

SOLANO SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY

AGREEMENT FOR PROFESSIONAL SERVICES (Professional Services/Contractor)

THIS AGREEMENT, **effective July 1, 2025**, is between SOLANO SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY, a public agency existing under and by virtue of Chapter 573 of the 1989 statutes of the State of California, hereinafter referred to as "Agency," and **Luhdorff & Scalmanini Consulting Engineers**, hereinafter referred to as "Contractor."

The Agency requires services for **Solano Subbasin Groundwater Sustainability Plan Implementation Support**; and the Contractor is willing to perform these services pursuant to the terms and conditions set out in this Agreement.

IT IS MUTUALLY AGREED, as follows:

1. SCOPE OF SERVICES

The Agency hereby engages the Contractor, and the Contractor agrees to perform the services for **Solano Subbasin Groundwater Sustainability Plan Implementation Support**, as described in Exhibit A, in accordance with the terms of this Agreement and any applicable laws, codes, ordinances, rules or regulations. In case of conflict between any part of this Agreement, this Agreement shall control over any Exhibit.

2. COMPENSATION

Compensation for services shall be as follows: Hourly rate of personnel plus any allowed reimbursable expenses based on unit costs as indicated on any allowed reimbursable expense in Exhibit B **not to exceed \$1,442,500** for all work contemplated by this Agreement.

3. METHOD OF PAYMENT

Payment for services will be approved by the Agency's representative only if all contract requirements have been met.

Invoices must be submitted monthly, and upon approval of the Agency's representative, the Agency shall pay the Contractor monthly in arrears for fees and allowed expenses incurred the prior month. Invoices that are over 6 months old will not be approved or paid by the Agency. **In no event shall the cumulative total paid pursuant to this agreement exceed the maximum amount provided for in paragraph 2 of this Agreement.**

Every invoice shall specify hours worked for each task identified in Exhibit A undertaken. To be approved by payment, any allowed reimbursable expenses will need supporting written documentation such as receipts and mileage logs.

Each invoice shall be accompanied by a spreadsheet showing, by month, costs incurred to date for the project broken down by the Tasks identified in Exhibit A. The spreadsheet shall show, for each task, budget amounts, total expended and remaining amounts. The spreadsheet shall show a subtotal for each fiscal year covered by the contract. Any amendments to the contract shall be listed and incorporated into spreadsheet. An example of a typical spreadsheet shall be provided by the Agency.

4. **TIME OF PERFORMANCE**

This Agreement shall become effective as of the date it is executed and said services will take place between this date and **June 30, 2026** as directed by the Agency.

5. **MODIFICATION AND TERMINATION**

This Agreement may be modified or amended only by written instrument signed by the parties hereto, and the Contractor's compensation and time of performance of this Agreement shall be adjusted if they are materially affected by such modification or amendment.

Any change in the scope of the professional services to be done, method of performance, nature of materials or price thereof, or to any other matter materially affecting the performance or nature of the professional services will not be paid for or accepted unless such change, addition or deletion be approved in advance, in writing, by the Agency's General Manager.

This Agreement may be terminated by the Agency at any time, without cause, upon written notification to the Contractor. The Contractor may terminate this Agreement upon 30 days written notice to Agency.

Following termination by the Agency or the Contractor, the Contractor shall be reimbursed for all expenditures made in good faith in accordance with the terms of this Agreement that are unpaid at the time of termination.

6. **PERMITS** *(Note: include only if permits are required)*

Permits required by governmental authorities will be obtained at the Contractor's expense, and the Contractor will comply with local, state and federal regulations and statutes including Cal/OSHA requirements.

7. **INDEMNIFY AND HOLD HARMLESS**

To the extent permitted by law, Contractor shall hold harmless, defend at its own expense, and indemnify Solano Subbasin Groundwater Sustainability Agency, its directors, officers, employees, and authorized volunteers, against any and all liability, claims, losses, damages, or expenses, including reasonable attorney's fees and costs, arising from all acts or omissions of Contractor or its officers, agents, or employees in rendering services under this contract; excluding, however, such liability, claims, losses, damages or expenses arising Solano Subbasin Groundwater Sustainability Agency's sole negligence or willful acts.

8. **INSURANCE**

Minimum Insurance Requirements: Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries or death to persons or damages to property which may

arise from or in connection with the performance of the work hereunder and the results of that work by the Contractor, his agents, representatives, employees or sub-contractors.

Coverage - Coverage shall be at least as broad as the following:

1. **Commercial General Liability (CGL)** - Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01) including products and completed operations, property damage, bodily injury, personal and advertising injury with limit of at least two million dollars (\$2,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (coverage as broad as the ISO CG 25 03, or ISO CG 25 04 endorsement provided to Solano Subbasin Groundwater Sustainability Agency) or the general aggregate limit shall be twice the required occurrence limit.
2. **Automobile Liability** – (if necessary) Insurance Services Office (ISO) Business Auto Coverage (Form CA 00 01), covering Symbol 1 (any auto) or if Contractor has no owned autos, Symbol 8 (hired) and 9 (non-owned) with limit of one million dollars (\$1,000,000) for bodily injury and property damage each accident.
3. **Workers' Compensation Insurance** - as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease. **Waiver of Subrogation:** The insurer(s) named above agree to waive all rights of subrogation against the Solano Subbasin Groundwater Sustainability Agency, its elected or appointed officers, officials, agents, authorized volunteers and employees for losses paid under the terms of this policy which arise from work performed by the Named Insured for the Agency; but this provision applies regardless of whether or not the Solano Subbasin Groundwater Sustainability Agency has received a waiver of subrogation from the insurer.

If the Contractor maintains broader coverage and/or higher limits than the minimums shown above, the Solano Subbasin Groundwater Sustainability Agency requires and shall be entitled to the broader coverage and/or higher limits maintained by the Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the Solano Subbasin Groundwater Sustainability Agency.

Other Required Provisions - The general liability policy must contain, or be endorsed to contain, the following provisions:

1. **Additional Insured Status:** Solano Subbasin Groundwater Sustainability Agency, its directors, officers, employees, and authorized volunteers are to be given insured status (at least as broad as ISO Form CG 20 10 10 01), with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations.
2. **Primary Coverage:** For any claims related to this project, the Contractor's insurance coverage shall be primary at least as broad as ISO CG 20 01 04 13 as respects to the Solano Subbasin Groundwater Sustainability Agency, its directors, officers, employees and authorized volunteers. Any insurance or self-insurance maintained by the Solano Subbasin Groundwater Sustainability Agency its directors, officers, employees and authorized volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

Notice of Cancellation: Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Solano Subbasin Groundwater Sustainability Agency.

Self-Insured Retentions - Self-insured retentions must be declared to and approved by the Solano Subbasin Groundwater Sustainability Agency. The Solano Subbasin Groundwater Sustainability Agency require the Contractor to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or Solano Subbasin Groundwater Sustainability Agency.

Acceptability of Insurers - Insurance is to be placed with insurers having a current A.M. Best rating of no less than A: VII or as otherwise approved by Solano Subbasin Groundwater Sustainability Agency.

Verification of Coverage – Contractor shall furnish the Solano Subbasin Groundwater Sustainability Agency with certificates and amendatory endorsements, or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the Solano Subbasin Groundwater Sustainability Agency before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Contractor's obligation to provide them. The Solano Subbasin Groundwater Sustainability Agency reserves the right to require complete, certified copies of all required insurance policies, including policy Declaration pages and Endorsement pages.

Sub-contractors - Contractor shall require and verify that all sub-contractor maintain insurance meeting all the requirements stated herein, and Contractor shall ensure that Solano Subbasin Groundwater Sustainability Agency its directors, officers, employees, and authorized volunteers are an additional insured are an additional insured on Commercial General Liability Coverage.

9. **COMPLIANCE WITH LAW**

The Contractor shall be subject to and comply with all federal, state and local laws and regulations applicable with respect to its performance under this Agreement, including but not limited to, licensing, employment and purchasing practices, and wages, hours and conditions of employment.

10. **RECORD RETENTION**

Except for materials and records, delivered to the Agency, the Contractor shall retain all materials and records prepared or obtained in the performance of this Agreement, including financial records, for a period of at least three years after the Contractor's receipt of the final payment under this Agreement. Upon request by the Agency, the Contractor shall make such materials and records available to the Agency at no additional charge and without restriction or limitation to State and federal governments at no additional charge.

11. **OWNERSHIP OF DOCUMENTS**

All materials and records of a finished nature, such as final plans, specifications, reports and maps, prepared or obtained in the performance of this Agreement, shall be delivered to and become the property of the Agency. All materials of a preliminary nature, such as survey notes, sketches, preliminary plans, computations, and other data, prepared or obtained in the performance of this Agreement, shall be made available, upon request, to the Agency at no additional charge and without restriction or limitation on their use.

12. **SUBCONTRACT AND ASSIGNMENT**

This Agreement binds the heirs, successors, assigns and representatives of the Contractor. The Contractor shall not enter into subcontracts for any work contemplated under this Agreement and shall not assign this Agreement or monies due or to become due, without the prior written consent of the General Manager of the Agency or his designee, subject to any required state or federal approval.
(Note: list any subcontractors here)

13. **NONRENEWAL**

The Contractor understands and agrees that there is no representation, implication, or understanding that the services provided by the Contractor under this Agreement will be purchased by the Agency under a new agreement following expiration or termination of this Agreement and waives all rights or claims to notice or hearing respecting any failure to continue purchase of all or any such services from the Contractor.

14. **NOTICE**

Any notice provided for herein are necessary to the performance of this Agreement and shall be given in writing by personal delivery or by prepaid first-class mail addressed as follows:

AGENCY

Chris Lee, General Manager
Solano Subbasin Groundwater Sustainability Agency
810 Vaca Valley Parkway, Suite 202
Vacaville, CA 95688

CONTRACTOR

Scott Lewis, President
Luhdorff & Scalmanini Consulting Engineers
500 First Street
Woodland, CA 95695
slewis@lsce.com

The parties have executed this Agreement the day and year first above written. If the Contractor is a corporation, documentation must be provided that the person signing below for the Contractor has the authority to do so.

Solano Subbasin Groundwater
Sustainability Agency

Luhdorff & Scalmanini Consulting Engineers

By: _____
Chris Lee,
General Manager

By: _____
Scott Lewis,
President

FOR SGSA USE ONLY

Contract Period: 7/1/2025 to 6/30/2026

File Number: AG-L-5

Account Manager: Maritza Flores Marquez

G/L Account #: 62101IMP, 62102IMP, 62103IMP, 62104IMP, 62105IMP, 62106IMP, 62107IMP, 62108IMP, 62109IMP, 62110IMP, 62111IMP, 62112IMP, 6213IMP, 6146AC

Job Cost #: _____

Contract Type: Professional Services

EXHIBIT A

SCOPE OF SERVICES

Scope of Work

The Solano Subbasin Groundwater Sustainability Agency (Solano GSA) requires the following tasks to assist with implementation of the Groundwater Sustainability Plan.

Grant Administration

The Solano GSA requires assistance with administering the Proposition 68 grant.

GSP Monitoring and Data Management Enhancements

The Solano GSA requires assistance with monitoring and addressing data gaps, data management system enhancements, interconnected surface water and groundwater dependent ecosystems, and Putah Creek projects.

Groundwater Use Management Actions

The Solano GSA requires assistance with improving the understanding of basin's water use, local water conservation and management, and support for potential groundwater management policies.

Water Supply Replenishment and Reliability Projects

The Solano GSA requires assistance with targeted recharge projects, evaluations of localized groundwater conditions, and City of Vacaville Recycled Water Planning.

GSP Implementation, Outreach, and Compliance Activities

The Solano GSA requires assistance with updating the Solano County and Solano Subbasin Data Management System, acquisition of key water budget data required for GSP annual reporting, and groundwater conditions annual update report.

Funding Development Support

The Solano GSA requires assistance with grant funding, coordination and technical support.

On-call SGMA Technical Support

The Solano GSA requires on-call technical assistance for GSP implementation.

Deliverables

Grant Administration

- Quarterly Progress Reports, Quarterly Invoices, and all required backup documentation
- Draft and Final Component Completion Reports
- Draft and Final Grant Completion Reports

GSP Monitoring and Data Management Enhancements

- Monitoring enhancements and addressing monitoring data gaps
 - Outreach letters for well recruitment
 - Times series charts of water level elevations, rating curve charts
 - Survey data from streams stages, maps
 - Summary tables and maps of well inventory, including groundwater quality sampling results
- Data management system enhancements
 - Enhanced DMS with web-based visualization tools for viewing and accessing GSP-related data

- Documentation of DMS
 - Update Guidebook for GSAs
- ISW and GDEs and Putah Creek projects
 - Technical Memo summarizing ISW conditions in the Subbasin and GDE health

Groundwater Use Management Actions

- Improving understanding of basin water use
 - Technical Memo summarizing improved understanding of Subbasin water use including ET, surface water and documenting model updates
 - Education and Outreach materials
- Local water conservation and management (to be prepared by GSAs, and subcontractors/collaborators)
 - Technical Memo summarizing results of water conservation efforts
- Groundwater management policy
 - Technical Memo summarizing economic impacts of policies
 - Meeting Notes and Agendas

Water Supply Replenishment and Reliability Projects

- Recharge study
 - Feasibility Study
 - 100% Design, plans and specifications, if applicable
 - Awarded contracts, if applicable
 - Required environmental documentation for CEQA compliance
 - Copies of required permits and access agreements
 - Health and Safety Plan, if applicable
- Localized groundwater conditions evaluation
 - Time-series charts of water level elevations
 - Summary tables of water demands including groundwater use and surface water diversions
 - Document summarizing well vulnerability, water supply reliability options and considerations, and recharge and replenishment interests and feasibility
- City of Vacaville recycled water planning (*to be prepared by City of Vacaville, and subconsultants*)
 - Technical Memorandum

GSP Implementation, Outreach, and Compliance Activities

- Annual reporting
 - Annual reports
- Addressing GSP corrective actions and initial efforts related to completion of five-year periodic evaluation of GSP
 - Draft materials for five-year periodic evaluation of GSP
- Stakeholder engagement and community outreach (*to be prepared by GSAs, and subconsultants*)
 - Subbasin outreach materials
 - Stakeholder and Board Meeting minutes
 - Workshop agenda and presentation materials

Funding Development Support

- Grant or other submittal materials, as appropriate

On-Call SGMA Technical Support

- As necessary and requested

April 1, 2025
File No. 25-1-060

Mr. Chris Lee
Solano Subbasin Groundwater Sustainability Agency
810 Vaca Valley Parkway, Suite 203
Vacaville, CA 95688

SUBJECT: 2025-2026 Solano Subbasin Groundwater Sustainability Plan Implementation Support

Dear Mr. Lee:

In response to your request, Luhdorff & Scalmanini, Consulting Engineers (LSCE) is pleased to provide this letter describing a scope of work and budget to support the Solano Subbasin Groundwater Sustainability Agency Collaborative (Solano Collaborative¹) and other Groundwater Sustainability Agencies (GSA) in the Solano Subbasin with implementation of the Solano Subbasin Groundwater Sustainability Plan (GSP) during Fiscal Year 2025-2026 spanning July 1, 2025 through June 30, 2026. The Solano Subbasin Groundwater Sustainability Agency (Solano GSA) is the point of contact and contracting entity for the Solano Subbasin on behalf of the Solano Collaborative. The scope and budget include assistance with GSP implementation tasks described in the workplan for the Proposition 68 Round 2 GSP implementation grant awarded to the Subbasin by the Department of Water Resources (DWR). The Solano GSA is the lead entity responsible for managing and administering the GSP implementation grant. Tasks included in the grant workplan, and which will be supported by this scope of work, include grant administration, GSP monitoring and data management enhancements, advancing groundwater use management actions, planning of water supply replenishment and reliability projects, and GSP reporting, updates, and stakeholder outreach. Tasks related to completion of the grant workplan will build on efforts conducted in Fiscal Year 2024-2025.

The grant supports activities related to implementation of the GSP through April 30, 2026. Although we understand there has been communication between the GSA and DWR about the possibility of extending the grant deadline, no definitive response or grant extension has been provided by DWR. Therefore, this scope of work assumes that there will be no extension of the grant schedule and associated deadline for completion of grant tasks. If the grant schedule is extended by DWR, LSCE will coordinate with the GSA to evaluate whether this scope and budget for Fiscal Year 2025-2026 should be amended to recognize the grant extension and to hold some grant funds for supporting work in Fiscal Year 2026-2027. LSCE will also coordinate with the GSA to evaluate whether the scope and budget should be amended based on the status of the overall grant budget at the end of Fiscal Year 2024-2025. Additional tasks are included to assist with tasks not covered by the grant, including funding

¹ The Solano Collaborative consists of the following entities: Solano Subbasin GSA, Solano Irrigation District GSA, City of Vacaville GSA, Sacramento County GSA, Northern Delta GSA

development and grant applications, support continuing GSP implementation outside of the scope of the grant or after the grant completion deadline passes, and for responding to on-call requests related to support for Solano GSA activities.

Accordingly, this scope of work describes efforts in Fiscal Year 2025-2026 relating to the following tasks included in the GSP implementation grant:

Task 1: Grant Administration

Task 2: GSP Monitoring and Data Management Enhancements

Task 3: Supporting Groundwater Use Management Actions

Task 4: Water Supply Replenishment and Reliability Projects

Task 5: GSP Implementation, Outreach, and Compliance Activities

Additional tasks included in the scope of work, which are not anticipated to be supported by the GSP implementation grant because they are outside the scope of the activities eligible for grant support or occur after the grant completion deadline, include the following:

Task 6: Funding Development Support

Task 7: As-Needed Technical Support for GSP Implementation (only specific efforts outside the grant scope or after the grant completion deadline on April 30, 2026)

Task 8: On-Call Technical Support for Solano GSA Activities

Task 1: Grant Administration

Task 1 involves supporting the Solano GSA in the management and administration of DWR's GSP implementation grant project and funding awarded to the Subbasin. Grant administration support efforts to be conducted by LSCE will include assistance in preparing Quarterly Progress Reports and Quarterly Invoices detailing work completed during reporting periods with sufficient information for the DWR Grant Manager to understand and review backup documentation submitted with invoices. Additional assistance will include support to collect and organize backup documentation by component, budget category, and task and prepare a summary Excel document detailing contents of the backup documentation organized by component, budget category, and task.

This task will include providing support in grant administration (to be completed by the end of grant period) and assisting in preparation of draft and final Component Completion Reports for each grant component. All deliverables listed in the grant workplan will be submitted with each Final Component Completion Report. LSCE will provide support in preparing draft and final Grant Completion Reports at the conclusion of the grant period. The Completion Reports will be prepared and presented in accordance with the provisions of the grant agreement. All deliverables will be submitted according to the grant agreement schedule unless a new deliverable due date is approved by the DWR Grant Manager.

Task 2: GSP Monitoring and Data Management Enhancements

This task includes continued implementation of three elements initiated during the prior fiscal year:

1. Monitoring enhancements and addressing monitoring data gaps,
2. Data management system enhancements, and
3. Interconnected surface water (ISW) and groundwater dependent ecosystems (GDEs) and Putah Creek projects.

Monitoring enhancements and addressing monitoring data gaps will include providing continued technical assistance to Solano Subbasin GSAs in identifying groundwater level and quality representative monitoring site (RMS) wells and coordination with monitoring entities as necessary to ensure the required monitoring is conducted and continued in accordance with the Solano Subbasin GSP. This will include ongoing assistance coordinating with DWR and well owners to continue level monitoring at some RMS wells that have recently been dropped from DWR's monitoring program. It will also include supporting GSAs in efforts to engage with entities conducting monitoring of groundwater quality RMS wells to ensure the specified chemical constituents are being monitored and the monitoring frequencies are consistent with the GSP. As part of this task, LSCE will also assist GSAs in addressing key data gaps identified in the GSP. One notable data gap includes identification of additional RMS wells or supplemental monitoring network wells in select areas of the Subbasin. LSCE will support efforts to address monitoring data gaps through identification and recruitment of additional monitoring sites and support in well vetting and documentation of well information for any wells included in the GSP monitoring program. LSCE will assist with outreach efforts on behalf of the GSAs to solicit new RMS or supplemental monitoring wells, as needed.

Expansion of automated water level monitoring includes the effort and equipment to instrument up to 10 key wells with automated water level monitoring equipment. This involves inspecting and identifying candidate wells for automated monitoring, installation and setup of automated water level instrumentation, purchase of equipment for automated water level monitoring and telemetry, and one year subscription for telemetry (where possible/feasible).

Task 2 will also include refining of available information on locations, types, depths, and point of use for water supplied by active wells and will also include geospatial mapping and formulation of a plan and process to maintain a database of accurate information on active water supply wells across the entire Subbasin, with a focus on the Northwest (NW) Focus Area. To improve the characterization of water quality conditions in domestic wells in the Subbasin, a subset of domestic wells identified in the well inventory will be selected for water quality sampling for key constituents of interest. Up to 25 wells will be selected for water quality sampling, with a prioritization of wells in Underrepresented Communities and other areas of need for improved information on domestic well water quality.

The well inventory efforts will be conducted in coordination with inventorying of surface water diversions included as part of parallel efforts included in Task 3. Data developed through the well inventory will be assembled in geospatial format and in formats compatible with existing needs of local entities involved in reviewing and overseeing well-related issues or for use in other applications. The planning involved in the well inventory task will include addressing topics related to data sharing, confidentiality, and other considerations to ensure appropriate data transparency and security are maintained. Additionally, remaining data gaps in information on active wells will be identified at the

conclusion of the efforts conducted as part of completion of this component along with providing recommended next steps to address any remaining needs.

Data management system enhancements included in the task involve completing upgrades to the existing DMS to provide more streamlined data reporting capabilities and enhanced interactive data visualizations of GSP data for internal reference by the GSAs and for distribution of information to the public. This task will include database structure refinement for implementing a cloud-based SQL Server environment including integration of both spatial and tabular data. This task will include creating processes and tools for streamlined reports, queries, and views to manage and export data to facilitate analysis and reporting of data. DMS enhancements will also include the development of tools and procedures to update the DMS with information assembled from various data sources (including public databases), QA/QC procedures to ensure data quality in the DMS, and workflows to update and publish spatial datasets.

The last element of Task 2 is furthering the characterization and evaluation of interconnected surface water (ISW) and groundwater dependent ecosystems (GDEs) and Putah Creek projects. This will include conducting initial efforts related to enhancing existing surface water monitoring along Putah Creek and other surface water features and additional review of potential GDEs, and further evaluation of the spatial distribution, ecosystem composition and health characteristics of GDEs. This will also include assessing any remaining ISW and GDE data gaps and considering the long-term approach to monitoring GDEs and any need for refinement or further detailing of the GDE monitoring proposed in the GSP. As part of the longer-term work on ISW and GDE assessment in the Subbasin, LSCE will provide technical support relating to engagement with tribal communities to understand any culturally important GDEs in the area. Efforts under Task 2 will also include updating mapping of managed wetland areas within the Subbasin. LSCE anticipates continued engagement with a subconsultant to support completion of this task.

Task 3: Support Groundwater Use Management Actions

Task 3 includes continued implementation of three elements initiated during the prior fiscal:

1. Improving the understanding of basin water use
2. Local water conservation and management
3. Supporting groundwater management policies

Improving the understanding of basin water use involves refining information on the locations and volumes of applied surface water and groundwater extraction in the Solano Integrated Hydrologic Model (IHM), with emphasis on improving estimations of urban water demands and water demands met by shallow groundwater and applied surface water. In accordance with GSP regulations, Subbasin water balances are summarized for the land surface, groundwater, and surface water systems. This task will include developing refined information related to the land surface system to better estimate consumptive use of water within the Subbasin through improvements to estimates of evapotranspiration (ET), which is a key driver of water use and groundwater pumping. Most of the groundwater pumping occurring in the Subbasin is unmetered and estimates of the distribution and

amount of groundwater pumping are derived from hydrologic modeling using the Solano IHM. Hydrologic modeling relies on inputs of ET and surface water deliveries to calculate residual demand that is assumed to be met through groundwater pumping. As a result, refining of available information on ET and surface water deliveries in the Subbasin will improve simulations of groundwater pumping and produce more accurate estimates of groundwater use to support groundwater management decision making.

This task will include evaluation of remote sensing ET data available from OpenET² in conjunction with available ground-based sensors to assess parameters in the Solano IHM related to ET (including crop coefficients and soil properties). Currently, the platform OpenET provides estimates of ET derived from remotely sensed satellite data for six different ET models or algorithms. The OpenET data are available as spatially continuous data for the western United States. These data are available as daily, monthly, or annual values for individual pixels (cells) or fields. Monthly data from OpenET for fields will be aggregated for at least water years 2017-2022 (and possibly through 2024, if data are available and the analysis of additional years can be completed within the grant budget) for use in assessing consumptive use of water in the Subbasin. In coordination with willing landowners, available data from ground-based ET and soil moisture sensors will be compiled and assessed within the Subbasin with support from Dixon and Solano Resource Conservation Districts (RCDs). Additional ET and soil sensors, at up to 15 sites, will also be installed to track ET and soil conditions representing a cross-section of land use types in the Subbasin including riparian areas, native vegetation, and agricultural lands employing a variety of agricultural management practices.

A robust comparison of ET estimates from the OpenET data with ground-based sensor measurements will be conducted to assess ET estimates from OpenET and determine the algorithm(s) that best reflect local ET conditions. The comparison will utilize additional information such as land use mapping, vegetation mapping, agricultural management practices (e.g., irrigation method), groundwater extraction volumes as available, and any additional local information that is identified as relevant. Using information from this analysis, updated crop coefficients will be developed for inclusion in refinements to the hydrologic model for the Subbasin. These model refinements will improve estimates of total volumes and spatial distribution of consumptive water use in the Subbasin.

An additional aspect of this task will be refining information on surface water diversions in the Subbasin. Estimates of the volume and distribution of groundwater pumping in the Subbasin rely on use of the hydrologic model and calculations that incorporate total water demand and available surface water supplies to estimate residual unmet demand that must be satisfied from groundwater uptake or groundwater pumping. Therefore, improving information on surface water diversions will improve estimates of groundwater demands, including pumping, and also the overall Subbasin water budget. This work will involve development and implementation of a plan for completion of an inventory of surface water points of diversion, volumes of surface water diverted, and the place of use for these diversions. The effort will coordinate with activities related to the well inventory planned as part of Task

² <https://openetdata.org/>

2 and will include working with local entities, including the County of Solano, to assemble critical information on surface water diversions to support refinements to analyses of Subbasin water use and planning related to development of an integrated water supply and drainage implementation framework being conducted by the County. The inventory will utilize available information from the State Water Resources Control Board eWRIMS database, with desktop and field work conducted to validate, refine, and augment information in the eWRIMS database. The surface water diversion inventory plan will include a process to maintain the currency and accuracy of data on surface water diversions in the Subbasin. Data developed through the well inventory will be assembled in geospatial format and in formats compatible with existing needs of local entities involved in reviewing and overseeing well-related issues or for use in other applications. The planning involved in the surface water diversion inventory task will include addressing topics related to data sharing, confidentiality, and other considerations to ensure appropriate data transparency and security are maintained. Additionally, remaining data gaps in information on diversions will be identified at the conclusion of the efforts conducted as part of completion of this component along with providing recommended next steps to address any remaining needs.

Information and data developed through the analysis of ET, inventorying of surface water diversions, and active well inventory completed as part of grant Component 2 will be used to characterize the spatial distribution of utilization of groundwater and surface water at the parcel scale to support refinements to how fees to fund GSP implementation are assessed across the GSAs in the Subbasin. The task will include enhanced accounting and understanding of the water system in the Solano Subbasin with emphasis on estimating future conditions. Future conditions include both proposed management scenarios as well as climate impacts to the region.

Furthering local water conservation and management involves supporting the continuation and expansion of grower education and outreach efforts to provide growers with educational resources that help them to plan and implement on-farm practices that simultaneously support groundwater sustainability and maintain or improve agricultural productivity. LSCE will support Solano and Dixon RCDs efforts related to grower outreach and education. As part of this task, LSCE will provide technical information and presentations to support the education of growers on groundwater and surface water conditions in the Subbasin and to identify and encourage interest in implementing practices on working lands that can enhance and improve water management efforts to ensure sustainability is maintained. These activities will include, in coordination with the RCDs, evaluating existing on-farm practices that may impact water management, tracking of which practices are being implemented where, and working with individual landowners to evaluate and identify practices that could be implemented to improve water management. Efforts will involve participation in workshops and providing technical information in educational materials. LSCE will support site-specific assessments of practices and provide technical assistance in addressing irrigation and stormwater management, as appropriate. Stormwater management is a concern in several areas of the Subbasin, including in the Tremont 3 watershed to the north and east of Dixon. Education and outreach programs will include specific efforts to engage with small farmers and other at-risk growers.

Implementation of grower education activities would be expected to benefit groundwater levels, groundwater storage, and water quality. Encouraging growers to implement on-farm water management practices that maximize surface water use and reduce non-beneficial ET would be expected to provide in-lieu recharge benefits to the groundwater system. Encouraging soil management to enhance infiltration would be expected to enhance direct groundwater recharge. Both in-lieu and direct recharge would be anticipated to benefit groundwater levels and groundwater storage. Encouraging growers to implement precision nutrient management would also be expected to help manage nutrient loading in the Subbasin, with benefits to water quality. Targeting small and at-risk growers will have an added benefit of increasing job security and economic resilience for the local community.

Based on the engagement and tracking conducted related to water management practices, a small number of sites will be identified for implementing monitoring to assess the benefits achieved through different on-farm practices. This monitoring will be used to quantify the effects of practices on reduced runoff and stormwater flows, enhanced recharge, and soil and groundwater conditions. Furthermore, these sites may serve as demonstration sites illustrating how various practices can be implemented in an effort to encourage broader adoption of key management practices.

Support for groundwater management policies includes assisting in the evaluation and formulation of policies to ensure sustainable groundwater management in the Subbasin is maintained. As part of this task, LSCE and subconsultants with expertise in areas of economics and/or public policy, will assist in consideration of policies related to land use development and management, incentivization to promote enhanced groundwater recharge and sustainable groundwater development, and existing groundwater ordinances and permitting policies as they relate to groundwater use, reliability, and compliance with water quality standards. A focus of the task is identifying and developing policies while considering future adaptation strategies to improve resiliency to changing climate conditions.

Land use changes in the Subbasin can result in additional and hardening of groundwater demands and decreased groundwater recharge. The Subbasin has over time seen changes in land use, particularly the conversion of lands to a permanent crop type and increases in less permeable surfaces (both in agricultural and developed land). This is specifically concerning in the Northwest Focus Area where lowering groundwater levels have been noted in recent years. This task will include developing a plan for evaluating sustainable land use development across the Subbasin that incorporates consideration of the spatial distribution of land use and groundwater development, triggers and response actions relating to land use changes, and associated policies to encourage and manage land use development in a manner consistent with the GSP.

Additionally, as part of this element of Task 3, LSCE and subconsultants will work with Subbasin stakeholders to evaluate potential incentives and policies relating to promoting enhanced groundwater recharge projects and management practices while also promoting actions that ensure sustainable groundwater development and utilization, especially in areas of greater interest for groundwater sustainability and groundwater supply reliability without land use restrictions. These policies would

primarily focus on efforts to limit future over development of new groundwater supplies from the Basal Tehama Formation and in areas with domestic or other drinking water supply wells that are susceptible to impacts from groundwater level declines. This task will also involve development of strategies to manage and monitor groundwater use including potential updates to groundwater ordinances or well and groundwater development project permitting processes.

LSCE and its subconsultants will coordinate and participate in meetings with GSAs, Counties, and other stakeholders during completion of the task.

Task 4: Water Supply Replenishment and Reliability Projects

This task will include continued implementation of three elements initiated during the prior fiscal year:

1. Recharge study – targeted augmentation
2. Localized groundwater conditions evaluation
3. City of Vacaville Recycled Water Planning

The targeted augmentation recharge study will include completion of feasibility testing and analysis for implementing groundwater recharge activities at several high-priority sites to replenish groundwater and provide stormwater control. The recharge concepts that will be considered in the feasibility analyses include MAR activities focusing on actions and projects that manage stormwater or hold runoff on lands to allow this water to recharge the aquifer.

Identifying properties for targeting recharge feasibility analyses will build on previous GSP work conducted at the Subbasin scale to evaluate the suitability of land characteristics in the Subbasin for implementing recharge and will also involve close collaboration with the local RCDs in working to identify and connect with landowners interested in implementing recharge activities. Assessment of areas to target recharge feasibility analyses through field-scale site investigation will involve initial scoring of properties based on characteristics related to hydrogeologic conditions, recharge potential, land use and cropping, runoff, nearby water infrastructure, and other considerations. Data from recent aerial electromagnetic (AEM) surveys conducted by DWR will be incorporated into the refined assessment of recharge potential across the Northwest Focus Area of the Subbasin. Existing water conveyance and drainage infrastructure operated by local entities, including the Solano Irrigation District (SID), Solano County Water Agency (SCWA), and the RCDs, may facilitate recharge efforts in parts of the Subbasin and will also be considered and evaluated.

After properties are scored based on their characteristics in relation to recharge and stormwater management objectives, specific properties where landowners are interested in implementing recharge activities will be identified for further field evaluation. Landowner agreements will be established prior to conducting any field studies. Field investigation of the suitability and feasibility of identified recharge sites will involve evaluating up to three properties for implementing recharge through field efforts including subsurface borings or other methods, and potential small-scale infiltration testing, as determined appropriate. Field investigation work will also include installation of wells and other permanent monitoring equipment at the properties determined feasible for recharge to determine

existing conditions and track the volume of water recharged and the benefits of recharge activities on soil and groundwater conditions. Through consideration of results from field investigations, preliminary recharge project design and planning concepts will be developed for future implementation. The feasibility analyses and recharge planning concepts will consider the costs and risks associated with on-farm activities for participating landowners to implement different recharge activities. These activities may include lower-cost options of using existing field infrastructure and irrigation systems to deliver water to fields for recharging or building berms or similar features to increase standing water on fields outside of the growing season to support recharge. Recharge plans developed for some properties may also involve more extensive and permanent recharge project concepts such as dedicated recharge basins, where property characteristics and landowner interests overlap. Outreach related to recharge interest began during the GSP development and will continue with meetings and other communications with landowners in select areas of the Subbasin in coordination with the Solano and Dixon RCDs.

The second element Task 4 consists of a localized groundwater conditions evaluation with a focus on the area near Lake Solano. This will involve the review of recent groundwater levels, water demands, well construction information, and evaluation of domestic and community water supply reliability in the Northwest Focus Area of the Subbasin, with particular focus on the area near Lake Solano. There is a need to better understand conditions relating to the lowered groundwater levels around Lake Solano through a detailed investigation of how the hydrogeology, land use, and water demands have affected groundwater conditions. This investigation will utilize the improved information on active wells assembled through the well inventory conducted as part of a separate effort. The assessment will include identification of active domestic and public/community supply wells that are vulnerable to groundwater level impacts and consideration and planning of potential management actions or projects that could be implemented to address vulnerable domestic or community water supplies. Through comparing well construction information (e.g., well depth, top and bottom of perforations) and current and projected water levels in the area, wells that may be more likely to experience water supply reliability issues will be identified. Projects and management actions that may be considered to address domestic and community water supply vulnerability and reliability issues include targeted recharge efforts to raise groundwater levels, potential water system creation or consolidation, and technical or other support for communities or domestic well owners experiencing water supply reliability issues. The evaluation of local groundwater conditions in the Northwest Focus Area and consideration of actions to address these conditions in the Solano Subbasin will include coordination with the Yolo Subbasin GSA relating to groundwater development and land use changes on the north side of Putah Creek in the Yolo Subbasin and how more regional conditions may be impacting groundwater levels in the area within the Solano Subbasin.

The last element of the task involves providing support to the City of Vacaville in its efforts related to conducting additional City of Vacaville recycled water planning. The GSP discusses utilization of recycled water from the City of Vacaville to help support sustainable groundwater management in the Subbasin. The City of Vacaville's recent 2020 Recycled Water Master Plan Feasibility Study (Carollo, 2020) evaluates a number of aspects relating to the feasibility of providing recycled water to customers within the City's service area. This task will include providing technical support and coordination with the City of Vacaville (and subconsultants) in completing additional planning steps to build upon the City's 2020

Recycled Water Master Plan Feasibility Study and exploration of additional opportunities for broader distribution of recycled water outside of the City's service area to offset groundwater pumping within areas served and managed by other entities. The task assumes that the City of Vacaville will perform the planning efforts as part of a separate agreement with the Solano GSA, and LSCE's involvement will be limited to providing technical support as needed and appropriate.

LSCE's technical support may include assistance in identification of areas for potential targeting of recycled water use considering where providing recycled water would be most beneficial. LSCE may also assist in coordination amongst GSAs (including SID and the Solano GSA) and water providers or management entities during consideration of the feasibility of broader recycled water distribution and, as necessary and appropriate, establishing agreements and policies that could facilitate this effort. Additional technical support may include assisting in analyses of the benefits and costs of expanding recycled water distribution, including how much and where broader project benefits to sustainable groundwater management in the Solano Subbasin will occur.

Task 5: GSP Implementation, Outreach, and Compliance Activities

Regular groundwater conditions reporting is a valuable tool for presenting information on local groundwater resources to stakeholders and state agencies and annual reports as required by the GSP Regulations. Previous reporting has provided a means for proactively addressing stakeholder concerns and synthesizing data across monitoring programs. During Fiscal Year (FY) 2025-2026, LSCE will prepare an Annual Report describing current groundwater level, groundwater quality, and subsidence conditions and trends in the Solano Subbasin and Suisun-Fairfield Valley Basin relative to historical conditions, with emphasis on reporting in accordance with the Solano Subbasin GSP and as required by SGMA. The data acquisition, analysis, and development of the Annual Report will meet the requirements of SGMA, including annual groundwater extraction estimates, estimates of surface water supply used or available for use, in-lieu use (e.g., wastewater and stormwater reuse), total water year water use, and change in groundwater storage for the Solano Subbasin, although additional information on conditions in the Suisun-Fairfield Valley Basin will also be included. The SGMA Annual Report for the Solano Subbasin is required to be submitted to the California Department of Water Resources (DWR) by April 1, 2026.

The Annual Report will also summarize additional data collection and analysis performed as part of ongoing tracking and analysis of conditions in the Subbasin to understand trends in groundwater levels and causes of trends in northwestern part of the Subbasin. The Annual Report will also document the status of ongoing actions by the Solano Collaborative to implement the Solano Subbasin GSP, including efforts related to GSP monitoring and addressing data gaps. Work to be performed as part of the Annual Report preparation will include those items listed below.

- Updating the existing Solano County and Solano Subbasin Data Management System (DMS) with the following data, as available:
 - Groundwater levels
 - DWR (CA Department of Water Resources)
 - SCWA
 - City of Vacaville (*monitoring and production wells*)

- City of Dixon
- California Water Service Company (CalWater)
- Solano Irrigation District (SID)
- GeoTracker (SWRCB)
- Sacramento County
- U.S. Bureau of Reclamation (USBR)
- Other groundwater level data
- Groundwater quality
 - DWR
 - SCWA
 - U.S. Geological Survey (USGS)
 - SID
 - SWRCB Division of Drinking Water (DDW)
 - GeoTracker
 - Other groundwater quality data
- Land subsidence
 - SCWA monitoring facilities
 - Plate Boundary Observatory (PBO) stations
 - DWR InSAR data
- Acquisition of key water budget data required for SGMA Annual Reporting including groundwater extractions, surface water diversions and deliveries, and surface water inflows from local and public sources, as available, including the following data sources:
 - SID
 - City of Vacaville
 - City of Dixon
 - City of Rio Linda
 - CalWater
 - Maine Prairie Water District
 - RD 2068
 - SWRCB Electronic Water Rights Information Management System (eWRIMS) water use data
- Groundwater Conditions Annual Update Report and SGMA Annual Report for Solano Subbasin (outline of contents)
 - Executive Summary
 - Background
 - Brief description of the geologic setting with reference to existing reports and key figures
 - Description of existing Solano County and Solano Subbasin groundwater and subsidence monitoring networks, including monitoring wells to track surface water-groundwater interactions (including summary tables and figures)
 - Evaluation of groundwater conditions and trends including levels in each principal aquifer unit; contouring of groundwater levels in principal aquifer zones for spring and fall of 2025
 - Evaluation of groundwater quality (concentrations of selected constituents)
 - Presentation/evaluation of subsidence data and the relationship of subsidence to groundwater level fluctuations

- Summary of annual groundwater extraction estimates for all water use sectors (Solano Subbasin)
- Estimates of surface water supply used or available for use, in-lieu use (e.g., wastewater and stormwater reuse) (Solano Subbasin)
- Summary of total water year water use (Solano Subbasin)
- Change in groundwater storage (Solano Subbasin)
- Graph depicting water year type, groundwater use, annual change in groundwater storage, cumulative change in groundwater storage, including from 2015 to current reporting year
- Status of Solano Subbasin GSP Representative Monitoring Site network
- Status of ongoing GSP projects and management actions in the Solano Subbasin

This task will include preparing and submitting all required Annual Report files and monitoring data associated with the Annual Report for uploading to DWR's GSP Reporting System and Monitoring Network Module. Additional updates and reporting on the status of Projects and Management Actions (PMAs) included in the GSP in DWR's PMA Module will also be included, as required by DWR starting with the WY 2025 Annual Report. Submittal of an Annual Report satisfying GSP Regulations is essential for SGMA compliance. This task will also include coordination with GSAs and other monitoring entities on implementing standard monitoring procedures and developing processes and forms for providing semi-annual well monitoring data and GSP Annual Report data.

LSCE will begin work on addressing recommended corrective actions identified by DWR in the GSP approval letter received in January 2024. These efforts will focus on reviewing subsidence sustainable management criteria (SMC) and potential revisions to the subsidence RMS network and additional consideration of SMC for depletion of interconnected surface water based on any additional guidance documents prepared by DWR. These efforts will support future completion of the GSP five-year periodic evaluation required to be submitted by January 31, 2027.

As part of this task LSCE will also assist GSAs and subconsultants in performing public engagement to interested parties and stakeholders about GSP implementation activities through attendance at GSA Board and stakeholder meetings and public workshops, as requested, during the fiscal year. This task will also include providing technical support in preparation of GSP-related outreach materials, including flyers, newsletters, press releases, or other avenues for public outreach.

Task 6: Funding Development Support (not grant supported)

Under this task, LSCE will provide grant funding coordination and development of technical support, including coordination with Dixon and Solano RCDs, Solano County, and other local entities on grant opportunities for multi-benefit stormwater and groundwater resource management projects. Potential grant funding opportunities to be considered include California Department of Conservation, DWR, and State Water Resources Control Board grant programs and other funding opportunities aligned with GSP implementation activities. Additional federal grant opportunities through the U.S. Bureau of Land Management and National Resources Conservation Service will also be considered, if available.

Task 7: As-Needed Technical Support for GSP Implementation (not grant supported)

Through this task, LSCE will provide technical assistance, as requested, to support GSP implementation activities in the Solano Subbasin that are outside of the scope of the grant or after the grant completion deadline. This task will include support for continuing GSP implementation efforts that are not funded by the GSP implementation grant during the months of May and June 2026, as necessary. Services may include:

- Development of maps and other outreach materials to support GSP implementation planning,
- Supporting coordination with Solano Subbasin stakeholders, GSAs in adjacent basins, or others, or
- Responding to data requests and other SGMA-related technical assistance.

Task 8: On-Call Technical Support for Solano GSA Activities (not grant supported)

Through this task, LSCE will provide technical assistance, as requested, to support Solano GSA activities. Services may include:

- Development of maps and other outreach materials to support GSA activities,
- Responding to data requests and other GSA-related technical assistance, and
- Support related to updating and evaluating parcel records for the purpose of administering Solano GSA fees.

Schedule and Deliverables

All grant deliverables relating to this scope of work will be prepared and submitted in accordance with the deliverable due date schedule developed as part of the Grant Administration task. Updates on grant progress will be provided in monthly status reports to the Solano GSA, through other periodic updates at monthly Solano Collaborative meetings, and at Solano GSA Board of Directors meetings, as requested.

The following products are the final deliverables supported by completion of this scope of work, with the final deliverables for grant-supported tasks to be completed by the end of the grant period, currently planned for April 30, 2026. Deliverables associated with Tasks 1 through 5 are directly supported by the GSP implementation grant.

Task 1 – Grant Administration

- Environmental Information Form (completed)
- Deliverable due date schedule (completed)
- Quarterly Progress Reports, Quarterly Invoices, and all required backup documentation
- Draft and Final Component Completion Reports
- Draft and Final Grant Completion Reports

Task 2 – GSP Monitoring and Data Management Enhancements

Monitoring enhancements and addressing monitoring data gaps

- Outreach letters for well recruitment
- Times series charts of water level elevations, rating curve charts
- Survey data from streams stages, maps
- Summary tables and maps of well inventory, including groundwater quality sampling results

Data management system enhancements

- Enhanced DMS with web-based visualization tools for viewing and accessing GSP-related data
- Documentation of DMS
- Update Guidebook for GSAs

ISW and GDEs and Putah Creek projects

- Technical Memo summarizing ISW conditions in the Subbasin and GDE health

Task 3 – Supporting Groundwater Use Management Actions

Improving understanding of basin water use

- Technical Memo summarizing improved understanding of Subbasin water use including ET, surface water and documenting model updates
- Education and Outreach materials

Local water conservation and management *(to be prepared by GSAs, and subcontractors/collaborators)*

- Technical Memo summarizing results of water conservation efforts

Groundwater management policy

- Technical Memo summarizing economic impacts of policies
- Meeting Notes and Agendas

Task 4 – Water Supply Replenishment and Reliability Projects

Recharge study

- Feasibility Study
- 100% Design, plans and specifications, if applicable
- Awarded contracts, if applicable
- Required environmental documentation for CEQA compliance
- Copies of required permits and access agreements
- Health and Safety Plan, if applicable

Localized groundwater conditions evaluation

- Time-series charts of water level elevations
- Summary tables of water demands including groundwater use and surface water diversions
- Document summarizing well vulnerability, water supply reliability options and considerations, and recharge and replenishment interests and feasibility

City of Vacaville recycled water planning *(to be prepared by City of Vacaville, and subconsultants)*

- Technical Memorandum

Task 5 – GSP Implementation, Outreach, and Compliance Activities

Annual reporting

- Annual reports

Addressing GSP corrective actions and initial efforts related to completion of five-year periodic evaluation of GSP

- Draft materials for five-year periodic evaluation of GSP

Stakeholder engagement and community outreach *(to be prepared by GSAs, and subconsultants)*

- Subbasin outreach materials
- Stakeholder and Board Meeting minutes
- Workshop agenda and presentation materials

Task 6 – Funding Development Support

- Grant application or other submittal materials, as appropriate

Task 7 – As-Needed Technical Support for GSP Implementation

- As necessary and requested

Task 8 – On-Call Technical Support for Solano GSA Activities

- As necessary and requested

Cost Estimate

Table 1 details the estimated cost for the activities proposed in Tasks 1 through 8. The GSP implementation grant awarded to the Subbasin includes funding for Tasks 1 through 5. Three additional tasks (Tasks 6 through 8), which are not part of the GSP implementation grant, include providing any as-needed support in securing additional funding for GSP projects and management actions, addressing any other identified technical support needs related to GSP implementation, and assisting with Solano GSA activities. The scope and budget include several items for which LSCE intends to engage subconsultants. These subcontractors to LSCE will be engaged to assist with specialized aspects of grant tasks, including GDE and wetland mapping support in Task 2, economic analysis support in Task 3, and modeling support in Task 5. The cost for engaging subcontractors to LSCE, and any other outside services contracted through LSCE, are included in the scope and budget. The cost estimate does not include the costs for work to be conducted by entities contracting directly with the Solano GSA such as for the Solano RCD, Dixon RCD, City of Vacaville, and Ag Innovations. LSCE anticipates close coordination with these other entities during completion of the scope of work, although they will contract directly with the Solano GSA for their work. The total estimated cost for all tasks included in the scope of work is \$1,442,494. The estimated cost for the tasks covered by the GSP implementation grant is \$1,328,584; the cost for tasks not covered by the GSP implementation grant is \$113,910.

The current LSCE Schedule of Fees is enclosed for your reference. In the event the Solano Collaborative or Solano GSA requests out-of-scope work and additional funds are needed to complete the task(s), the Solano GSA (on behalf of the Solano Collaborative) will be contacted before proceeding with further work.

If you have any questions, or wish to discuss any of the above, we would be pleased to respond.

Sincerely,

LUHDORFF & SCALMANINI
CONSULTING ENGINEERS



Nick Watterson, PG, CHG
Principal Hydrogeologist



Vicki Kretsinger Grabert
Senior Principal Hydrologist

Enclosures:

Table 1 – Cost Estimate
LSCE Schedule of Fees

EXHIBIT B
RATE OF COMPENSATION

Table 1
Cost Estimate: Solano Subbasin Groundwater Sustainability Plan Implementation Support — Fiscal Year 2025-2026

Task Description		Hours							Cost			
		Sr. Prin. Hydrol.	Prin. Hydrogeologist	Suprvsg. Hydro./ Geol.	Pjt. Hydro./ Geol.	Staff Hydro./ Geol.	GIS/ Data Tech.	Clerical	LSCE	Outside Services	Subtask	Task
Billing Rate (\$/hr)		\$280	\$260	\$248	\$192	\$170	\$160	\$105				
Task 1 - Grant Administration												
1	Provide support in the preparation of the following grant administration items: •Quarterly Progress Reports, Quarterly Invoices, and all required backup documentation •Draft and Final Component Completion Reports (some work on draft reports to occur in FY25, primarily will occur in FY26) •Draft and Final Grant Completion Reports (primarily will occur in FY26)	16	100		100	80	30	20	\$70,180		\$70,180	
Task Total												\$70,180
Task 2 - GSP Monitoring and Data Management Enhancements												
2.1	<u>Monitoring Enhancements and Addressing Monitoring Data Gaps</u> •Inventory of active wells; water quality sampling of select domestic wells in areas of interest (assumes sampling of up to 25 wells) •Automated/real-time instrumentation of select monitoring sites (assumes instrumentation of up to 5 additional wells) •Review recent Basal Tehama ag production •Activities associated with identifying potential sites suitable for well recruitment to address GW monitoring data gaps	4	16		40	80			\$26,560	\$20,000	\$46,560	
2.2	<u>Data Management System Enhancements</u> •DMS updates, interactive web mapping application expansion and enhancements, and other data visualizations for GSA and public use		40		80	80	200		\$71,360		\$71,360	
2.3	<u>Interconnected Surface Water (ISW) and Groundwater Dependent Ecosystems (GDEs) and Putah Creek Projects</u> •Improved GDE inventory and assessment – cottonwoods, managed wetlands •ISW and GDE monitoring enhancements – rating curves/instrumentation at least four existing facilities, identify additional monitoring sites east of Stevenson Bridge, survey SCWA streamflow/stage gages •Synthesis of shallow groundwater/stream infiltration monitoring on Putah Ck in conjunction with soil and ET monitoring in relation to GDE impacts; creation and updating of hydrogeologic cross-sections with AEM and local well lithology and monitoring data •Technical Memo summarizing ISW conditions in the Subbasin and GDE health	16	80		100	100	100		\$77,480	\$30,000	\$107,480	
Task Total												\$225,400

Table 1
Cost Estimate: Solano Subbasin Groundwater Sustainability Plan Implementation Support — Fiscal Year 2025-2026

Task Description		Hours							Cost			
		Sr. Prin. Hydrol.	Prin. Hydrogeol oagist	Suprvsg. Hydro./ Geol.	Pjt. Hydro./ Geol.	Staff Hydro./ Geol.	GIS/ Data Tech.	Clerical	LSCE	Outside Services	Subtask	Task
Billing Rate (\$/hr)		\$280	\$260	\$248	\$192	\$170	\$160	\$105				
Task 3 – Supporting Groundwater Use Management Action												
3.1	<u>Improving Understanding of Basin Water Use</u> •Review and refine ET estimates using OpenET •Comparison of remote sensing versus available ground-based sensors and sensors to be installed •Improve assessment of SW use locations and volumes (with well inventory) •Complete model updates with new information on SW and GW use locations and volumes •Technical Memo summarizing improved understanding of Subbasin water use including ET, surface water and documenting model updates	12	120		240	100	40		\$104,040	\$30,000	\$134,040	
3.2	<u>Local Water Conservation and Management</u> Support Solano and Dixon RCDs in the following tasks: •Continued outreach to growers on BMPs benefitting water conservation •Irrigation management evaluations for groundwater users •Technical Memo summarizing results of water conservation efforts	40	80		80	80			\$60,960		\$60,960	
3.3	<u>Groundwater Management Policy: Positioning for the Future</u> •Incentives and policies for future groundwater development •Future land use policy •Strategies to manage and monitor groundwater use, including mechanisms to promote recharge and potential updates to groundwater ordinance •Technical Memo summarizing economic impacts of policies	20	100		100	100	10		\$69,400	\$80,000	\$149,400	
Task Total												\$344,400
Task 4 – Water Supply Replenishment and Reliability Projects												
4.1	<u>Recharge Study - Targeted Implementation</u> •Recharge feasibility analyses in NW Focus Area and Tremont 3 Watershed- ranking areas and identifying properties for field-scale consideration •Field-scale recharge site investigation – selected sites for detailed cost/benefit and field conditions assessment for designing pilot recharge projects •Planning, and design activities, including environmental permits, access agreements, completion of CEQA documentation, and install and conduct any necessary monitoring	40	120		200	200	100		\$130,800	\$100,000	\$230,800	
4.2	<u>Localized Groundwater Conditions Evaluation (near Lake Solano)</u> •Review and assess GW conditions near Lake Solano in relation to hydrogeology and land use/water demand •Coordination with Yolo Subbasin •Identify domestic wells vulnerable to GW level impacts •Evaluate community water supply well needs or other water supply options for improving domestic water supply reliability in NW Focus Area •Evaluate recent groundwater quality conditions in NW Focus Area and other parts of Subbasin; consider relationships of water quality conditions to past and future recharge activities •Coordination with Solano One-Water activities, Sustainable Conservation, and RCDs	20	100		120	120	40		\$81,440		\$81,440	
4.3	<u>City of Vacaville Recycled Water Planning</u> LSCE will assist and coordinate with City of Vacaville on recycled water planning and evaluating potential challenges and benefits relating to use of recycled water in the context of Subbasin groundwater management. City of Vacaville will lead this task with consideration for the following task objectives and deliverables: •Engineering/economic analysis of how much and where the benefits occur •Consideration of where additional water would be most beneficial and associated costs, could offset some current and/or future Basal Tehama pumping by serving within COV •Considering future water supplies and treatment needs •Technical Memorandum	6	8		12				\$6,064		\$6,064	
Task Total												\$318,304

Table 1
Cost Estimate: Solano Subbasin Groundwater Sustainability Plan Implementation Support — Fiscal Year 2025-2026

Task Description		Hours							Cost			
		Sr. Prin. Hydrol.	Prin. Hydrogeologist	Suprvsg. Hydro./ Geol.	Pjt. Hydro./ Geol.	Staff Hydro./ Geol.	GIS/ Data Tech.	Clerical	LSCE	Outside Services	Subtask	Task
Billing Rate (\$/hr)		\$280	\$260	\$248	\$192	\$170	\$160	\$105				
Task 5 – GSP Implementation, Outreach, and Compliance Activities												
5.1	<u>Prepare GSP Annual Report</u> •Includes data acquisition, model refinement, quality control review, and DMS updating, draft and final text preparation •Prepare annual report for water year 2025	6	80		120	120	24	4	\$70,180	\$40,000	\$110,180	
5.2	<u>GSP Modifications and Five-Year GSP Assessment</u> •Work on addressing DWR GSP recommended corrective actions •Early preparations for five-year GSP review and evaluation, due January 2027 •Includes data acquisition, model refinement and enhancements, quality control review, and DMS updating, draft text preparation	40	140		300	200	120	20	\$160,500	\$40,000	\$200,500	
5.3	<u>Stakeholder Engagement and Community Outreach</u> •Update website •Perform public engagement at public Grantee Board meetings and stakeholder meetings and workshops including targeted outreach •Newsletter and other periodic stakeholder updates •Support interbasin coordination	60	100		60		20	20	\$59,620		\$59,620	
Task Total												\$370,300
Task 6 – Funding Development Support												
6	Grant funding coordination and technical support; includes coordination with Dixon and Solano RCDs, Solano County, and other local entities on grant opportunities for multi-benefit stormwater and groundwater resource management projects. Potential grant funding opportunities to be considered include California Department of Conservation, DWR, and State Water Resources Control Board grant programs and other funding opportunities aligned with GSP implementation activities. Additional federal grant opportunities through the BLM and NRCS will also be considered, if available.	32	40		40		10		\$28,640		\$28,640	
Task Total												\$28,640
Task 7 – As-Needed Technical Support for GSP Implementation												
7	Performing as-needed tasks as requested related to implementation of the Solano Subbasin GSP, including continued development of maps and other outreach materials to support stakeholder education and engagement efforts, participation in meetings, and other tasks. This task will include support for continuing GSP implementation efforts that are not funded by the GSP implementation grant during the months of May and June 2026, as necessary.	24	80		100	80			\$60,320		\$60,320	
Task Total												\$60,320
Task 8 – On-Call Technical Support for Solano GSA Activities												
8	Performing on-call tasks as requested to support Solano GSA activities, including continued development of maps and other outreach materials to support stakeholder education and engagement efforts, participation in meetings, and other tasks. Provide support in analysis of parcel information for administration of Solano GSA fees.	4	24	24	24	32	6	6	\$24,950		\$24,950	
Task Total												\$24,950
Total for Tasks Funded by GSP Implementation Grant (Tasks 1-5)												\$1,328,584
Total for Tasks Not Funded by GSP Implementation Grant (Task 6-7)												\$113,910
Total All Tasks		340	1,228	24	1,716	1,372	700	70	\$1,102,494	\$340,000		\$1,442,494



**Luhdorff &
Scalmanini**
Consulting Engineers

Woodland-Roseville-Chico-Daly City-Meridian, ID

2025 SCHEDULE OF FEES

ENGINEERING AND RELATED FIELD SERVICES

Professional*

Senior Principal	\$280/hr.
Principal Professional.....	\$260/hr.
Supervising Professional	\$248/hr.
Senior Professional	\$220/hr.
Project Professional	\$192/hr.
Staff Professional	\$170/hr.

Technical

Data Management Specialist**	\$160/hr.
Senior GIS Analyst	\$160/hr.
GIS Specialist.....	\$120/hr.
Engineering Asst./Scientist.....	\$120/hr.

Project Admin Support

Word Processing, Clerical.....	\$105/hr.
Digital Communications Specialist	\$120/hr.
Project Administrator	\$120/hr.

Vehicle Use	\$0.70/mi (or curr. IRS rate)
Subsistence	Cost Plus 15%
Field Equipment (Flow Meters, Transducers, etc.)	\$25 to \$100/day
Copies	\$0.20 ea.
Professional or Technical Testimony	200% of Regular Rates
Technical Overtime (if required)	150% of Regular Rates
Outside Services/Rentals	Cost Plus 15%
Services by Associate Firms	Cost Plus 15%
Prevailing Wage Rate	\$210/hr.

* Engineer, Geologist, Hydrogeologist, and Hydrologist

**Information Systems Analyst and Database Specialist

Note: Send invoice payments to Accounts Receivable, 500 1st Street, Woodland, CA 95695