and Following the guidance developed through the design refinement process will select the two sites where recharge wells will be installed and establish the depth of these wells

**(c) Implementation / Construction**

**Task 1 Recharge Well Installation**

Task 1 includes *Recharge Well Design Refinement and Deployment Project* work: Install one recharge well, Install one recharge well, Connect the newly installed well to the irrigation well, and Install appropriate instrumentation for measuring the flow and volume of water entering each new recharge well

**(d) Monitoring / Assessment**

**Task 1 Model Update**

Task 1 includes updating appropriate model input files.

**(e) Engagement / Outreach**

**Task 1 Landowner Outreach**

Task 1 includes *Recharge Well Deployment* work: Landowners with suitably sized groundwater wells are willing to make these facilities available for recharge well installation and testing Two of these sites would be located in the Cosumnes subbasin along the lower four miles of the FSC.

**b.** **Project Deliverables**

Project deliverables should be actual work products that can be submitted to DWR (e.g., studies, engineering, design plans and specifications, land and easement acquisition, quality analysis, supporting tests completed in support of well design, drilling, completion, bid documents, photos of construction, etc.)

**[proponent should provide]**

**(a) Component Administration**

**Task 1. Project Management Deliverables**

* **Invoices**

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

**Task 1 Geologic Characterization**

* **XX**

**Task 2 Site Selection**

* XX

**Task 3 Recharge well design**

* **XX**

**Task 4 Water Quality Management**

* **XX**

**Task 5 Site Selection**

* **XX**

**(c) Implementation / Construction**

**Task 1 Recharge Well Installation**

* **XX**

**(d) Monitoring / Assessment**

**Task 1 Model Update**

* **XX**

**(e) Engagement / Outreach**

**Task 1 Landowner Outreach**

* **XX**
1. **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.

1. (1 point) Provide a completed budget summary table using template below.
	* Assure that the budget is reasonable for the project.
	* Assure that the budget table provided coincide with the scope of work and the schedule table.
2. **Schedule** (maximum of 1 point possible)

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.

1. (1 point) Provide a completed schedule table using template below.
	* Assure that the schedule is feasible for the project.
	* Assure that the schedule table provided coincide with the scope of work and the budget table.

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

* A description and/or list of expected environmental compliance requirements, including any California Environmental Quality Act obligations;
* A listing of environmental related permits or entitlements that are needed for the project;
* A list of easement/land acquisition needed.

**BUDGET TABLE TEMPLATE**

**[Grantwriter will complete summary budget compiling all components]**

**Component X: <enter title>**

Component X 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  | $0 |
| (b) Environmental / Engineering / Design | $0 |
| (c) Implementation / Construction | $0 |
| (d) Monitoring / Assessment | $0 |
| (e) Engagement / Outreach | $0 |
| **Total:** | **$0** |

# **SCHEDULE TABLE TEMPLATE**

**[Grantwriter will complete summary schedule compiling all components]**

*For Project with MULTIPLE Components use the following:*

**Grant Title: <enter title>**

| **Categories** | **Start Date** | **End Date** |
| --- | --- | --- |
| **Component 1: Grant Administration <or other component name if no Grant Administration is covered by grant funds>** |  |  |
| (a) Component Administration | MM/DD/YYYY | MM/DD/YYYY |
| (b) Environmental / Engineering / Design  | MM/DD/YYYY | MM/DD/YYYY |
| (c) Implementation / Construction  | MM/DD/YYYY | MM/DD/YYYY |
| (d) Monitoring / Assessment | MM/DD/YYYY | MM/DD/YYYY |
| (e) Engagement / Outreach | MM/DD/YYYY | MM/DD/YYYY |
| **Component X: <component name>** |  |  |
| (a) Component Administration | MM/DD/YYYY | MM/DD/YYYY |
| (b) Environmental / Engineering / Design  | MM/DD/YYYY | MM/DD/YYYY |
| (c) Implementation / Construction  | MM/DD/YYYY | MM/DD/YYYY |
| (d) Monitoring / Assessment | MM/DD/YYYY | MM/DD/YYYY |
| (e) Engagement / Outreach | MM/DD/YYYY | MM/DD/YYYY |