

**SAN GORGONIO PASS WATER AGENCY**  
**1210 Beaumont Avenue, Beaumont, CA**  
**Board of Directors Meeting**  
**Agenda**  
**June 17, 2019 at 1:30 p.m.**

**1. Call to Order, Flag Salute, Invocation and Roll Call**

**2. Adoption and Adjustment of Agenda**

**3. Public Comment:** Members of the public may address the Board at this time concerning items relating to any matter within the Agency's jurisdiction. To comment on specific agenda items, please complete a speaker's request form and hand it to the board secretary. Speakers are requested to keep their comments to no more than five minutes. Under the Brown Act, no action or discussion shall take place on any item not appearing on the agenda, except that the Board or staff may briefly respond to statements made or questions posed for the purpose of directing statements or questions to staff for follow up.

**4. Consent Calendar:** If any board member requests that an item be removed from the Consent Calendar, it will be removed so that it may be acted upon separately.

- A. Approval of the Minutes of the Regular Board Meeting, June 3, 2019\* (p. 3)
- B. Approval of the Minutes of the Engineering Workshop, June 10, 2019\* (p. 6)

**5. Reports:**

- A. General Manager's Report
  - 1. Operations Report
  - 2. General Agency Updates
- B. General Counsel Report\* (p. 8)
- C. Directors' Reports
- D. Committee Reports

**6. New Business:**

- A. Consideration and Possible Action on Awarding Consulting Contract to Provost & Pritchard to Develop a Groundwater Sustainability Plan for the San Gorgonio Pass Subbasin\* (p. 10)
- B. Consideration of and Possible Action on Developing a Social Media Policy\* (p. 77)

**7. Topics for Future Agendas**

**8. Announcements:**

- A. Finance and Budget Workshop, June 24, 2019 at 1:30 p.m.
- B. San Gorgonio Pass Regional Water Alliance, June 26, 2019 at 5:00 p.m. – Banning City Hall
- C. Regular Board Meeting, July 1, 2019 at 1:30 p.m.

**9. Closed Session: (3 Items)**

- A. CONFERENCE WITH REAL PROPERTY NEGOTIATORS  
Pursuant to Government Code section 54956.8  
Property: Potential water rights/supplies offers from the City of Ventura  
Agency negotiator: Jeff Davis, General Manager  
Negotiating parties: Lynn Takaichi  
Under negotiation: price and terms of payment
  
- B. PUBLIC EMPLOYEE PERFORMANCE EVALUATION  
Pursuant to Government Code Section 54957  
Title: General Manager
  
- C. CONFERENCE WITH LABOR NEGOTIATORS  
Pursuant to Government Code Section 54957.6  
Agency designated representative: Ron Duncan, President of the Board of Directors  
Unrepresented employee: General Manager

**10. Adjournment**

**Information included in Agenda Packet**

(1) Materials related to an item on this Agenda submitted to the Board of Directors after distribution of the agenda packet are available for public inspection in the Agency's office at 1210 Beaumont Avenue, Beaumont during normal business hours. (2) Pursuant to Government Code section 54957.5, non-exempt public records that relate to open session agenda items and are distributed to a majority of the Board less than seventy-two (72) hours prior to the meeting will be available for public inspection at the Agency's office, located at 1210 Beaumont Avenue, Beaumont, California 92223, during regular business hours. When practical, these public records will also be made available on the Agency's Internet Web site, accessible at: [www.sgpwa.com](http://www.sgpwa.com) (3) Any person with a disability who requires accommodation in order to participate in this meeting should telephone the Agency (951 845-2577) at least 48 hours prior to the meeting in order to make a request for a disability-related modification or accommodation. 2 / 8 1

**SAN GORGONIO PASS WATER AGENCY**  
**1210 Beaumont Avenue, Beaumont, California 92223**

**Minutes of the**  
**Board of Directors Meeting**  
**June 3, 2019**

**Directors Present:** Ron Duncan, President  
Lenny Stephenson, Vice President  
Stephen Lehtonen, Treasurer  
Blair Ball, Director  
David Fenn, Director  
David Castaldo, Director  
Michael Thompson, Director

**Staff Present:** Jeff Davis, General Manager  
Jeffrey Ferre, General Counsel  
Thomas Todd, Finance Manager  
Cheryle Stiff, Executive Assistant

1. **Call to Order, Flag Salute, Invocation, and Roll Call:** The meeting of the San Gorgonio Pass Water Agency Board of Directors was called to order by Board President Duncan at 1:30 p.m., June 3, 2019 in the Agency Boardroom at 1210 Beaumont Avenue, Beaumont, California. President Duncan led the Pledge of Allegiance to the flag. President Duncan gave the invocation. A quorum was present.
2. **Adoption and Adjustment of Agenda:** *President Duncan asked if there were any adjustments to the agenda.* There being none the agenda was adopted as published.
3. **Public Comment:** *President Duncan asked if there were any members of the public that wished to make a public comment on items that are within the jurisdiction of the Agency that are not on today's agenda.* There were no members of the public that wished to comment at this time.
4. **Consent Calendar:**
  - A. Approval of the Minutes of the Regular Board Meeting, May 6, 2019
  - B. Approval of the Minutes of the Engineering Workshop, May 13, 2019
  - C. Approval of the Minutes of the Finance and Budget Workshop Report, May 28, 2019
  - D. Approval of the Finance and Budget Workshop Report, May 28, 2019

*President Duncan asked for a motion on the Consent Calendar.* Director Stephenson noted that the Regular Board Meeting minutes for 05/06/2019 reflected him as present under item 6b, he was not in attendance. The first sentence is to state the following: Director Stephenson asked at a previous meeting for Board comment on this revised document. for he had asked at a previous board meeting. Director Thompson noted that the Finance and Budget minutes for May 28, 2019 reflected that he was present and absent, he was in fact absent. General Counsel Ferre made a recommendation on item 6A of the May 6, 2019 Board meeting. He requested that language be changed on the second and third bullet items in order to be consistent with the Resolution. Director Stephenson made a motion, seconded by Director Lehtonen, to adopt the consent calendar with the recommended changes. Motion passed 7-0.

## 5. Reports:

### A. General Manager's Report:

**(1) Operations Report:** a) General Manager Davis reported that the Agency delivered 1297 acre-feet of Table A water to the Noble Creek Connection for the month of May. Deliveries were increased from 20 cfs to 25 cfs late in May, and will be increasing to 30 cfs no later than next week. b) SWP Water Allocation: Storms in May increased the water supply around the state. The SWP allocation remains at 70%. Lake Oroville is at 98% of capacity and 116% of normal for this date; it has nearly 3.5 MAF right now. Snowpack for June 1 is 202% of normal.

**(2) Update on Delta Conveyance:** General Manager Davis provided a PowerPoint presentation that was acquired from Metropolitan Water District of Southern California on the Delta Conveyance. The information provided included the Governor's Executive Order (April 29) - Policy Directive and his Water Policy vision for California. The presentation also included information on the process of withdrawing from the California WaterFix; Delta Conveyance Planning Process; Upcoming Delta Conveyance efforts; Delta Conveyance Finance Authority; and information on the Design and Construction Authority.

**(3) General Agency Updates:** General Manager Davis relayed information on the following:

- I. State of California Proposed Water Tax
- II. Calimesa Water supply issues - a joint board meeting is scheduled in July for YVWD, SBVMWD and the Agency
- III. State Water Project issues
- IV. An update on the Agency's construction projects
- V. SGMA update.
- VI. General Manager Davis announced that the SGP Subbasin Stakeholder Advisory Committee will meet for the first time at the Agency's Board Room on June 12<sup>th</sup> at 3:30 pm. A public notice of the meeting and an agenda will be available. Board members are invited to attend as members of the public.

General Manager Dan Jaggars (BCVWD) spoke on the Noble Creek enlargement.

### B. General Counsel Report: None.

**C. Directors Reports:** 1) **Director Fenn** reported on the SGPRWA meeting that was held on May 22<sup>nd</sup>. The Alliance is seeking a Chair and Co-Chair, preferably elected officials. The next meeting will take place on June 26<sup>th</sup>. 2) **Director Stephenson** reported on the following: The ACWA JPIA meeting that he attended on May 6<sup>th</sup>, YVWD's Board workshop that was held on May 14<sup>th</sup>, Yucaipa GSA meeting that was held on May 22<sup>nd</sup>, and he attended the 2019 Solar Boat Challenge. 2) **President Duncan** reported on the 2019 Inland Solar Boat Challenge.

**D. Committee Reports:** 1) **Director Lehtonen** reported on the 2019 Inland Solar Boat Challenge. He complimented the volunteers for their efforts in making this another successful event. He informed the Board that next year is the 10<sup>th</sup> anniversary of the Challenge. He suggested that the Agency be more involved for next year's event. 2) **Director Thompson** reported on the May 9<sup>th</sup> Water Conservation and Education Committee meeting. One of the topics discussed

was the legalities involved with social media postings. **2) Director Fenn** announced that there will be a General Manager's Performance Evaluation Committee Meeting on June 10<sup>th</sup> at 12:30 pm.

**6. New Business:**

**A. Consideration of Nomination for ACWA Region 9 Board of Directors.** A staff report, ACWA's Board Committee letter and nomination form were included in the agenda packet. General Manager Davis stated that the Agency has been an ACWA member for many years. ACWA Region 9 Nominating Committee is looking for ACWA members who are interested in leading the direction of ACWA Region 9 for the 2020-2021 term. General Manager Davis provided a brief summary of the duties involved with the Region 9 board member position. After discussion the members of the Board declined to be nominated.

**B. Consideration of Cost of Living Increase for Staff.** At the May 28 Finance and Budget workshop, the Board recommended that Agency staff (not including the General Manager) receive a 2.8% cost of living increase starting July 1. This year the cost of living data was more localized. The purpose of this proposed Board action is to act on that recommendation. Director Fenn made a motion, seconded by Director Stephenson, to approve the 2.8% cost of living increase starting July 1. Motion passed 7-0.

**7. Topics for Future Agendas: President Duncan** requested information on the recharge facility change order. **Director Fenn** asked for information as to when the recharge facility will be available for testing. **Director Stephenson** asked to have a discussion on selling the Nickel Water contract in totality. He also requested discussion on hiring Provost and Pritchard to provide a list of available permanent water rights. **Director Thompson** requested that there be discussion on a social media policy. **Director Ball** requested information on the expected use of the Agency's land between the school and the recharge facility. There were no other topics for further discussion requested.

**8. Announcements:**

- A. Engineering Workshop, June 10, 2019 at 1:30 p.m.
- B. Water Conservation and Education Committee Meeting, June 13, 2019 at 1:30 p.m.
- C. Regular Board Meeting, June 17, 2019 at 1:30 p.m.

**9. Adjournment**

**Time: 2:39 pm**

*Draft - Subject to Board Approval*  
Jeffrey W. Davis, Secretary of the Board

**SAN GORGONIO PASS WATER AGENCY**  
**1210 Beaumont Avenue, Beaumont, CA 92223**  
**Minutes of the**  
**Board of Directors Engineering Workshop**  
**June 10, 2019**

**Directors Present:** Ron Duncan, President  
Leonard Stephenson, Vice President  
Blair Ball, Director  
David Fenn, Director  
Steve Lehtonen, Director  
Mike Thompson, Director (arrived at 1:50 pm)

**Directors Absent:** David Castaldo

**Staff Present:** Jeff Davis, General Manager  
Jeff Ferre, General Counsel  
Cheryle Stiff, Executive Assistant

**1. Call to Order, Flag Salute and Roll Call:** The Engineering workshop of the San Gorgonio Pass Water Agency Board of Directors was called to order by Vice President Stephenson at 1:30 p.m., June 10, 2019 in the Agency Board room at 1210 Beaumont Avenue, Beaumont, California. Vice President Stephenson led the Pledge of Allegiance to the flag. A quorum was present.

**2. Public Comment:** There were no members of the public who wished to speak at this time.

**3. Discussion of Draft Term Sheet for Proposed Agreement with Yucaipa Valley Water District and San Bernardino Valley Municipal Water District to Facilitate Deliveries in Riverside County.** A copy of a term sheet and a three party agreement with SBVMWD, DWR, and the Agency (SWPAO 16-030) were included in the agenda package. General Manager Davis noted that the Board had recently approved the three party agreement that allows DWR to directly bill the Agency for water sold to YVWD, and indicated that the three party agreement to follow, terms of which are included in the agenda package, would memorialize actions that have been followed for the past 13 years. He told the Board that the actual agreement would be presented for action at a joint board meeting with SBVMWD and YVWD in July. The Board asked a number of questions about the term sheet. Director Ball suggested adding a sentence that states that, as of the signing of the agreement, none of the parties owes money to any other party. Neither General Counsel Ferre nor General Manager Davis had an objection to adding this language.

**4. Discussion of Draft Amendment to 2008 Cooperative Agreement with Santa Ana Regional Water Quality Control Board.** A copy of the draft agreement, the original cooperative agreement, and a Memorandum of Understanding to implement the cooperative agreement were included in the agenda package. General Manager Davis cited the history of the cooperative agreement and how the Agency, and others, have had to pay for modeling every six years to fulfill it. He explained that the amendment will decrease the frequency of the modeling to once every ten years, and would put it under the purview of the Basin Monitoring Task Force. He also noted that, since the Agency recharges its water into a management zone with a

max benefit agreement, the Agency is exempt from the modeling. In exchange for this exemption, the Agency has other obligations in the Beaumont Management Zone. After answering questions from the Board, he indicated that he will bring the final amendment to the Board for consideration in the future.

**5. Discussion of Sites Reservoir Funding Options.** General Manager Davis recounted the Agency's participation in the Sites project, noting that it is an excellent project for the Agency and the region, but expressed concern that, in the event that the reservoir is not deemed to be part of the State Water Project, the Agency may have difficulty in funding its proposed 10,000 AF share. He voiced his opinion that the proposed Agency capacity fee would be critical in ensuring that the Agency can fund its participation in the project, and suggested that the Board may want to consider notifying other elected officials in the region of this fact, beginning with the Alliance.

**6. Announcements:**

- A. San Gorgonio Pass Subbasin Stakeholder Meeting, June 12, 2019 at 3:30 pm—San Gorgonio Pass Water Agency Board Room
- B. Water Conservation and Education Committee Meeting, June 13, 2019 at 1:30 pm.
- C. Regular Board Meeting, June 17, 2019 at 1:30 pm
- D. Finance and Budget Workshop, June 24, 2019 at 1:30 pm
- E. San Gorgonio Pass Regional Water Alliance, June 26, 2019, 5:00 pm, Banning City Hall

**7. Closed Session (2 items)**

- A. CONFERENCE WITH LEGAL COUNSEL—ANTICIPATED LITIGATION  
Significant exposure to litigation pursuant to paragraph (2) of subdivision (d) of Government Code Section 54956.9

The Board went into closed session at 2:28 pm and reconvened to open session at 3:13 pm. General Counsel Ferre announced that no action was taken that is reportable under the Brown Act.

**9. Adjournment:** Vice President Stephenson adjourned the meeting at 3:14 pm.

**Draft - subject to Board approval**

Jeff Davis, Secretary to the Board

cmr



**BEST BEST & KRIEGER**  
ATTORNEYS AT LAW

**Memorandum**

**To:** President and Members of the Board of Directors  
San Geronio Pass Water Agency

**From:** Jeff Ferre, General Counsel

**Date:** June 17, 2019

**Re:** General Counsel Report - Board of Directors Meeting

AMERICA'S WATER INFRASTRUCTURE ACT OF 2018 ("AWIA")

On October 23, 2018, the AWIA was signed into law. This federal law requires community (drinking) water systems serving more than 3,300 people to develop or update Risk Assessments and Emergency Response Plans ("ERPs"). The law specifies the components that the Risk Assessments and ERPs must address, and establishes deadlines by which water systems must certify to the EPA the completion of the Risk Assessment and ERP.

The deadlines applicable to the Agency are March 31, 2020 for the Risk Assessment, and September 30, 2020 for the ERP (based on population served, which is defined to include persons served "directly or indirectly" and specifies that, for a wholesaler, population served by a consecutive system must be counted as part of "population served"). The reports, however, would address the systems owned, maintained and operated *only by the Agency* (the Agency does not address consecutive systems/retailers).

*No later than August 1, 2019, the EPA will release a baseline threat document to provide additional information concerning Risk Assessment requirements. The EPA is currently developing a process for community water systems to certify completion of Risk Assessments and ERPs. The EPA will be hosting overview webinars and detailed in-person/web accessible training on the new Risk Assessment and ERP requirements and tools.*

Risk Assessment Requirements

Each community water system serving a population of greater than 3,300 persons shall assess the risks to, and resilience of, its system. Such an assessment shall include:

1. The risk to the system from malevolent acts and natural hazards;
2. The resilience of the pipes, source water, water collection and intake, pretreatment, treatment, storage and distribution facilities, electronic, computer, or other automated systems which are utilized by the system;





**BEST BEST & KRIEGER**  
ATTORNEYS AT LAW

3. The monitoring practices of the system;
4. The financial infrastructure of the system;
5. The use, storage, or handling of various chemicals by the system; and
6. The operation and maintenance of the system.

ERP Requirements

No later than 6 months after certifying completion of its Risk Assessment, each system must prepare or revise, where necessary, a ERP that incorporates the findings of the Risk Assessment. The ERP shall include:

1. Strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system;
2. Plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability to deliver safe drinking water;
3. Actions, procedures and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes and construction of flood protection barriers; and
4. Strategies to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.

## MEMORANDUM

---

**TO:** Board of Directors

**FROM:** General Manager

**RE:** Selection of Consultant for San Gorgonio Pass Subbasin GSP

**DATE:** June 17, 2019

### **Summary:**

The purpose of this proposed Board action is to determine if the Board wishes to negotiate a contract with the firm of Provost & Pritchard to develop the Groundwater Sustainability Plan for the San Gorgonio Pass Subbasin. The firm was selected after a lengthy process by the three GSA's in the subbasin.

### **Background:**

The Agency has been deeply involved in the implementation of SGMA (the Sustainable Groundwater Management Act) for several years. It has spent most of its SGMA effort in the San Gorgonio Pass Subbasin, which roughly covers the eastern half of the Agency's service area.

Agency staff has been meeting with representatives of the other members of the three GSA's (Banning Heights Mutual Water Company, City of Banning, Cabazon Water District, Mission Springs Water District, and Desert Water Agency) for over three years to prepare an MOU, to decide how to implement a stakeholder outreach program, and to determine a scope of work for the Groundwater Sustainability Plan (GSP). During that time, the Agency applied for, and received, two \$1 million grants, including \$1 million for the preparation of the GSP.

Recently, the GSP Working Group, as it calls itself, has been defining and implementing a process to select a consultant to prepare the GSP. The end result of that process is a unanimous recommendation to award a contract to Provost & Pritchard, at a cost

of just under \$1 million, to prepare the GSP. Since the grant belongs to the Agency, the consultant will also work for the Agency and have a contract with the Agency, though the firm will be working with the entire GSP Working Group during the GSP process.

### **Detailed Report:**

After several months were spent developing a Request for Proposals to prepare the GSP, the GSP Working Group sent the RFP to eleven firms who it believed had the capability to prepare a GSP. Some of these firms came to light as a result of references from other sources. Many of them were not familiar to staff, though some were. These eleven firms are based throughout California (and one in New Hampshire). In addition to sending the RFP out to these eleven firms, the GSP Working Group posted the RFP on the GSA web site and also on the Agency's web site.

Based on this effort, the group received six proposals. Five of these were from firms who received the RFP, and one from a firm who found out about it through other means. The accompanying spreadsheet summarizes the eleven firms and the six cost proposals. The group reviewed all six proposals in detail.

Of the six firms represented, three of them were deemed to have experience in GSP's, and three were not. The group felt that experience preparing GSP's was the most critical prerequisite for our consultant. The group decided to interview the three firms with this experience. This included Woodard & Curran, Provost & Pritchard, and Dudek.

The firms were interviewed on May 29. During those interviews, the group found that Woodard & Curran and Provost & Pritchard demonstrated the ability to prepare a GSP for the subbasin, while Dudek did not. Dudek was eliminated from further consideration. The group then discussed the other two consultants and their advantages and disadvantages. Each was deemed capable of doing the job.

In Woodard & Curran's favor, they prepared the recently completed Integrated Regional Water Management Plan, and thus had experience working with most members of the group. They also

prepared the model that will be used as part of the GSP, though they did not have sufficient funds to calibrate the model. They are currently working on a number of GSP's in critically overdrafted basins in the San Joaquin Valley. Their proposal was for approximately \$1.2 million.

In Provost & Pritchard's favor, they too have experience in developing GSP's in the San Joaquin Valley. They do not have experience in the subbasin, but their philosophy on calibrating the model developed by Woodard & Curran was appreciated by the group and carried great weight in the decision-making process. Their proposal was for approximately \$1 million. In reviewing both proposals, the group found that Provost & Pritchard offered 6000 hours of time for the \$1 million, while Woodard & Curran offered only 5000 hours of time for the \$1.2 million. Woodard & Curran's billing rates militated against them in the decision-making process.

Another factor in the final decision was that Woodard & Curran has done a lot of work with DWR in developing guidelines for implementation of SGMA. While Woodard & Curran presented this as an advantage, the group felt that it might make Woodard & Curran too beholden to DWR in the event the group wanted to challenge a DWR guideline.

Based on all the information presented during the entire process, the group unanimously recommends that a contract with Provost & Pritchard be negotiated so that it may begin work on the GSP in the next month or so. Staff has made it clear to Provost & Pritchard that they will need to become familiar with the basin, the members of the GSA's, and the stakeholders early in the process. A copy of the RFP and a copy of Provost & Pritchard's proposal are included in the agenda package for reference.

**Fiscal Impact:**

The proposal amount from Provost & Pritchard is \$997,026. These funds would be expended over three fiscal years. The Agency has a grant for \$1 million to perform this work. If there are no change orders or additions to the scope of work, 100% of this work would be reimbursed to the Agency. Staff believes that there will be either

change orders or additions to scope due to the fact that GSP's are new to everyone and there will likely be some additions to the scope.

The GSP Working Group is working on a cost share agreement that would divide any costs over \$1 million among the members. Under the terms currently being discussed (not approved yet by any Boards), the Agency would pay 1/3 of all costs over \$1 million and the other five members would equally split the other 2/3 of the costs. Under any circumstances, it is not expected that award of a contract to Provost & Pritchard would significantly impact the Agency's finances. While invoices from the firm would be paid up front by the Agency, those costs would be reimbursed on a quarterly basis by DWR.

**Recommendation:**

It is recommended that the Board follow the unanimous recommendation of the GSP Working Group and award a contract to Provost & Pritchard for an amount not to exceed \$1 million under terms acceptable to the General Counsel to produce a Groundwater Sustainability Plan for the San Geronio Pass Subbasin.

14/81

Consultant Name	Mailing Address	Proposals Rec'd	Consult Proposal Costs
Dudek	605 3rd Street, Encinitas, CA 92024	5/10/2019	\$753,944.00
Woodard & Curran	888 S. Figueroa St, Suite 1700, LA 90017	5/9/2019	\$1,195,234.00
Geoscience	620 Arrow Highway, Suite 2000, Laverne, 91750	5/10/2019	\$907,115.00
GEI	99 S. Lake Avenue, Suite 300, Pasadena, 91101		
AECOM	3500 Porsche Way, Suite 300, Ontario, 91764		
Larry Walker & Associates	1480 Drew Avenue, Suite 100, Davis, 95618	5/10/2019	\$999,992.00
14/81 Davids Engineering	1772 Picasso Avenue, Suite A, Davis, 95618-0550		
Provost & Pritchard	2505 Alluvial Avenue, Clovis, 93611	5/10/2019	\$997,025.00
Todd Groundwater	2490 Mariner Square Loop, Suite 215, Alameda, 94501		
AMEC/Foster Wheeler/Wood PLC	250 E. Rincon Avenue, Suite 204, Corona, 92879		
West Yost Associates	1777 Botelho Drive, Suite 240, Walnut Creek, 94596		
Rubicon Engineering Corp	12831 Newport Avenue, Ste 200, Tustin, CA 92780	5/10/2019	\$736,200.00

# **Request for Proposals**

---

DEVELOP GROUNDWATER SUSTAINABILITY PLAN FOR THE SAN  
GORGONIO PASS SUB-BASIN AREA

---

## **San Gorgonio Pass Water Agency**

In partnership with

Desert Water Agency  
Mission Springs Water District  
Cabazon Water District  
City of Banning  
Banning Heights Mutual Water Company  
(known collectively as the “GSP Working Group”)

**Deadline to submit proposals is: May 10, 2019**

## **I. PROJECT BACKGROUND**

In 2017, the San Gorgonio Pass Water Agency (Agency) joined the Cabazon Water District, the City of Banning, and the Banning Heights Mutual Water Company to form the San Gorgonio Pass Sub-Basin Groundwater Sustainability Agency (SGP-GSA). At the same time, the Agency joined the Mission Springs Water District (MSWD) to form the Verbenia Groundwater Sustainability Agency (Verbenia-GSA), and the Desert Water Agency (DWA) formed the Desert Water Agency Groundwater Sustainability Agency (DWA-GSA). In addition, each of the GSA's established that they will coordinate and cooperate with other GSAs in the San Gorgonio Pass Sub-Basin (SGPSB). Following, these entities have joined together through the San Gorgonio Pass Groundwater Sustainability Plan Working Group (GSP Working Group) to develop a Groundwater Sustainability Plan (GSP) for the SGPSB of the Coachella Valley Basin. The SGPSB has been identified as a medium priority basin by the California Department of Water Resources (DWR) (2015 initial priority and the 2018 update). The group is required to submit a final GSP to the DWR by January 31, 2022.

The Sustainable Groundwater Management Act (SGMA) went in effect on January 1, 2015. SGMA requires governments and water agencies of high and medium priority basins, as determined by DWR, to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins must reach sustainability within 20 years of implementing their respective GSP's. For medium priority basins, such as the SGPSB, 2042 is the deadline for sustainability. SGMA implementation began with a process to identify the unmanaged basins, or basins not adjudicated, throughout the State of California and establishing a priority. For each of these unmanaged basins that were identified with a critical, high and medium priority, one or more GSA's are required to be established to prepare one or more GSP's. A portion of the San Gorgonio Pass Sub-basin is located in the adjudicated Beaumont Storage Unit (also known as the Beaumont Basin), and will not be managed by the SGPSB GSP pursuant to Water Code Section 10720.8. The Morongo Band of Mission Indian's (MBMI) reservation lands overlie more than half of the sub-basin and will not be managed by the SGPSB GSP. The GSP working group is charged with developing a GSP for the SGPSB, excluding the Beaumont Basin and the MBMI reservation.

Before formation of the GSA's, the Agency had worked with the United States Geological Survey (USGS) to model a portion of the SGPSB known as the Cabazon Storage Unit. The Cabazon Storage Unit covers a majority of the SGPSB as defined by DWR in Bulletin 118. Various separate and distinct canyon basins are also included in the SGPSB, as is a portion of the Banning Storage Unit and Banning Bench Storage Unit. These basins were not included in the USGS model of the Cabazon Storage Unit.

As part of the recently completed (2018) San Gorgonio Integrated Regional Water Management Plan (SGIRWMP), the Agency, in conjunction with the City of Banning, Cabazon Water District, and Banning Heights Mutual Water Company, expanded the



USGS model to include the approximate boundaries of the SGPSB, and also incorporated a rainfall/runoff model. This new model, known as the San Geronio Integrated Watershed and Groundwater Model (SGIWGM), is complete but not yet calibrated. For this reason, it should be considered as an incomplete model at this time. Exhibit B and Exhibit C are two technical memoranda that describe this model.

The SGIWGM is hampered by a paucity of groundwater level data, especially in the eastern portion of the SGPSB. In an effort to remedy this paucity of data, the Agency applied for and received a Sustainable Groundwater Planning Grant, through DWR, to drill up to three monitoring wells in the eastern portion of the SGPSB. Work on these monitoring wells is ongoing but no data will be available until at least May or June 2019.

The Morongo Band of Mission Indians (MBMI), a federally recognized tribal reservation is located completely within the boundaries of the SGPSB. While the MBMI has worked closely with the GSP Working Group in the initial stages of SGMA, it elected to not be a participating member of any of the GSAs. As a federally recognized Native American tribe, the MBMI is exempt from SGMA as identified in Water Code section 10720.3. The MBMI is not required to report groundwater data on its tribal lands, however it is required to submit annual surface water filings related to its State surface water rights.

## **II. PROJECT DESCRIPTION**

The SGPSB underlies the eastern half of the Agency's service area and a small portion of the western jurisdictional boundary of Desert Water Agency and Mission Springs Water District. Figures 1 through 3 show the SGPSB boundary, along with various agency and GSA boundaries.

The City of Banning, the Banning Heights Mutual Water Company, the Cabazon Water District, and the Mission Springs Water District each pump water from the SGPSB to meet retail water demands. In addition, Robertson's Ready Mix is a major pumper. The MBMI has wells in the SGPSB as well but no data has been made available from those wells. The MBMI also has a wastewater treatment plant that has discharged into the Cabazon Storage Unit since 2003. The Agency and DWA are the water importers for their service areas and as such are charged with bringing imported water to the portion of the SGPSB within their respective boundaries should it be required.

Based on data available to the Agency, approximately 8,200 acre-feet of water were pumped from the SGPSB in 2017. Data regarding safe yield are not available at this time, although the intent of the USGS model and the SGIWGM is to eventually estimate safe yield. The lack of adequate data from the eastern portion of the SGPSB, where there are virtually no wells, as well as the presence of the MBMI reservation, make it difficult to establish an accurate water budget and safe yield.

Implementation of SGMA provides an opportunity to fill in the gaps in data and to develop a management strategy for the SGPSB. Key information is not available at this

time. This includes a water budget, a safe yield, and other information required by SGMA as part of a GSP. One key piece of information that is not known is the amount of water flowing out of the SGPSB past Fingal Point to the remaining portions of the Coachella Valley Basin. It is believed that this flow varies based on groundwater elevation in the SGPSB and Indio Sub-Basin (ISB). Available data indicate that groundwater in the SGPSB have declined significantly over the past decade. However, this is not well understood and could be a natural phenomenon. It is believed that the SGPSB operates on a lengthy cycle of gradually draining over a number of years, and then rapidly filling over a fewer number of years, during wetter periods. The lack of data makes it difficult to determine if this is the case and more difficult to develop a management strategy for the SGPSB.

Key information and analysis needed in order to develop a GSP include, but is not limited to, the following:

**Evaluate Supplies and Demands.** The essential issue is to identify the difference, or gap, between supply and demand (current and future).

**Establish Sustainability Goals** for the SGPSB including the amount of water needed to bridge any gap between supplies and demands, including an additional amount for reliability (“reliability factor”); and measurement and tracking of identified sustainability indicators.

**Identify and Evaluate Management Actions** that may be implemented to address any gaps in supplies and demands and achieve the established sustainability goals by year 2042. Options will be evaluated based upon feasibility, potential efficacy, cost, and other factors.

**Identify and Assess Impacts** of the GSP to applicable County and City General Plans and the water resources-related plans and programs within the SGPSB.

**Implement the Plan and Adaptive Management.** This involves building the necessary institutional agreements, processes, and administrative framework to put the GSP into action, to measure progress, and to make course changes if necessary.

**Establish Framework for Local Management of Groundwater Resources.** All of the actions above will be undertaken in a collaborative manner to insure that beneficial users of the SGPSB have a voice in the success of the GSP.

### **III. SCOPE OF SERVICES**

#### **Develop Draft and Final Groundwater Sustainability Plan (GSP) for the San Geronio Pass Sub-Basin (SGPSB)**

Using the information generated in Tasks 1, 2, and 3 as outlined in the Grant **Component 2** Work Plan (see *Exhibit A* for further details), consultant shall prepare an administrative

draft GSP for circulation, review and comment by the GSP Working Group and stakeholders. This will also be a “check-in” point with DWR. Based on comments, consultant shall prepare a draft GSP as identified and described in Task 2 below. Thereafter, a maximum of six public hearings will be held to receive comments on the draft GSP. The comments received on the draft GSP will be considered by the GSA’s and individual water agency boards prior to incorporation into the final GSP and plan adoption. Consultant shall incorporate any comments as necessary into the final GSP.

Generally, the work performed by consultant will include, but not be limited to, the following tasks, which are correlated with tasks from the grant work plan (Exhibit A):

1. Meet with the GSP Working Group to obtain pertinent information and references for use in preparation of (not in implementation of) the GSP. Meet as needed or as directed to provide updates during preparation of the SP. It is anticipated that monthly meetings with the GSP Working Group will be required for at least the first six months.
2. Analyze the available information and develop draft chapters of the GSP as described in Task 2 of the Grant Work Plan
3. Identify projects and management actions to achieve the sustainability goal as described in Task 2 of the Grant Work Plan. Work with the GSP Working Group to establish how many projects, programs, or policies are necessary to achieve sustainability in the basin.
4. Define an Implementation Plan per Task 2 of the Grant Work Plan in conjunction with the GSP Working Group.
5. Describe Existing and Planned Monitoring Network and evaluate its ability to monitor each of the sustainability indicators for the SGPSB area. See Task 2 of the Grant Work Plan.
6. Develop framework for Data Management System (DMS) database once the SGIWGM model is completed and calibrated, the existing and planned monitoring network has been assessed, and the template for reporting has been developed, per Task 1 of the Grant Work Plan. Develop a DMS database specification sheet along with a cost estimate in the form of a memorandum for review and comment by the GSP Working Group.
7. Integrate established governance structure of the GSA’s into the GSP.
8. Hold, coordinate, and present materials for a maximum of four stakeholder outreach workshops. Facilitate outreach meetings to best meet SGMA requirements for GSP development outreach, and inclusion of various stakeholders including disadvantaged and underrepresented communities, per Task 4 of the Grant Work Plan. Assume free use of Agency Administration Building for this work.
9. Prepare final GSP document and handle all filings and administrative procedures through final approvals by DWR and the State Water Resources Control Board . Verify and confirm that the GSP meets all requirements as set forth in Water Code § 10727.2., and additional requirements where applicable.
10. Develop a water budget for the SGPSB using existing data, as well as newly generated data from monitoring wells completed in 2019.

11. Review, update, and calibrate the SGIWGM as needed to make its accuracy consistent with that of Exhibit B. Exhibit C includes recommendations on how to achieve this level of calibration.

Once finalized, all electronic files must be submitted to the Agency in the latest editions of the following software programs: Microsoft Excel, Microsoft Word, Adobe Acrobat and Microsoft Project. No other electronic file format will be accepted without written approval from the Agency.

#### **IV. PROPOSAL SCHEDULE**

<u>Date</u>	<u>Event</u>
4/1/19	Release of Request for Proposal (RFP)
4/19/19	RFP Questions Due
5/3/19	Response to Questions
5/10/19	Deadline for Agency Receipt of Proposals
5/20/19	Notice of Interviews (optional)
5/29/19	Interviews (optional)
6/17/19	Board of Directors Approval/Award Contract

#### **V. TEAM**

Proposer (Consultant) is responsible for assembling a team which meets all of the requirements outlined in this RFP.

#### **VI. MEETINGS**

Consultant will conduct all meetings necessary to complete this project. Monthly meetings with the GSP Working group are anticipated for at least the first six months. At least four stakeholder meetings will be required, along with a maximum of six public meetings on the draft GSP. Meetings with individual members of the GSP Working Group may also be required to gather and analyze existing data, explore current governance structures, etc. Some of these meetings with individual members may be accomplished via telephone.

#### **VII. PROJECT SCHEDULE**

The proposal shall include a detailed, project schedule which shows the project tasks. The schedule will be reviewed and finalized with the Consultant prior to start of the project. Once the schedule has been finalized, no extension will be allowed unless the extension has been requested, in writing, and approved by the Agency before a submittal deadline. Failure to submit required work by scheduled deadlines may result in cancellation of the remainder of the contract and all outstanding invoices. Should cancellation occur, all materials collected and/or developed during the process will become property of the Agency.

## VIII. PROPOSAL REQUIREMENTS

- a) **Body of the proposal** (may not exceed 15 pages in length with a minimum font size of 12 point)
- i) Table of Contents
  - ii) Project Understanding. A clear statement of the project.
  - iii) Project Approach. The project approach shall include a detailed description of all the tasks needed for successful completion of the project and shall follow the general outline provided in the Scope of Services section above.
  - iv) Organizational chart illustrating the individuals who will actually work on the project complete with names, firm names, addresses, telephone numbers, email addresses and chain of responsibility (qualifications are to be provided in the appendix, see below).
  - v) Project Schedule
  - vi) Any other information that may assist the GSP Working Group in making its determination in the selection process: Consultant is encouraged to include any other information that will help the GSP Working Group make its selection.
  - vii) Fee schedule: Fee schedule shall be organized to follow the general tasks in the Scope of Services. Services outlined in each proposal must comply with all requirements set forth in this RFP. The costs shall provide hourly rates and hours to complete each task, including sub-consultant's hourly rates and hours, and any other costs for a complete project including estimated reimbursables. The level of effort and associated costs are to be easily understood by the GSP Working Group. The Agency accepts no responsibility for costs incurred by any individual or firm submitting a proposal pursuant to this RFP. The proposal must include a complete and fixed price. If the scope of services requires modification during the course of the work, the Agency, in consultation with the other members of the GSP Working Group, will determine whether to amend the current agreement or to issue a subsequent RFP for additional services. The price specified must remain firm and irrevocable for 90 days following the RFP submission date. All proposals become property of the Agency and will not be returned.
- b) **Appendix**
- i) Qualifications, licenses, certificates and resumes for all persons, including sub-consultants that will actually work on the project. Please limit individual experience to similar projects. For each project, highlight the name(s) of each individual on the project team for this proposal. Please include reference(s) (be sure they are current).

Six (6) hardcopies and a PDF version (can be submitted via email) of the proposal must be received by the proposal submission deadline. Please submit your proposals to:

Jeff Davis  
General Manager  
San Geronio Pass Water Agency  
1210 Beaumont Avenue  
Beaumont, CA 92223

All questions regarding this RFP must be submitted in writing via email by 4:30 pm, April 19, 2019 to the following email address: [jdavis@sgpwa.com](mailto:jdavis@sgpwa.com). Answers may be sent via email and/or regular mail to the entire distribution list for this RFP by May 3, 2019.

## **IX. INTERVIEW**

Interviews may be scheduled with selected firms following initial review of the proposals and will take place on the date specified in the Proposal Schedule above. Interview must be attended by the actual team members that will work on the project including any sub-consultants. The interview will include an approximate 20-30 minute presentation by the project team followed by a question and answer period.

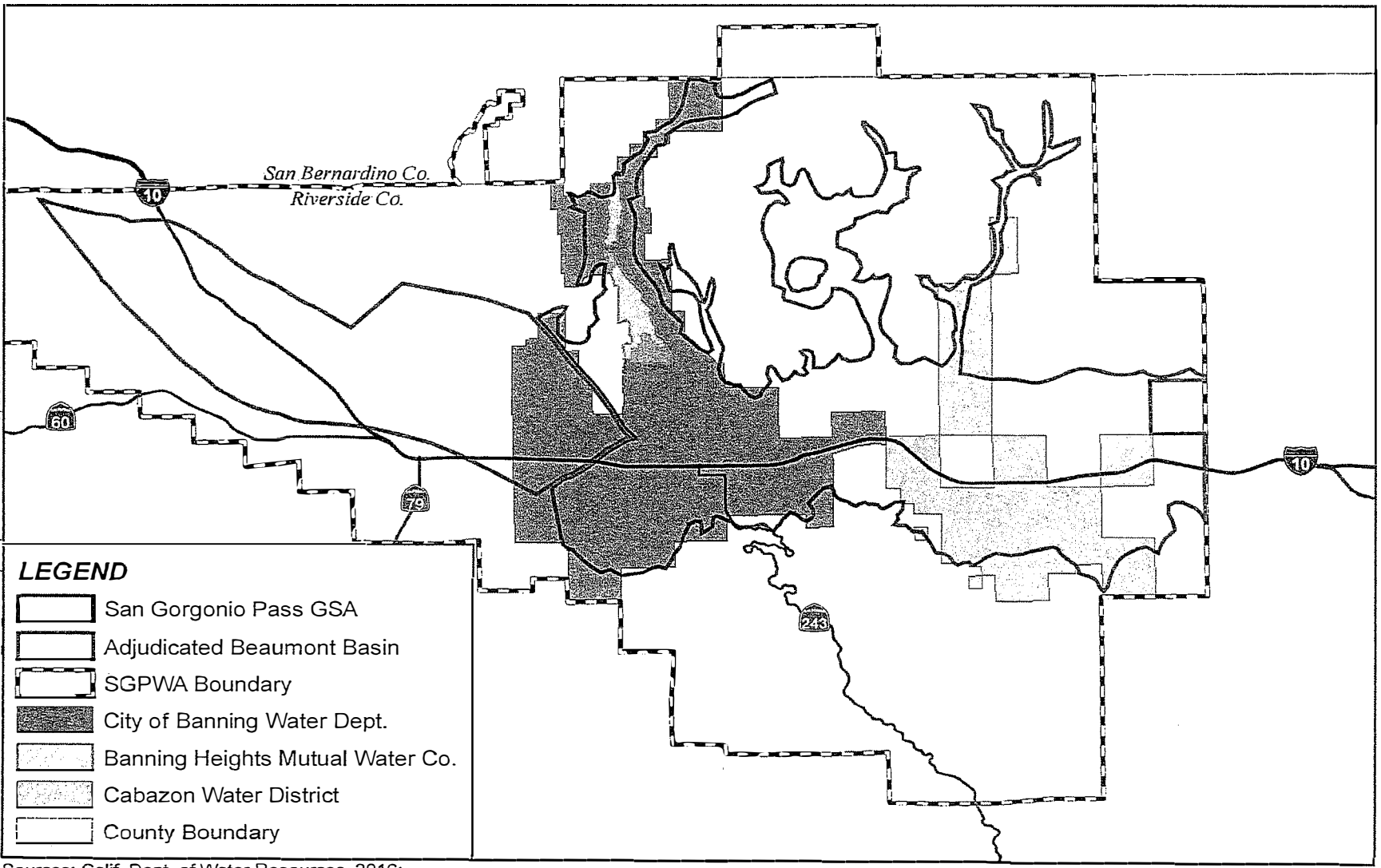
## **X. EVALUATION PROCESS AND CRITERIA**

Evaluation of proposals shall be based upon a competitive selection process. Review and evaluation of the submitted proposals will be based upon the following criteria:





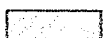
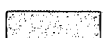
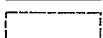
- a) Project approach (20)
- b) Experience on similar projects and/or projects of similar complexity and size (40)
- c) Demonstrated ability to perform the tasks outlined in this RFP efficiently and accurately (30)
- d) Fee (10)
- e) Interview presentation – optional (10)

The Agency reserves the right to issue additional RFPs, to modify or to abandon this project before award of contract.

G:\2008\08-0007\GIS\SGMA\_Ex\_B.mxd, Map revised March 9, 2017.



**LEGEND**

-  San Geronio Pass GSA
-  Adjudicated Beaumont Basin
-  SGPWA Boundary
-  City of Banning Water Dept.
-  Banning Heights Mutual Water Co.
-  Cabazon Water District
-  County Boundary

Sources: Calif. Dept. of Water Resources, 2016; LAFCO 2010; Riverside Co. GIS, 2017.

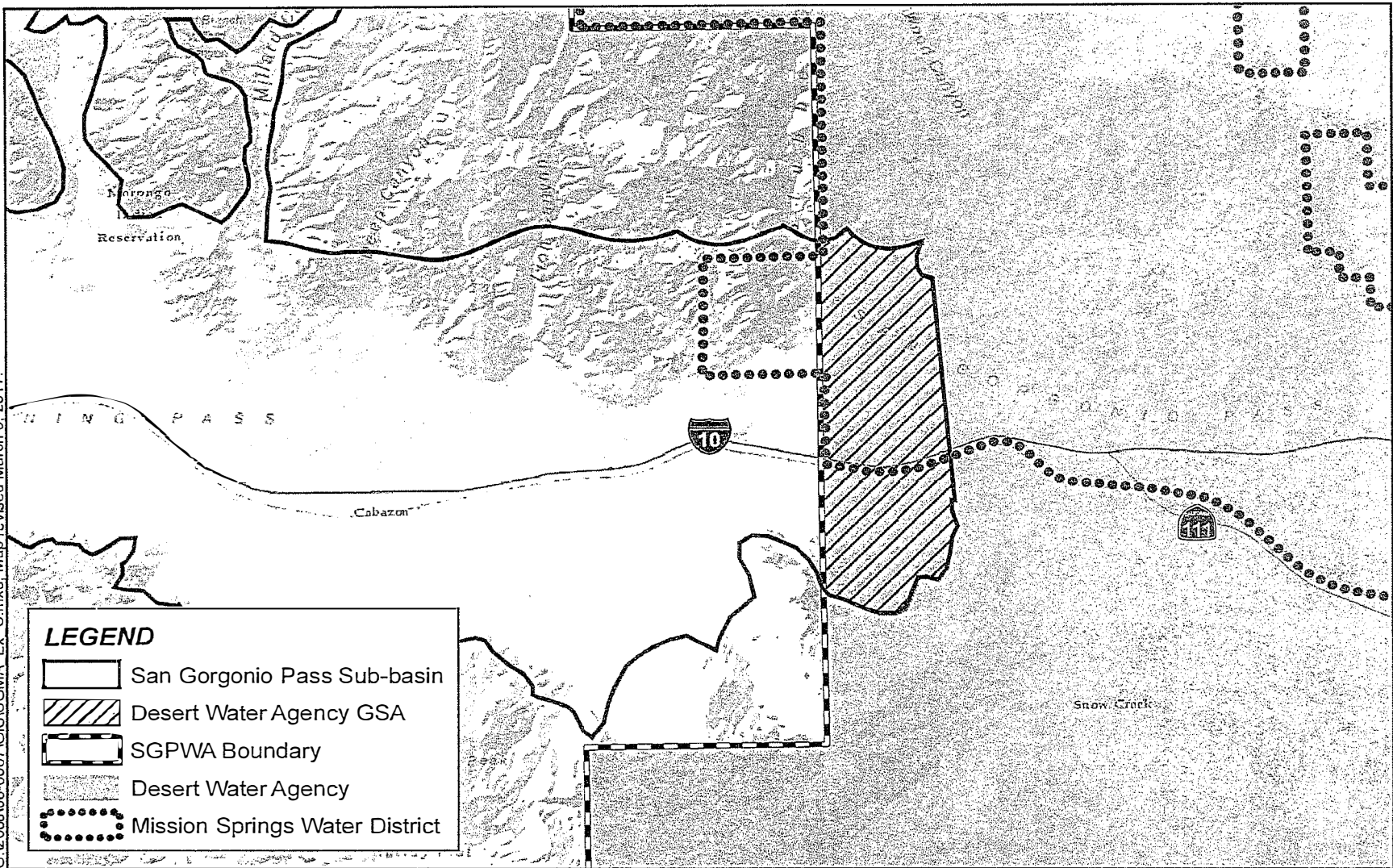


0 2 4 6 Miles






**Figure 1**  
SGP GSA Portion of Sub-basin



G:\2008\08-0007\GIS\SGMA\_Ex\_C.mxd; Map revised March 9, 2017.



**LEGEND**

-  San Geronio Pass Sub-basin
-  Desert Water Agency GSA
-  SGPWA Boundary
-  Desert Water Agency
-  Mission Springs Water District

Sources: Calif. Dept. of Water Resources, 2016; Riverside Co. GIS, 2016.



0 1 2 3 Miles

**Figure 2**  
Desert Water Agency GSA





G:\2008\08-0007\GIS\SGMA\_Ex\_D.mxd; Map revised March 2, 2017.

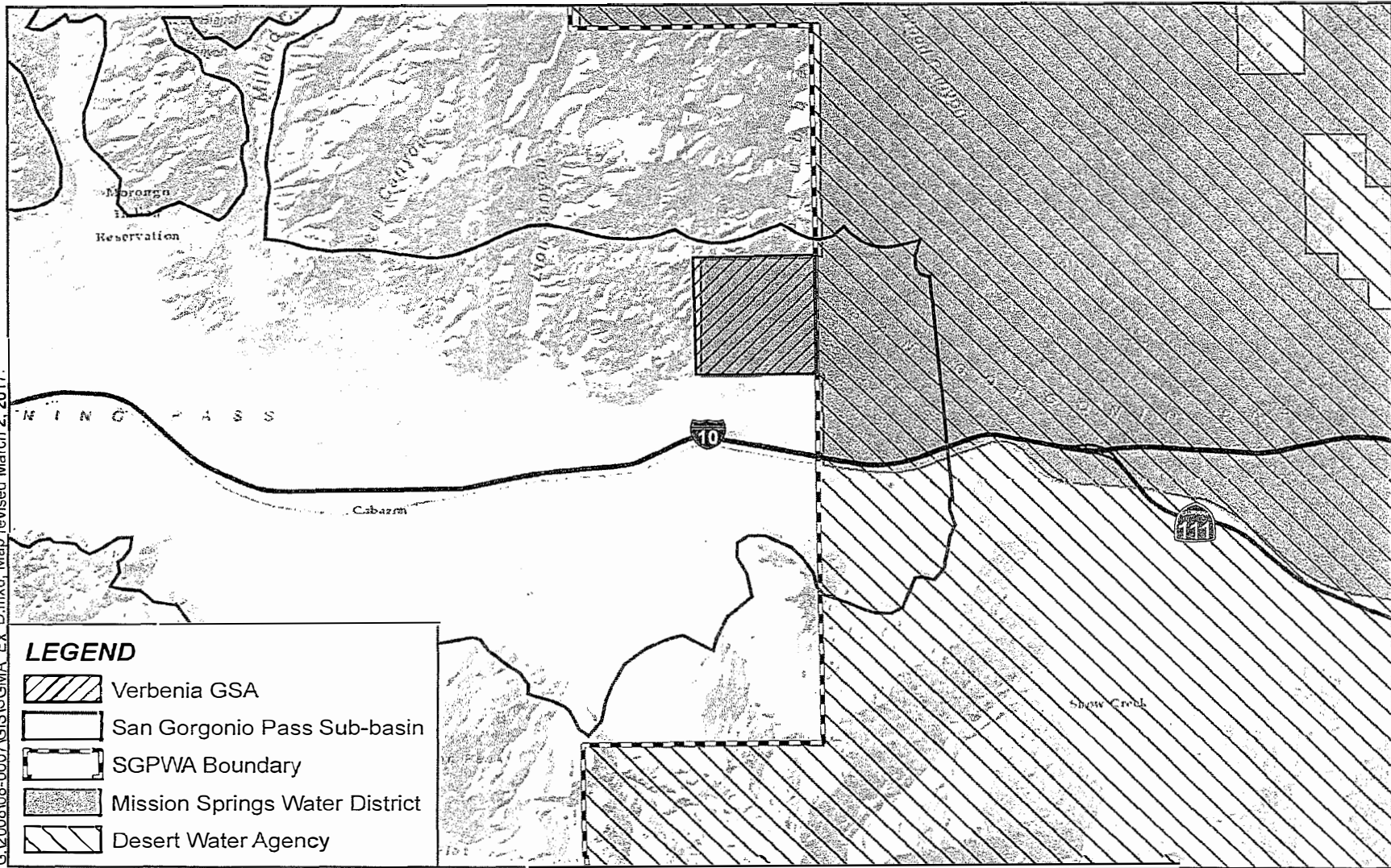


Figure 3  
Verbenia GSA



Exhibit “A” – 2017 Sustainable Groundwater Planning Grant Program: Work Plan

## EXHIBIT A WORK PLAN

**Project Title:** San Gorgonio Pass Subbasin Groundwater Sustainability Plan and Implementation

**Project Description:** The Grantee's San Gorgonio Pass Subbasin GSP and Implementation Project (Project) includes two components. First, the implementation project is to install approximately nine to fifteen monitoring wells on approximately three sites located on the east side of the San Gorgonio Pass Subbasin (Subbasin) where virtually no data exists regarding water levels. The sites are located in SDACs within the Subbasin and one in the adjacent Indo Subbasin. Second, is the preparation of a GSP for the Subbasin that meets the criteria of SGMA by January 2022. The San Gorgonio Pass Subbasin (DWR Basin No. 7-021.04) is located within the Coachella Valley Groundwater Basin in Riverside County.

The resulting GSP will incorporate appropriate Best Management Practices (BMPs) as developed by DWR and will result in a more complete understanding of the groundwater Subbasin to support long-term sustainable groundwater management. The Work Plan consists of the following components which outline the scope of work, including tasks and project deliverables:

- Component 1: Monitoring Wells Installation and Site Development
- Component 2: San Gorgonio Pass Subbasin GSP Development

### **Component 1: Monitoring Wells Installation and Site Development**

#### **Category (a): Grant and Component 1 Administration**

Manage and comply with the Grant Agreement requirements and develop supporting grant documents. Complete administrative responsibilities associated with the Project, such as coordinating with DWR, partnering agencies, the United States Geological Survey, and owners of the well sites. Prepare and submit invoices to DWR, compile invoice backup information, and manage contracts and budgets associated with the Grant Agreement. Prepare and submit quarterly Progress Reports, a Component Completion Report, and a Grant Completion Report. All reports will meet generally accepted professional standards for technical reporting and the requirements outlined in Exhibit F of this Grant Agreement.

#### Deliverables:

- Environmental Information Form (EIF)
- Progress Reports
- Invoices and associated backup documentation
- Final Component 1 Completion Report
- Final Grant Completion Report

#### **Category (b): Stakeholder Engagement**

Conduct public meeting to inform and coordinate with local stakeholders about the location of the monitoring wells and the value they bring to the Subbasin. Coordinate with the San Gorgonio Pass (SGP) GSA to incorporate the installation of the proposed wells into the monitoring program for the Subbasin, and to include them in the adaptive management of the Subbasin.

#### Deliverables:

- Summaries of the public meeting on the monitoring wells included in the Progress Report(s)

**Category (c): Planning/Environmental/Design**

**Task 1: Planning, Environmental, Design, Permitting, and Procurement**

Conduct activities for planning, environmental, and design of the monitoring wells and any required site development or improvements. Perform site evaluation, including, but not limited to, Geographical Information System (GIS) work, geotechnical evaluations, site visits, and other analyses required to select sites and prepare for design. A technical memorandum will be prepared that incorporates the results of the site evaluation and supporting planning documents and analyses. Prepare final design of the wells and conduct meetings between USGS, and the planning and design team(s).

All drilling and other required permits, including necessary equipment and materials will be obtained as set forth in Paragraph 14 of this Agreement. A Notice of Exemption will be filed for this project, filed with the appropriate County Clerk and submitted to DWR's Project Manager in accordance with Paragraph D.7 of his Agreement.

Deliverables:

- Final site evaluation technical memorandum
- Final designs for monitoring well installation
- Final permits
- Notice of Exemption and other appropriate environmental document(s)
- Meeting summaries included in the Progress Report(s)

**Task 2: Project Monitoring Plan**

Develop and submit a Project Monitoring Plan, as described in Paragraph 18 of this Agreement, for the new monitoring wells installed within the Subbasin. This plan shall incorporate items defined and listed in Exhibit K.

Deliverables:

- Project Monitoring Plan

**Category (d): Construction/Implementation**

**Task 3: Drilling and Construction**

Drill and construct approximately nine to fifteen monitoring wells. Each of the approximately three monitoring well sites will have approximately three to five wells. Construction activities include site preparation, tailing disposal, and mobilization/demobilization. Following site preparation, borehole drilling and well construction will begin. This task also includes management and disposal of waste solids and fluids and well development. Finally, this task includes demobilization of field equipment, site cleanup following construction, and establishing site security.

Deliverables:

- Award of Contract
- Notice to Proceed
- Photo Documentation of Construction activities included in progress report(s)

**Task 4: Site Management, Data Collection, and Analysis**

Establish site security, develop a detailed description of lithology and sequence-stratigraphic unit assignments, track the measurement of depth-to-water in each well, complete a high-precision reference mark survey, and complete geophysical logging at each site.

Deliverables:

- Geophysical logging reports for all well sites

### **Task 5: Data and Construction Documentation**

Compile the data collected, conduct quality assurance checks on the data, complete well and site reporting, engage in correspondence, and compile a project archive. Also included in this task will be the preparation of well construction reports for submittal to DWR.

#### Deliverables:

- Copy of the Notice of Completion for all well sites.
- Well design and construction reports

### **Component 2: San Gorgonio Pass Subbasin GSP Development**

#### **Category (a): Component 2 Administration**

Manage the administrative responsibilities associated with Component 2, such as coordinating with DWR, partnering agencies, and consultants. The Grantee will prepare and submit information for Component 2 in relevant quarterly progress reports, and a Component Completion Report. All reports will meet generally accepted professional standards for technical reporting and the requirements outlined in Exhibit F of this Agreement.

#### Deliverables

- Component information included in relevant Progress reports
- Final Component 2 Completion Report

#### **Category (b): GSP Development**

##### **Task 1: Data Management System (DMS)**

Develop a DMS that can store and report information relevant to the development or implementation of the GSP and monitoring of the subbasin. Compile relevant data required to define sustainability, set sustainability criteria, develop required water budgets, and evaluate options for obtaining and maintaining groundwater basin sustainability. Develop the needs and criteria for a DMS to serve the Subbasin. Identify what kinds of data will be included in the DMS, set quality control criteria and processes, and develop a plan for implementing the DMS. Obtain input from the Subbasin GSA member agencies, along with stakeholder input at a stakeholder DMS workshop. Organize GPS data into standardized data sets using common formats for groundwater data, and link GPS data to a Geographical Information System (GIS) geodatabase. All data compiled into the DMS will undergo quality control checks, reconciled to standardized benchmarks. Create the DMS system, including data entry and quality control of data available at the time of implementation.

#### Deliverables:

- Technical memorandum describing DMS

##### **Task 2: Prepare GSP Chapters:**

Prepare the GSP to include, at a minimum, the sections listed and described below. The GSP will meet SGMA regulations and DWR requirements and will build upon activities outlined in the Grant Agreement. Provide summaries of the GSP development activities in the Progress Reports.

##### 1. Basin Setting and Flow Modeling

Define the characterization of the Subbasin, including the evaluation of historical and current hydrologic and hydraulic data and development of hydrologic data to be used for the HCM. The San Gorgonio Integrated Watershed and Groundwater Model (SGIWGM) is being updated as part of the City of Banning IRWM Grant Agreement No. 4600011932. The updated flow model will be the basis for the hydrogeologic conceptual model (HCM); however, the development of the HCM will be separate and distinct from the updated flow model. Develop and calibrate a HCM using the updated SGIWGM as a base and analyze groundwater conditions to support sustainable groundwater management. The HCM will describe the structural and physical characteristics that govern

groundwater occurrence, flow, storage, and quality and will cover the entire Subbasin. Develop and analyze a water budget that will show the inflows to the Subbasin, along with existing and potential export of groundwater from the Subbasin for historical, existing, and expected future conditions, including Subbasin interflows with the adjacent Indio Subbasin, and change in volume of groundwater storage. Complete an analysis of the Subbasin and its water budget and determine the approximate safe annual yield of water extracted from the Subbasin.

2. Monitoring Network

Review historical and current monitoring programs to identify potential representative monitoring sites, including wells that have been long monitored and deemed suitable for the CASGEM program, as well as the new monitoring well sites constructed under Component 1. Representative monitoring sites will be evaluated and documented in terms of distribution and density, suitability to monitor sustainability indicators, and representation of general conditions in an area. Evaluate the monitoring network established for the GSP. Develop a monitoring program that will define performance criteria for the monitoring network and develop a plan for obtaining data to evaluate against performance criteria.

Develop the GSP sections for Description of Monitoring Protocols and Data and Reporting Standards. Sections will include technical standards, data collection methods, and other procedures or protocols to ensure reliable and comparable data and methodologies.

3. Sustainability Goals and Indicators

Build on the hydrogeologic conceptual model, groundwater conditions, and water budgets to identify and evaluate Sustainable Management Criteria. The GSP will include a description of the decision process for establishment of the sustainable management criteria, along with the sustainable management criteria and measurable objectives. Additionally, undesirable results will be defined, along with minimum thresholds.

4. Projects and Management Action

Develop and analyze projects and management actions to achieve the identified sustainability goal (and interim goals). The gap between current groundwater conditions and sustainability goals will be identified, and an implementation program will be developed to close this gap. The implementation program will form the Management Actions and Projects sections of the GSP.

5. Implementation Plan

Develop the implementation plan for the GSP. This task includes developing steps for implementation, a plan schedule (including annual reporting, periodic evaluations, and five-year updates), and a fiscal strategy for implementing the GSP. Additionally, it will include estimated costs for implementing the GSP, Project and Management Actions, and the Monitoring Network and potential improvements. The Implementation Plan will also address how the GSP will be evaluated for different reporting requirements.

6. Executive Summary, Introduction, Plan Area, and Administrative Information

Develop outstanding GSP items that include a description of the geographic area covered by the GSP, as well as a description of governance and administration. Describe the management structure for the SGP-GSA, Desert Water Agency-GSA, and Verbenia GSA, as well as the Subbasin GSP, along with the legal authority for member agencies to form a GSA and manage Subbasin groundwater. The roles and responsibilities of each of the Subbasin GSAs will be defined.

Deliverables:

- Summaries of activities included as an attachment in the Progress Reports
- Draft GSP
- Proof of Final GSP submittal to DWR

**Task 3: Financing**

Prepare a financing plan that will evaluate potential alternatives for obtaining necessary implementation funding. This task will identify opportunities to secure additional funding that may be used to assist the GSAs in developing a meaningful financial plan that addresses the economic realities of the region while providing the basis for implementing the proposed programs and projects included in the final GSP.

Deliverables:

- Final Financing Plan

**Category (c): Stakeholder Engagement**

**Task 4: Website Development and Public Outreach Workshops**

Develop a website for the SGP-GSA to house information about the SGP-GSA, the GSP, and the DMS. The website will host GSP sections for public review and comment.

Prepare and distribute general outreach materials, notices, and updates as progress is made on development of the GSPs and the tasks described through the work plan. Prepare an Stakeholder Outreach and Communications Plan. Conduct public workshops across the SGP-GSA region to improve access by different populations. Some or all these public workshops may be held jointly with TAC workshops.

Deliverables:

- Public Workshop Meeting summaries included in Progress Reports as attachment(s)
- Stakeholder Outreach and Communications Plan

**Task 5: Intra-Basin Coordination (San Gorgonio Pass Subbasin)**

Provide technical support for coordinating technical analyses across the San Gorgonio Pass Subbasin. This task will involve coordination efforts between the three GSAs within the Subbasin: SGP-GSA, Verbenia GSA, and Desert Water Agency GSA. Conduct technical workshop meetings that will keep GSA personnel and stakeholders informed of the ongoing technical analyses as appropriate for the given audience.

Deliverables:

- Technical Workshops meeting summaries included in Progress Reports as attachment(s)

**Task 6: Inter-Basin Coordination**

Provide technical support for coordinating technical analyses across the neighboring subbasin. The San Gorgonio Pass Subbasin (7-021.04) is adjacent to the Indio Subbasin (7-021.01), part of the Coachella Valley Groundwater Basin. Conduct coordination meetings with the adjacent Indjo Subbasin. These meetings will focus on key aspects of the technical work that require inter-basin coordination.

Deliverables:

- Inter-Basin Coordination meeting summaries included in Progress Reports as attachment(s)

San Geronio Pass Water Agency  
Develop Groundwater Sustainability Plan  
for the San Geronio Pass Subbasin Area



Proposal  
May 10, 2019







2505 Alluvial Avenue  
Clovis, CA 93611-9166  
Tel: (559) 326-1100  
Fax: 559) 326-1090  
[www.ppeng.com](http://www.ppeng.com)

May 10, 2019

San Gorgonio Pass Water Agency  
Jeff Davis, General Manager  
1210 Beaumont Avenue  
Beaumont, CA 92223

**RE: Request for Proposals – Develop Groundwater Sustainability Plan for the San Gorgonio Pass Subbasin Area**

Dear Mr. Davis,

Thank you for the opportunity to submit Provost & Pritchard's proposal for developing a Groundwater Sustainability Plan (GSP) for the San Gorgonio Pass Subbasin of the Coachella Basin. Provost & Pritchard has a 50-year history of providing water resources consulting services to clients throughout California; offering a wide range of services, including groundwater planning, monitoring and management services. As the Central Valley's premier consulting firm for engineering and related services, our firm has been operating in ground-zero for SGMA. We feel that our experiences gained here will be a tremendous help in guiding the San Gorgonio Pass Subbasin to SGMA compliance.

By selecting Provost & Pritchard, the San Gorgonio Pass Subbasin will be afforded the management knowledge and experience needed to successfully develop a groundwater sustainability plan. Provost & Pritchard is familiar with the subbasin area and water management challenges for Southern California agencies with State Water Project supplies. We have extensive experience in developing Groundwater Sustainability Plans that meet client needs, stakeholders' expectations and the requirements of the State. With our partner, INTERA Geoscience and Engineering, our team also provides technical groundwater modeling capabilities that can adapt existing groundwater models to meet the needs for developing a GSP. Our team recognizes that the model is a tool and not the solution.

Our team will provide a practical approach to meet the Agency's needs in an efficient and effective manner. We are personally excited to have the opportunity to work with the San Gorgonio Pass GSP Working Team to comply with this complex legislation and believe we have assembled the right team to serve you well.

If you have any questions, or if you would like any additional information as you review our qualifications, please contact me at (559) 326-1100 or email [terlewine@ppeng.com](mailto:terlewine@ppeng.com).

Respectfully,

Terry Erlewine, PE  
Project Manager

Randy Hopkins, PE  
Vice President

San Geronio Pass Water Agency

# Develop Groundwater Sustainability Plan for the San Geronio Pass Subbasin Area

**Proposal**

May 10, 2019

Prepared for:  
San Geronio Pass Water Agency  
Jeff Davis, General Manager  
1210 Beaumont Avenue • Beaumont, California 92223  
Telephone: (951) 845-2577 • Email: [jdavis@sgpwa.com](mailto:jdavis@sgpwa.com)

Submitted by:  
Provost & Pritchard Consulting Group  
2505 Alluvial Ave • Clovis, California 93611  
Telephone: (559) 326-1100 • Fax: (559) 326-1090  
Website: [www.ppeng.com](http://www.ppeng.com)

# Table of Contents

## Cover Letter

Project Understanding .....	1
Project Approach .....	2
Organization Chart .....	9
Project Schedule .....	10
Additional Information .....	11
Fee Schedule .....	12

## Appendix: Qualifications

Project Experience

Resumes of Key Personnel

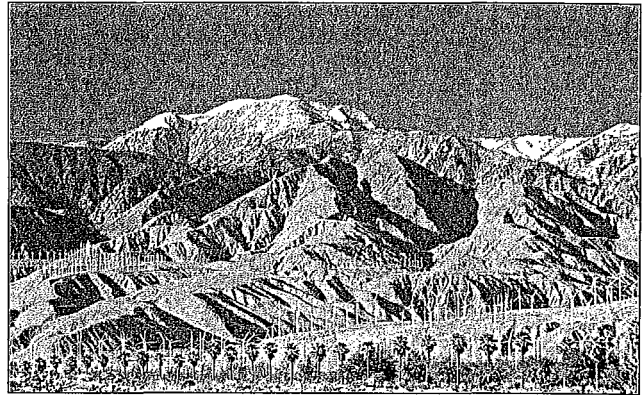
Proposal

# Project Understanding

With passage of the Sustainable Groundwater Management Act (SGMA) in 2014, water agencies have been provided with additional capabilities for managing groundwater sustainably to meet their water resource needs. A direct outcome of SGMA was the requirement for agencies to develop Groundwater Sustainability Plans (GSP) that demonstrate that they provide for sustainable groundwater management that avoids significant and unreasonable impacts to groundwater levels, groundwater storage, seawater intrusion, degraded groundwater quality, land subsidence and depletions of interconnected surface water.

For the water agencies in the San Geronio Pass Subbasin, the GSP provides an opportunity to document their historical groundwater management practices and plan for anticipated changes in water management factors affecting groundwater such as population change, water supply variations, and climate change.

To develop this important document, Provost and Pritchard Consulting Group has teamed with INTERA Geoscience and Engineering (INTERA) to provide a team that can implement a practical approach to successfully prepare the draft GSP for review and ultimate submittal to the Department of Water Resources (DWR). The Provost & Pritchard team understands that this is an important task for the San Geronio Pass Subbasin and proposes to complete this work in close coordination with the GSP Working Group and local stakeholders, incorporating the GSP Working Group's direction into policy choices underlying the GSP.









As will described in this document, the Provost & Pritchard team includes personnel combining extensive SGMA preparation experience with sophisticated groundwater modeling capability provided by INTERA.

**Essential to our proposed approach is the mindset that the purpose of GSP is providing a groundwater management roadmap. While describing hydrogeological conditions and updating the groundwater model are important elements of the GSP, they are primarily tools towards developing strategies for sustainable groundwater management. Provost & Pritchard's approach will be on emphasizing management options available to the San Geronio Pass Subbasin and identifying how those tools an meet the San Geronio Pass subbasin's overall water management needs.**

# Project Approach

The approach to developing the San Geronio Pass Subbasin Groundwater Sustainability Plan (GSP) includes soliciting frequent input from stakeholders to ensure their needs and ideas are addressed, closely following State requirements to help ensure the GSP is approved by the State, and following a practical approach focused on identifying solutions and projects that help achieve groundwater sustainability.

GSPs will need to focus on assessing, monitoring, and mitigating undesirable results from groundwater use, which are defined by the California Water Code as:

	Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply
	Significant and unreasonable reduction of groundwater storage
	Significant and unreasonable seawater intrusion
	Significant and unreasonable degraded water quality
	Significant and unreasonable land subsidence
	Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water

These undesirable results are the focus of the SGMA and will be thoroughly addressed in the San Geronio Pass Subbasin GSP. Some of these, such as sea water intrusion, are not applicable to the area, while others, such as lowering of groundwater levels and reduction in groundwater storage are significant issues. Each of these undesirable results will be investigated and prioritized as part of the GSP development.

The GSP will be prepared as much as possible using existing reports and studies to minimize the need for in-depth hydrogeologic and water supply studies. These include the several USGS and DWR publications, as well as the San Geronio Integrated Regional Water Management Water Supply Reliability Study and documentation prepared for the San

Geronio Integrated Watershed and Groundwater Model (SGIWGM).

## GSP Requirements and Guidelines

The proposed approach for the GSP development is consistent with the multiple GSPs Provost & Pritchard has prepared in the San Joaquin Valley and has been prepared in accordance with the requirements and recommendations in several State documents, including the following:

- California Code of Regulations, Title 23 - Waters, Subchapter 2 - Groundwater Sustainability Plans (State of California, 2015)
- Groundwater Sustainability Plan Annotated Outline Guidance Document (DWR, October 2016)
- Groundwater Sustainability Plan Emergency Regulations Guide (DWR, July 2016)
- Hydrogeologic Conceptual Model – Best Management Practice (DWR, December 2016)
- Monitoring Networks and Identification of Data Gaps – Best Management Practice (DWR, December 2016)
- Monitoring Protocols, Standards and Sites – Best Management Practice (DWR, December, 2016)
- Preparation Checklist for GSP Submittal Guidance Document (DWR, October 2016)
- Sustainable Groundwater Management Act Legislation (State of California, 2014)
- Water Budget Best Management Practice (DWR, December 2016)
- Modeling Best Management Practice (DWR, December 2016)
- Guidance for Climate Change Data Use During Groundwater Sustainability Plan Development (DWR, April 2018)

## Task List

Our approach will be to break the project into the following tasks, executed on concurrent timelines, to meet the goal for submittal to DWR by January 2022:

- Task 1 – Project Administration and Management
- Task 2 – Develop a Data Management System
- Task 3 – Prepare Groundwater Sustainability Plan Chapters
- Task 4 – Financing Plan
- Task 5 – Final Groundwater Sustainability Plan

These tasks are consistent with those shown in the proposed schedule and are described below.

### Task 1 – Project Administration and Management

This task includes overall project administration, subconsultant management, preparing monthly progress reports, and contract administration with the GSP Working Group.

This task also includes attending monthly meetings with the GSA. These meetings will focus on a series of topics shown under Task 3. At each meeting a presentation will be given on progress and results, and comments will be solicited on draft sections and upcoming work. In addition, focused workshops on important topics, such as Sustainability Goals, or review of the complete Draft GSP, may also be held. A description of the anticipated meetings is provided below:

- a. **Initial Project Meeting.** An initial meeting will be held to review GSP requirements, provide an overview of the proposed scope of work, budget and schedule, confirm the approach for planned stakeholder input to the process, identify available information and reference, and develop an effective strategy for completing the GSP. This will result in a detailed Roadmap for future work so all parties are familiar with and agree on the project approach.
- b. **GSP Development Meetings.** Throughout the course of the project, Provost & Pritchard will conduct regular meetings with the GSP Working

Group to develop the GSP. Each meeting will focus on a specific list of topics described below under Tasks 2, 3 and 4. These meetings are anticipated to be monthly for the first six months, with quarterly meetings expected after the initial six-month effort. Attendance at other committee meetings would also be included in this task to assist with GSP coordination and development

Public outreach will be managed by the GSP Working Group. The project team will be available to work alongside GSP Working Group, review outreach materials, and attend outreach meetings as necessary. These efforts are anticipated to be performed under Task 1.

### Task 2 – Develop a Data Management System

SGMA requires development of a Data Management System (DMS) to store and compile important water resources data. An assessment will be completed by the Project Team on current and historical data management tools and processes used by stakeholders within the basin. The assessment will identify applicable data that are sufficient to define sustainability, set sustainability criteria, develop required water budgets, and evaluate options for obtaining and maintaining groundwater basin sustainability. The SGIWGM that has been developed for the subbasin contains valuable data. Since the model itself is not an appropriate DMS, data in the model that is relevant to the GSP reporting and analysis can be integrated into a DMS.

The Project Team will use the results of this assessment and our understanding of the needs of reporting for the GSP to identify whether or not an existing DMS will meet the success criteria, if an existing DMS may need to be modified, or if a customized DMS needs to be developed.

The success of a DMS depends on its ability to support all activities needed to ensure basin sustainability, including monitoring, development and implementation of projects and management actions, modeling, water budget development, and outreach. A DMS for SGMA has the following success criteria:

- Seamless coordination
- Support for GSP development.
- Centralized project information
- Transparency
- Undesirable results tracking
- Threshold and impact evaluation
- Reliable total water budget
- Sustainability tracking
- Data sharing

The DMS for the Subbasin should be secure and easily accessible to stakeholders to enter data and generate reports. Access to and reporting of the data will occur on an ongoing basis, not just for annual reporting. Standardized data templates will help stakeholders organize their data so that it transfers to the DMS efficiently and reduce the amount of time spent on quality control. Available spatial and tabular data will be organized into standardized data sets using common formats so they can be utilized in a Geographic Information System (GIS). In formulating the DMS, input from the Subbasin GSA member agencies and other stakeholders will be sought out privately and at a stakeholder DMS workshop.

The Project Team will prepare a DMS Framework Report for consideration by the GSAs. The report will describe the use of the DMS in GSP implementation and the DMS options available to the GSAs. The kinds of data to be included in the DMS will be identified, quality control criteria and processes will be developed, and a DMS implementation plan will be prepared. Annual report examples generated from the DMS options will be provided in the report. The report will estimate the costs of the DMS options and schedule for implementation. After review by the GSP Workgroup, the DMS framework will be modified in response to comments and provided for implementation. All data compiled into the DMS will undergo quality control checks and reconciled to standardized benchmarks. The DMS system, including data entry and quality control of data available at the time of implementation will be created.

### Task 3 – Prepare GSP Chapters

In preparing GSP chapters, the responsible GSAs in the San Gorgonio Pass Subbasin will need a coordinated effort, which would be managed by the GSP Working Group. The project team will manage the preparation of chapters for the administrative draft GSP as follows:

**Basin Setting and Flow Modeling.** The basin setting includes a description of both the static physical characteristics of the basin and the dynamic groundwater and water budget conditions. A descriptive hydrogeologic conceptual model (HCM) will be used to describe basin setting static conditions. The HCM will provide a qualitative and quantitative understanding of the basin's physical characteristics and how the aquifers react to hydrologic stresses over time, and interaction of the surface water and groundwater systems in the basin.

As an informational tool, the HCM will become the basis for much of the stakeholder understanding of groundwater behavior and cause and effect relationships. The breadth and level of detail of the basin conditions will be sufficient to capture long-term changes in groundwater behavior. The dynamic groundwater conditions will be described by historical and present day groundwater conditions related to undesirable results, including a description as of January 1, 2015. Data gaps and data uncertainty that limit basin understanding or evaluation of GSP performance will be noted. The basin setting will also include a quantitative description of the water budget that provides an accounting of inflows and outflows. Overdraft will be quantified. Baseline conditions related to supply, demand, hydrology, and surface water supply reliability will be established for the purpose of understanding future projected conditions and for development of management actions and projects. We expect that most of the data needed for establishing the basin setting has been compiled and documented during development of the SGIWGM. A significant part of this effort will be a limited initial calibration of the San Gorgonio Integrated Watershed and Groundwater Model (SGIWGM) as requested by the RFP. INTERA will be taking



the lead in applying and calibrating the SGIWGM, as well as in extracting useful information for the HCM. Based on the calibration guidelines presented in Appendix B of the RFP, there are some major challenges to the SGIWGM calibration that may represent issues with model formulation, lack of data or both factors. INTERA will work with Provost & Pritchard to improve the SGIWGM calibration to the extent possible for this initial effort while also summarizing the information for the HCM. The existing data and data available from the SGIWGM will be supplemented by the Project Team as necessary for the GSP.

Included in the basin setting will be the development and discussion of management areas. A management area refers to an area within a basin for which a GSP may identify different minimum thresholds, measurable objectives, monitoring, or project and management actions based on unique local conditions for water use, water source, geology, aquifer characteristics, or other factors. For example, management areas could be designated by land use type or other management variables. The GSP will describe each management area, if this appropriate for the San Gorgonio Pass Subbasin, including the rationale behind the approach and how it can be managed differently without causing undesirable results outside the area.

**Monitoring Network.** Provost & Pritchard will review historical and current monitoring programs to identify wells that have been long monitored and are appropriate for CASGEM program and SGMA management use. SGMA and DWR guidelines for monitoring wells and monitoring networks will be used as the basis for develop the GSP sections for Description of Monitoring Protocols and Data and Reporting Standards. The existing monitoring network will be summarized, including the new monitoring well sites being constructed in 2019 and priority needs will be identified based on the summary and deficiencies identified in the initial SGIWGM calibration. Representative monitoring sites will be evaluated and documented in terms of distribution

and density, suitability to monitor sustainability indicators, and representation of general conditions in an area. Sections will include technical standards, data collection methods, and other procedures or protocols to ensure reliable and comparable data and methodologies.

The GSP will include a detailed description of the basin-specific monitoring network. For this GSP, we will likely use CASGEM monitoring wells or other existing monitoring programs as the initial foundation for the monitoring network to measure and track each applicable sustainability indicator. GSPs need to describe the monitoring protocols needed to accurately capture the cause (or source) of undesirable results. The monitoring program will be identified including define performance criteria for the monitoring network and used to develop a plan for obtaining data to evaluate against performance criteria.

The GSP monitoring plan must consider the following:

- be specific to each basin,
- follow minimum standards, and
- be tailored by local stakeholder interests based on the basin's current or potential future undesirable results.

It is anticipated that the GSP monitoring plan will group wells based on geographic and hydrogeologic conditions with one or two wells within each grouping potentially representing the surrounding area. The DMS (see Task 2) will be used to store the monitoring data and report the data in the GSP Annual Report.

Development of the monitoring network will benefit by input from the baseline simulations run using the SGIWGM, the basin setting, the sustainable management criteria, and the proposed projects and management actions to achieve basin sustainability.

**Sustainability Goals and Indicators.** Establishing and achieving a basin's sustainability goal will be accomplished through the development of sustainable management criteria (SMC). Sustainable management criteria are the metrics used to track the sustainability goal and monitor for undesirable results through the use of minimum thresholds and measurable objectives. Setting of the goal occurs through a local stakeholder process with the objective of having no undesirable results in the basin within 20 years of implementation.

We will work with the GSAs to establish minimum thresholds for each sustainability indicator to avoid undesirable results. Undesirable results may occur when one or more sustainability indicators experience conditions below the minimum thresholds, which are significant and unreasonable. The GSP will identify one or more measurable objectives for each sustainability indicator and establish associated interim milestones for every 5-year interval.

Development of the SMC is likely to be an iterative process that includes identification of tentative SMC, evaluation of the management limitations of those SMC and costs for mitigation, and reidentification of SMC based on these reviews. It may be desirable to develop the SMC in anticipation of projects and management actions. For example, use of the groundwater basin for cyclical groundwater storage and to provide reserves to protect from future drought conditions may require a wider range of water level fluctuations than from a static groundwater basin operation. The GSP chapter will describe the decision process for establishing the SMC, along with the SMC themselves, measurable objectives, minimum thresholds and undesirable results.

Measurable objectives will be developed to monitor each sustainability indicator. Measurable objectives will be established for each relevant sustainability indicator and a reasonable margin of safety will be established for each objective. To measure progress towards achieving and maintaining the sustainability goal, interim milestones for each relevant sustainability indicator will be developed using the

measurable objectives. We will develop a reasonable path to achieve interim and final milestones at 5, 10, 15, and 20 years using the measurable objectives for each sustainability indicator.

**Projects and Management Actions.** Supply projects and management actions will be developed and analyzed to achieve the identified sustainability goal (and interim goals). The gap between current groundwater conditions and sustainability goals will be identified and an implementation program will be developed to close any identified gap for current and future conditions based on anticipated development rates. Identified projects will be evaluated and their performance quantified to provide actions that area available as part of the overall implementation plan. As noted earlier, the development of projects and management actions should be conducted concurrently with development of SMC to avoid conflicts.

SGMA regulations identify the role of local agencies in managing their basins, which includes designing projects and management actions to address problems, responding to changing conditions, and helping achieve sustainability. The projects and management actions for the San Geronio Pass Subbasin will outline required permitting, implementation time-table, expected benefits, required legal authority, and implementation costs.

Additionally, the description of projects and management actions will indicate the process by which implementation will be triggered, including how they will be used to address interim milestones, the exceedance of minimum thresholds, or undesirable results that have occurred or are imminent. For example, if overdraft conditions are identified through the basin water budget, the GSP will describe projects or management actions designed to mitigate these conditions.

It is assumed that each GSA will undertake efforts to develop conceptual projects that are feasible in their service area as part of this effort. The Project Team will summarize this list of projects, programs and management actions that will contribute lead to subbasin sustainability. Each of these efforts will be

evaluated and ranked based on factors such as cost, implementation timing, economic impact, and legal implications.

It is assumed that projects will be identified by the GSP Working Group in coordination with the consulting team that may include concepts such as those identified in the San Gorgonio Integrated Regional Water Management Water Supply Reliability Study. The projects could include development of new recharge basins, development of new temporary storage facilities, development of new groundwater banking projects, development or acquisition of new surface water supplies, strategies to address community growth and groundwater use, and strategies to employ water markets.

**Implementation Plan.** The implementation plan will be developed for the GSP that identifies an initial master plan for implementation of projects and management actions. This task includes developing steps for the implementation, a plan schedule (including annual reporting, periodic evaluations, and five-year updates), and a fiscal strategy for implementing the GSP, Project and Management Actions, and the Monitoring Network and potential improvements. The Implementation Plan will also address how the GSP will be evaluated for different reporting requirements.

**Executive Summary, Introduction, Plan Area, and Administrative Information.** Framing portions of the draft GSP will be developed including a description of the geographic area covered by the GSP, a description of governance and administration and an executive summary. The management structure documenting how the SGP-GSA, Desert Water Agency-GSA, and Verbenia GSA will be coordinated in implementing the Subbasin GSP will be developed. The legal authority for member agencies to form a GSA and manage Subbasin Groundwater will be defined along with the roles and responsibilities of each of the Subbasin GSAs.

## Task 4 – Financing Plan

This task includes helping the GSAs estimate long-term administrative, monitoring and consulting expenses, and identifying funding alternatives to provide financial stability to the GSAs. Funding alternatives can include grants, collection of assessments or fees approved through processes conforming to Proposition 218 or Proposition 26, a potential groundwater credit system, or a combination of these or other options. Several GSAs that we are aware of have complied with Proposition 218 to initiate or raise assessments, but we know of several GSAs that are considering implementing assessments through Proposition 26 or other methods. At this time it appears that various attorneys have differing opinions, and there are some pending legal cases that will help provide direction. Provost & Pritchard will work closely with the GSP Working Group and their counsel to determine the appropriate and most expedient method of raising funds between Proposition 218 and Proposition 26, or if there are other methods for raising funds since SGMA is a State imposed mandate.

## Task 5 – Final Groundwater Sustainability Plan and Submittal

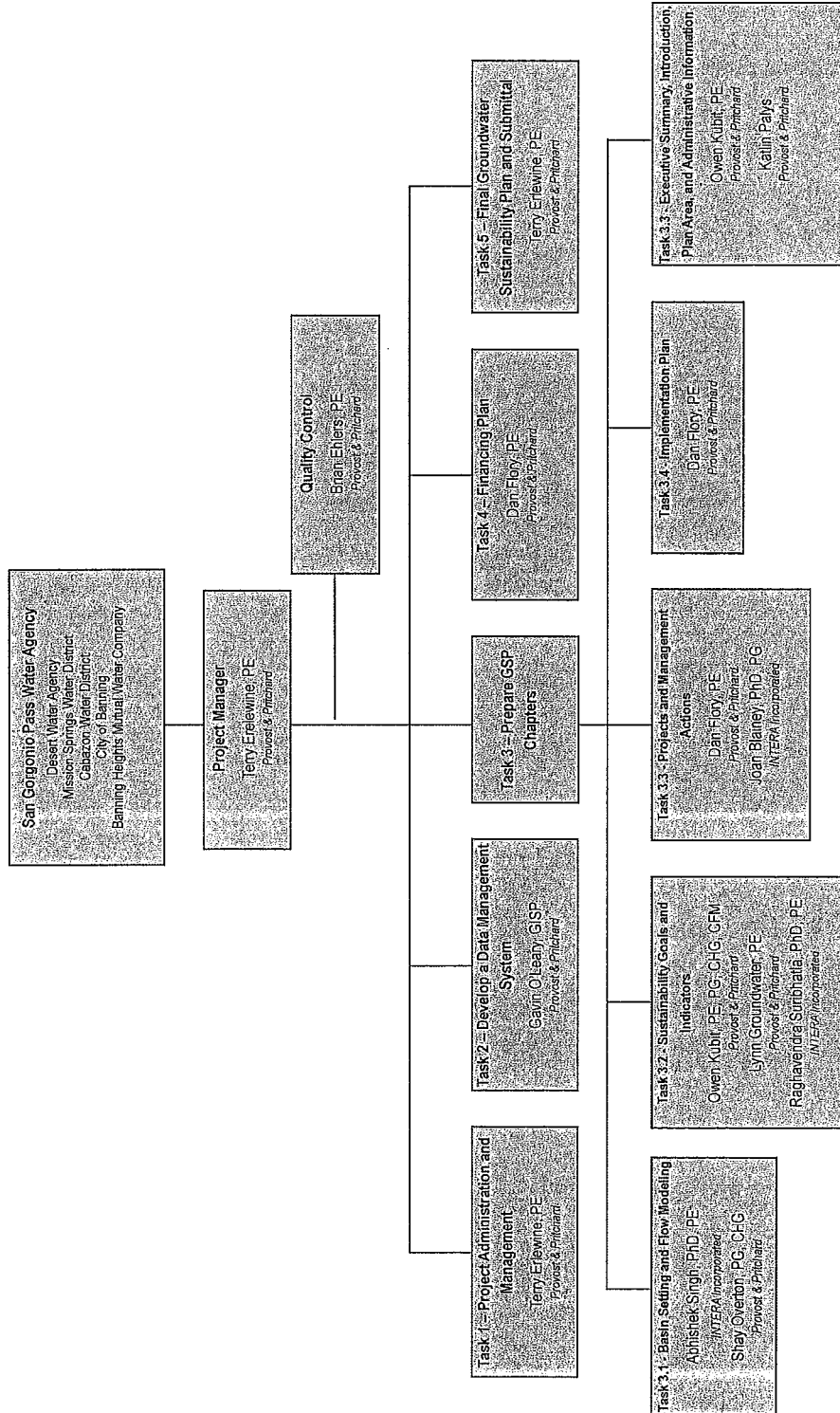
During development of the Draft GSP, the project team will coordinate with the GSP Working Group on scheduling up to four stakeholder outreach workshops. The project team will present interim results on GSP chapters and related activities at these outreach workshops at the direction of the GSP Working Group. These workshops will be conducted to best meet SGMA requirements for GSP development outreach and inclusion of various stakeholders including disadvantaged and underrepresented communities. The work efforts of Task 2, 3 and 4 will be assembled into an administrative draft GSP for circulation, review and comment by the GSP Working Group and stakeholders. This will also be a “Check-in” point with DWR. Based on comments, the public draft GSP will be prepared and made available for comment and review.

Thereafter, a maximum of six public hearings will be held to receive comments on the draft GSP. Upon receipt of comments on the Draft GSP, all comments will be summarized and prepared for consideration by the GSP Working Group. The summary will include recommendations from the consultant team on how to address each comment.

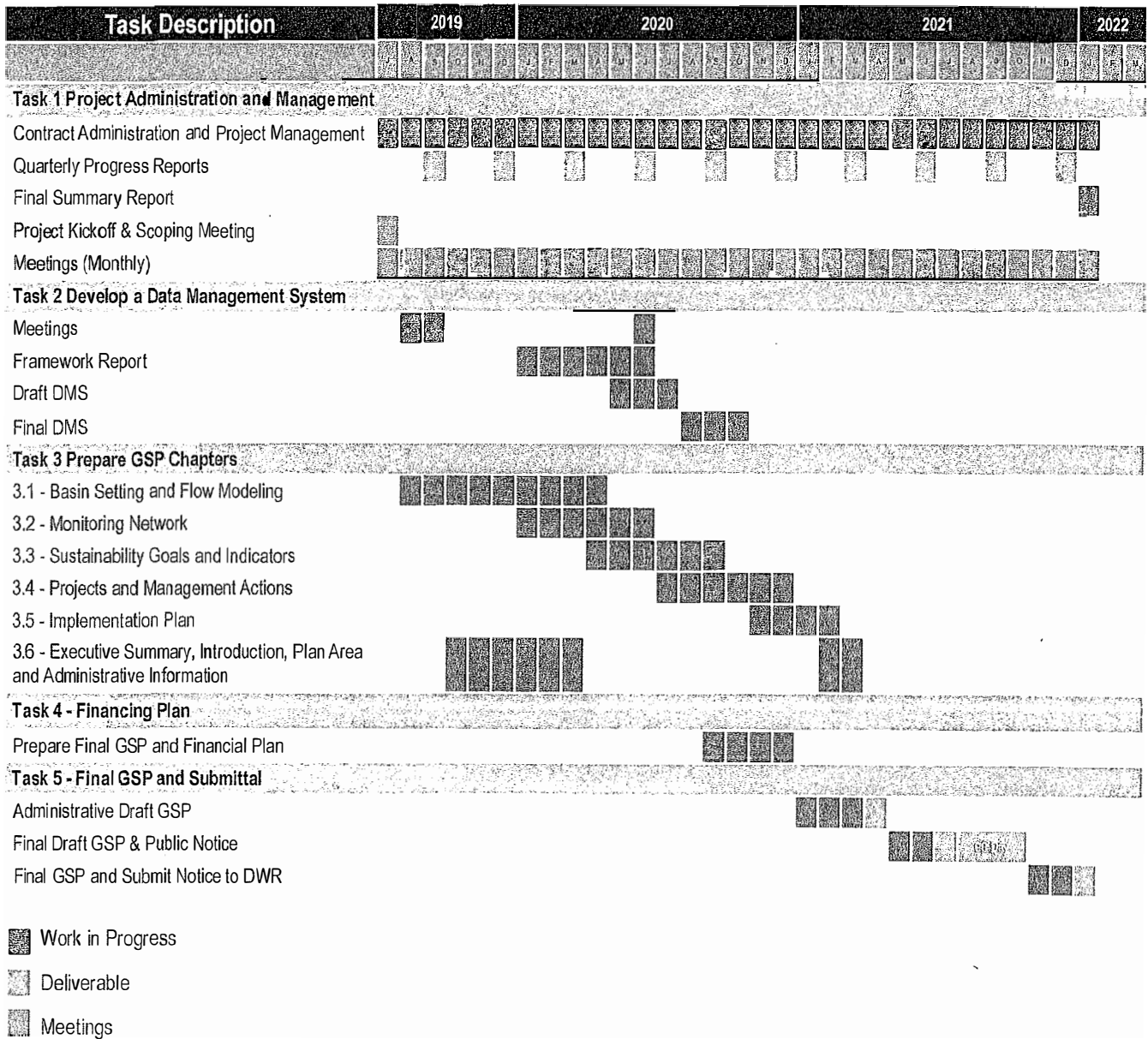
The comments received on the draft GSP will be assembled for consideration by the GSA's and individual water agency boards prior to incorporation into the final GSP and plan adoption. Upon consensus on how to address Draft GSP comments, the Final GSP will be prepared. Hardcopies and CDs of the final document will be prepared and submitted to member agencies.

The updated GSP will be presented to the GSA Boards of Directors for approval at regularly scheduled Board meetings. A summary of the final GSP changes will be presented to the Boards. A digital copy of the updated Final GSP will be added to the GSA website. The final GSP document will be prepared and all filing and administrative procedures will be completed through final approvals by DWR and the State Water Resources Control Board. Verification and confirmation that the GSP meets all requirements as set forth in Water Code § 10727.2., and additional requirements will be obtained.

# Organization Chart



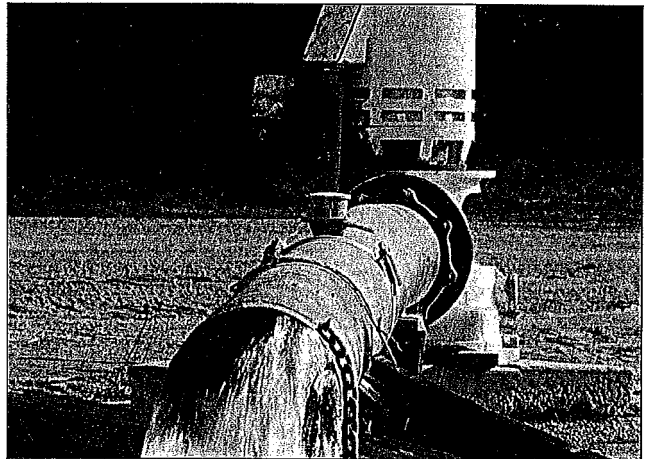
# Project Schedule



# Additional Information

Provost & Pritchard has assembled an experienced team that is uniquely qualified to prepare the San Geronio Pass Water Agency's Groundwater Sustainability Plan. The key characteristics that differentiate this team include:

- Leading collaborative multi-agency efforts in the area to implement plans and projects. Our team has facilitated numerous multi-agency projects and programs to improve water supply reliability.
- History of developing practical solutions for complex local issues. Our project team includes staff with experience with developing solutions, investigating alternatives, designing and implementing local projects and programs that increase local water supply reliability and improve water quality.
- Experience with local groundwater supply reporting. Provost & Pritchard have assisted with groundwater monitoring and storage calculations for many years. We are familiar with the available data and areas where additional data is needed.
- Practical Understanding of data and reporting information needed to make annual decisions. As staff support and consultants for many of the agencies that make up agencies, we understand the decision making process, factors and schedules that the various member agencies typically go through. We understand that regardless of what DWR requires, you need clear and concise information to make informed, practical decisions to benefit the area.
- Data management and reporting capability. Our team developed the existing groundwater databases that are currently used for groundwater reporting in other regions



- DWR Connections. Our team has strong connections with local and Sacramento based DWR staff. We regularly meet with DWR and attend seminars and workshops locally and in Sacramento.
- Grant Funding expertise. Our team has an unmatched record for helping local agencies secure grant funding for both planning and construction projects from a variety of sources, most recently helping the Kings Basin Water Authority secure funding for an IRWMP update and Stormwater Resources Plan.

# Fee Schedule

Task Description	Labor Hours	Labor Dollars	Expenses	Total Cost
Task 1 Project Administration and Management	444	\$65,000	\$37,467	\$102,467
Task 2 Develop a Data Management System	1,242	\$133,548	\$25,145	\$158,693
Task 3 Prepare GSP Chapters				
3.1 - Basin Setting and Flow Modeling	820	\$64,760	\$67,854	\$132,614
3.2 - Monitoring Network	252	\$29,440	\$11,597	\$41,037
3.3 - Sustainability Goals and Indicators	842	\$85,240	\$46,310	\$131,550
3.4 - Projects and Management Actions	624	\$69,840	\$37,218	\$107,058
3.5 - Implementation Plan	300	\$43,220	\$4,322	\$47,542
3.6 - Executive Summary, Introduction, Plan Area and Administrative Information	540	\$72,320	\$13,557	\$85,877
Task 4 - Financing Plan	344	\$59,000	\$7,798	\$66,798
Task 5 - Final GSP and Submittal	660	\$83,540	\$39,853	\$123,393
<b>TOTAL</b>	<b>6,068</b>	<b>\$705,908</b>	<b>\$291,118</b>	<b>\$997,026</b>



# Appendix: Qualifications

# Appendix: Qualifications

## Project Experience

---

### Groundwater Sustainability Plan Development

Since the enactment of SGMA in 2014, Provost & Pritchard has provided assistance to agencies and districts helping prepare for and comply with the SGMA through working with their GSAs. We are currently preparing GSPs for the following GSAs:

- Aliso GSA
- Grasslands GSA
- New Stone WD GSA
- North Kings GSA
- North Fork Kings GSA
- South Kings GSA
- Central Kings GSA
- McMullin GSA
- East Kaweah GSA
- Pleasant Valley Water District GSA
- Root Creek GSA
- Tulare Lake Subbasin GSA

### Groundwater Sustainability Plan Development

North Kings GSA, Fresno County, California

Provost & Pritchard has initiated preparation of the GSP for the North Kings GSA. The team has been actively working with the North Kings Technical Committee comprised of a cross-section of stakeholders to develop the GSP since February 2017. Monthly meetings have been held to review the regulations and requirements, discuss alternatives, provide recommendations, prepare draft chapter language and address comments received from the committee. Several chapters have been completed

including Plan Area, Hydrogeologic Conceptual Model, Groundwater Conditions and Groundwater Monitoring.

Team Members: Owen Kubit, Shay Overton, Gavin O’Leary, Katlin Palys, Terry Erlewine

Organization: Fresno Irrigation District

Address: 2907 S Maple Avenue, Fresno, CA 93725

Contact: Bill Stretch, Assistant General Manager, (559) 233-7161 x7401, bstretch@fresnoirrigation.com

### Groundwater Sustainability Plan Development

South Kings GSA – Fresno and Tulare Counties, California

Working as on-call engineer for the South Kings Groundwater Sustainability Agency, Provost & Pritchard is currently preparing a Groundwater Sustainability Plan. The initial task is to solicit frequent input from stakeholders to ensure their needs and ideas are addressed, closely following State requirement to help ensure the GSP is approved, and pursuing a practical approach focused on identifying solutions and projects that help achieve groundwater sustainability.

Team Members: Owen Kubit, Shay Overton, Gavin O’Leary, Katlin Palys, Terry Erlewine

Organization: City of Fowler

Address: 128 S. Fifth Street, Fowler, CA 93625

Contact: Dave Peters, PE, (559) 299-1544, dpeters@peters-engineering.com

### Basin Coordinator

Kern Groundwater Authority, Kern County, California

Provost & Pritchard has been retained by the Authority as the executive director to direct the activities of the authority members to comply with SGMA. In general, duties include: facilitation and attendance at monthly KGA Board Meetings; attend Executive Committee meetings; support and facilitation of Basin Coordination Policy Group

meetings; support and facilitation of Coordination Committee meetings; coordination with North Kern Water Storage District (fiscal agent) to assist in reviewing invoices and receipts, and approve items for payment, with additional oversight and approval from designated board members; communication with and education of stakeholders on pertinent issues; represent KGA with regulatory groups and business organizations, participate in community and professional groups and committees, and act as KGA liaison on various inter-agency coordination projects; and, review and tracking of Kern County Water Element of the General Plan.

Team Members: Terry Erlewine, Gavin O’Leary  
Organization: Kern Groundwater Authority  
Address: P.O. Box 20820, Bakersfield, CA 93390  
Contact: Eric Averett, General Manager  
(661) 589-6045, eaverett@rbwsd.com

### **Groundwater Database Management System**

Root Creek Water District, Fresno County, California Provost & Pritchard was successful in obtaining funding assistance from the Department of Water Resources Local Groundwater Assistance Fund Program (AB 303) to develop a Groundwater Database Management System for Root Creek Water District. The database was created as a geographic information system (GIS) to tie existing and new information to a district map, and create a central location for all groundwater related information. Survey, data, paper documents, database, and spreadsheet information were brought together in the GIS.

An enhanced interface was created with the GIS software to enable a person with limited training to be able to easily access, query, and print information. With the click of a mouse, the user can view such items as a scanned copy of the well driller’s report, a digital photo of the well, a current well hydrograph, historical groundwater contours, geologic cross-sections or well power meter readings.

Survey data was collected using GPS to determine the precise location and elevation of existing wells within the district. During the survey, specific information for each well was collected including well type, power

supply, and a digital photo. Driller’s reports and historical groundwater documents were scanned and linked to the appropriate location within the district.

The GIS provides the district with: a central location for all groundwater related information; improved storage for future information such as water levels and meter readings; reduced time spent locating information; the ability to query and compare previously unrelated information such as wells that have had a drop in water level; a visual representation of the data; and an excellent analysis and comparison tool.

Team Members: Shay Overton, Gavin O’Leary  
Organization: Root Creek Water District  
Address: P.O. Box 27950, Fresno, CA 93729  
Contact: Julia Berry, General Manager,  
(559) 970-8778, juliaberry@sbcglobal.net

### **Prop 218 Fee Study**

Colusa Groundwater Authority, Colusa County, California Provost & Pritchard recently prepared a Fee Study is prepared to describe the proportional cost distribution of the Colusa Groundwater Authority (CGA or Agency) proposed Operations Fee to each assessable parcel within the CGA jurisdiction, unless covered by a GSA Fee Funding Agreement. The proposal is for the Agency to collect revenue in the form of Operations Fees that will be used to cover everyday operations of the CGA. These operations include administration, legal services, insurance, consulting, office and outreach materials, accounting, monitoring and reporting to the DWR, and potentially some special studies.

Team Members: Gavin O’Leary  
Organization: Colusa Groundwater Authority  
Address: 100 Sunrise Boulevard, Suite A,  
Colusa, CA 95932  
Contact: Mary Fahey, Water Resources Manager  
(530) 458-0719, mfahey@countyofcolusa.org

### **Development of a Groundwater Flow Model of East and South Las Posas Basins**

#### **Calleguas Municipal Water District**

INTERA worked with Bryan Bondy, Calleguas Municipal Water District's contract hydrogeologist, to successfully understand basin hydrogeology, develop a numerical groundwater flow model, and work with the FCGMA (the local GSA) their Technical Advisory Group (TAG), and their GSP consultant to support the GSP development process. Other objectives of the project included using the numerical model to evaluate potential aquifer storage and recovery (ASR) management alternatives, as well as to understand the interaction between surface-water flows and the groundwater system.

The basins are characterized by complex hydrostratigraphy (faulting and folding) and dynamic interactions with surface water flows in the Arroyo Las Posas. Discharge of treated wastewater effluent to Arroyo Las Posas has resulted in a transition to perennial flow from historical conditions where surface water flows only occurred in Arroyo Las Posas during large precipitation events. Through close coordination with Mr. Bondy, INTERA developed a detailed numerical representation of the Arroyo, capturing the highly dynamic flow, width, and stage relationships characteristic of different reaches along the Arroyo. Data from aerial surveys, streamflow gages, shallow groundwater wells, and dry-weather flow studies was integrated into the surface-water/groundwater modeling framework. The model was used to assess historical and future water budgets (incorporating the impact of climate change using SGMA guidelines and data sets) and assess various project and management actions for the GSP preparation.

Throughout the project INTERA worked with Bondy Groundwater in an efficient and cost-effective manner to achieve the project goals. This was accomplished via regular communication through weekly conference calls, technical memoranda, and presentations to stakeholders. INTERA completed the work on time and under budget by regularly communicating with Bryan Bondy. We have an extensive and successful track record of this and can

do the same for your project. We also collaborated successfully with numerous other Basin parties such as the FCGMA, their TAG, and their GSP consultant, on what will likely be one of the first GSPs developed in the State of California under SGMA. We have a successful track record of working with your GSP Plan Manager (PM).

**Team Members:** Abhishek Singh; Joan Blainey; Raghu Suribhatla; Patrick O'Connell

**Organization:** Calleguas Municipal Water District

**Address:** 2100 Olsen Rd, Thousand Oaks, CA 91360

**Contact:** Susan Mulligan, General Manager  
(805) 579-7115; smulligan@calleguas.com

### **Potable Water Supply Infrastructure Model for Integrated Water Resource Planning in the Chino Basin**

#### **Inland Empire Utilities Agency (IEUA)**

INTERA is supporting development of Phase 2 of IEUA's Integrated Water Resources Plan (IRP) by developing a potable water system regional water infrastructure model for IEUA and its member agencies. The IEUA Infrastructure Model (Model) is a regional systems model developed using GIS and EPANET (version 2.0) water distribution modeling software to simulate the water balance and distribution capacity between agencies and from pressure zone to pressure zone (PZ) within agencies. Modeled infrastructure includes imported water supplies, groundwater and surface water supplies, treatment, major pipelines, pressure reducing valves, pump stations, and interconnections. The purpose of the model is to identify existing operational constraints and redundant capabilities, assess supply deficits and vulnerabilities, and identify and assess the potential local and regional benefits of various infrastructure projects for IEUA and its member agencies. The intended use of the model is to screen, compare, and prioritize projects. The model was developed through extensive interaction with IEUA, its member agencies, and other stakeholders, including the Chino Basin Watermaster (CBWM), Chino Desalter Authority (CDA), and neighboring non-IEUA agencies with interconnections of relevance to IEUA regional water supply reliability. INTERA also helped organize and participated in a stakeholder workshop with over 16 agencies

(including the Watermaster) to identify regional projects to improve water resiliency and sustainability.

Currently, INTERA is using the model to simulate multiple scenarios including reduced imported supplies due to MWD shut-downs, reduced local water supplies due to impaired groundwater, and long-term drought conditions and water supply allocation plan (WSAP) implementation. The model allows analysis of the regional and local supply and distribution capacity surpluses and deficits for any scenario. Scenarios may be based on the existing system, or may also include proposed interconnections and other improvements. The potential performance of various projects will be evaluated to compare relative benefits to regional water supply reliability. The model will provide a useful tool for use by IEUA and its member agencies to evaluate the shared regional benefits of proposed water supply infrastructure projects.

Team Members: Abhishek Singh; Patrick O'Connell;  
Raghu Suribhatla

Organization: Inland Empire Utilities Agency  
Address: 6075 Kimball Avenue, Chino, CA 91708  
Contact: Joshua Aguilar, Senior Engineer  
(909) 993-1694; jaguilar@ieua.org

## Terry L. Erlewine, PE

Project Manager

---

### Education

- ✓ M.S., Civil Engineering, University of California, Davis
- ✓ B.S., Civil Engineering, University of California, Davis

### Licenses/Registrations/Certifications

- ✓ Civil Engineer, California #32985

### Affiliations

- ✓ Groundwater Resources Association

### Areas of Expertise

- ✓ Water Resources
- ✓ Groundwater Resource Studies
- ✓ Groundwater Modeling
- ✓ Groundwater Conjunctive Use Programs
- ✓ Surface Water Studies

## Professional Summary

Terry Erlewine is Principal Water Resources Engineer with Provost & Pritchard who has more than 38 years of experience providing water resources planning and analysis. He has conducted many surface and groundwater resources studies, including water uses, operations studies, groundwater modeling, and groundwater conjunctive use programs. For twenty-three years, Mr. Erlewine worked for the State Water Contractors, most recently serving as General Manager for 14 years. Previously, Mr. Erlewine worked as a consultant on water resources. Mr. Erlewine began his career with the California Department of Water Resources. In his 13-year tenure with the Department, he was involved in all aspects of surface water and groundwater projects.

## Relevant Experience

North Fork Kings GSA, Riverdale, California, Project Engineer – Mr. Erlewine developed water budget for the North Fork Kings GSA, quantifying water budget components including agricultural water use, M&I water use, effective precipitation, groundwater seepage and groundwater pumping. The analysis also considered climate change, including effects on evapotranspiration, precipitation and local water supplies.

Kern Groundwater Authority, Bakersfield, California, Basin Coordinator – Mr. Erlewine serves as Basin Coordinator for the Kern Groundwater Authority, which is the largest Groundwater Sustainability in the Kern Subbasin. Mr. Erlewine initially served as acting general manager (Planning Manager) and has subsequently been serving in a senior advisory role. While acting Planning Manager, he developed KGA budget and schedule for GSP preparation. He also provided technical advice on groundwater modeling and other GSP preparation elements. He developed projected future water supply conditions for the State Water Project considering climate change for use in SGMA groundwater modeling projections.

State Water Contractors, Sacramento, California, General Manager – Mr. Erlewine managed the State Water Contractors, developing consensus on a wide variety of issues related to State Water Project (SWP) and other factors for the 27 member agencies of the State Water Contractors. He organized and directed monthly meetings for a nine-member Board of Directors, regularly reported on water supply and management issues, and provided annual reports on objectives for the State Water Contractors.

**Terry L. Erlewine, PE** *(continued)*Project Manager

---

Mr. Erlewine routinely discussed water supply impacts of Delta regulations with State Water Resources Control Board, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Wildlife Staff. Frequently presented views of the SWP contractors at State Water Resources Control Board hearings.

Water Supply Impact Analysis, State Water Contractors, Sacramento, California – Mr. Erlewine prepared an analysis of water supply impacts to the State Water Project of federal endangered species act regulatory measures. Water supply impacts included reduction in water deliveries to State Water Project customers leading to reduced crop acreage, increased costs for alternative supplies and groundwater level impacts. Testimony was presented to Eastern District of California Federal Court in litigation on implementation of the Operations Criteria and Plan biological opinion.

State Water Contractors, Sacramento, California, General Manager - Worked with Agricultural Economist and Water Supply Engineers in developing approach for analyzing water supply and economic impacts of water supply scenarios for State Water Project (SWP) contractor districts over multi-year drought periods. Developed water supply data for selected SWP contractors to apply in analysis of shortages during recent drought periods.

Semitropic Water Bank, Semitropic Water Storage District, Wasco, Groundwater Task Lead – Evaluated groundwater level impacts from proposed Metropolitan Water District of Southern California water banking program with Semitropic Water Storage District in the San Joaquin Valley. Groundwater levels were projected for a three-year period with and without the proposed banking program. Significant impacts of the proposed banking operation were summarized and present in California Environmental Quality Act documentation.

Sacramento Valley Water Management Agreement, State Water Contractors, Sacramento, Committee Co-Chair – Mr. Erlewine served as co-chair of the Technical Measurement and Monitoring Committee for the Sacramento Valley Water Management Agreement. The Technical Measurement and Monitoring Committee collectively developed groundwater monitoring approaches that would identify water supply benefits and impacts for proposed water management actions, primarily conjunctive use projects. Membership in the Technical Measurement and Monitoring Committee included representatives of the SWP Contractors, the CVP Contractors, Sacramento Valley Water Users, the Department of Water Resources and the U.S. Bureau of Reclamation.

San Joaquin Valley Groundwater Study, Department of Water Resources, Fresno, Project Manager – Modified and updated finite element groundwater model for San Joaquin Valley, California. Modified elements in network to reflect geology and variations in recharge due to surface water supply. Calibrated groundwater model for 12 years through comparison of modeled results to average water levels as determined from geostatistical analysis.

Kern Fan Element Water Bank, Department of Water Resources, Bakersfield, Project Manager – Developed finite difference groundwater model for 40,000-acre conjunctive use site and vicinity in Kern County, California. Model was developed with multiple layers and used to simulate impacts of proposed recharge basin and extraction well configurations. Pre-processing program was developed to quantify pumping and recharge amounts for various project alternatives.

## Dan Flory, PE

Principal Water Resources Engineer

---

### Education

- ✓ B.S., Civil Engineering, California State University, Chico
- ✓ Executive Management Program, University of California, Davis

### Licenses/Registrations/Certifications

- ✓ Civil Engineer, California #33004

### Areas of Expertise

- ✓ Water Resources Engineering
- ✓ Water Banking
- ✓ Water Transfers
- ✓ Bid Documents
- ✓ Data Analysis

## Professional Summary

Dan Flory is a principal engineer specializing in water resources with Provost & Pritchard. Mr. Flory has more than 35 years of experience in water resources engineering including six years as a water agency general manager. He served in progressively more responsible roles for the California Department of Water Resources, culminating in his position as the department's executive manager. He worked an additional four years in engineering with the California Department of Water Resources. He is an experienced advisor to legislative staffs, appointed officials and board members as well as serving as an expert witness providing testimony in litigation involving water rights.

## Relevant Experience

Antelope Valley-East Kern Water Agency, Palmdale, California, General Manager – Reporting to the Board of Directors, Mr. Flory was responsible to oversee all operations of the Agency. He managed a \$45 million budget and 40 operations and administrative staff. His position also included supplying water through four water treatment plants to a population of about 400,000 and 2,400 square miles in the Mojave Desert and Antelope Valley. He led the development of three local water banks recharging SWP water in 2011 allowing the Agency to meet all water quality and water supply needs during a four-year drought. He also negotiated water delivery and exchange agreements to net \$13 million in additional revenue for the Agency.

California Department of Water Resources, Sacramento, California, Executive Manager – Reporting to the SWP Deputy Director and leading the Department's efforts to renegotiate and extend the long-term water supply contracts, Mr. Flory developed new and revised contract terms to fund major capital improvements including the through Delta facilities and address SWP bonding and cash flow issues. He provided expert testimony and technical support to defend the Department's long-standing practices in the allocation of water and power costs among the water contractors. As Executive Manager for FloodSAFE California he provided oversight and executive direction to the FloodSAFE program with an annual budget over \$700 million per year. He also directed the work of a large multi-disciplinary matrix management team of Department staff and consultants; developed the bond expenditure plan and managed over one hundred programs and projects and reported to the legislature and Department management all expenses and progress of the work.



**Dan Flory, PE** *(continued)*Principal Water Resources Engineer

---

California Department of Water Resources, Sacramento, California, Division Chief – For six years, Mr. Flory supervised and directed the work of 100 engineers and analysts in the administration of power purchase and water supply contracts. The operating budget, including power purchases was about \$300 million a year. Work included the allocation of water supplies to water users and the distribution of water and power costs to 29 SWP contracting agencies. He also developed the 400 page annual report documenting the costs to contractors.

California Department of Water Resources, Sacramento, California, Principal Engineer – Mr. Flory supervised and directed the work of the Water Supply Reliability Branch, water resource planning related to the SWP, including the Bay Delta Water Rights Hearing Group, the Arroyo Pasajero Flood Study Team and the Future Water Supply Studies Group.

California Department of Water Resources, Sacramento, California, Section Chief – For 11 years Mr. Flory supervised the Water Contracts Administration and Negotiation Section. He directed the work of 20 engineers and technicians, approving water delivery schedules, documenting deliveries and facilitating water transfers. He also developed contracts for the use of the SWP facilities.

California State Water Resources Control Board, Sacramento, California, Water Rights Engineer – Mr. Flory was responsible to investigate, document and to present findings to the State Water Resources Control Board on water right applications and disputes. He gave presentations at public hearings and in one-on-one staff briefings of Board members; organized staff reports; facilitated public testimony and developed the hearing record on water right hearings and adjudicatory processes for surface and groundwater resources.

California Department of Water Resources, Sacramento, California, Civil Design Engineer – Mr. Flory developed civil design drawings and specifications for major SWP projects including the Bottlerock Geothermal Power Plant and the Suisun Marsh Water Quality Control Structures.

California State Water Resources Control Board, Sacramento, California, Associate Engineer – As an Associate Engineer, Mr. Flory performed a special study to determine the water available for appropriation in the Sacramento-San Joaquin watershed. He analyzed all water rights held in the Central Valley including all appropriative and riparian rights; determined the applicability of standard water right restrictions on diversions; took field measurements and documented water diversions for a court ordered adjudication.

Syblon-Reid, Engineering Contractors, Folsom, California, Project Engineer – Mr. Flory served as a Field Engineer and surveyor on several water resources construction projects including the Atwater wastewater treatment plant expansion, Roaring River Slough levee repair and road construction and the Friant-Kern Canal maintenance and lining repair. He developed bid documents and progress payment estimates.

## Brian Ehlers, PE

### Quality Control

---

#### Education

- ✓ M.S. Civil Engineering, University of Arizona, Tucson
- ✓ B.S. Civil Engineering, California State University, Fresno

#### Licenses/Registrations/Certifications

- ✓ Civil Engineer, California #40655

#### Affiliations

- ✓ American Society of Civil Engineers (ASCE)
- ✓ Groundwater Resources Association of California (GRAC)
- ✓ United States Committee on Irrigation & Drainage (USCID)
- ✓ Kings County Water Commission, Board Member

#### Areas of Expertise

- ✓ Water/Irrigation District Engineering
- ✓ Groundwater Banking
- ✓ Water Supply Investigation
- ✓ Major Conveyance Facility Construction & Operations
- ✓ Safety of Dams

## Professional Summary

With over 36 years of engineering experience, Brian Ehlers is a principal water resources engineer at Provost & Pritchard. His experience includes planning, design and construction management of water supply and distribution systems for cities and water districts throughout the state. Mr. Ehlers' is also skilled in feasibility studies, groundwater studies, and technical review of conveyance and pumping facilities for both agricultural and domestic water systems. Additionally, his areas of expertise include managing and performing hydrologic, hydraulic, soil and rock stability, and flood inundation studies, as well as computer modeling associated with such analyses.

## Relevant Experience

District Engineer, Various Districts, San Joaquin Valley, California – Mr. Ehlers serves as the district engineer for several water and irrigation districts. His responsibilities include water supply planning, water conservation programs, and capital improvements on an ongoing basis for:

- Root Creek Water District
- Tranquillity Irrigation District
- James Irrigation District
- Gravelly Ford Water District
- Fresno Irrigation District
- Kings County Water District
- Pleasant Valley Water District

District Management, Root Creek Water District, Madera County, California, District Manager – Mr. Ehlers has served as the district manager of Root Creek Water District since August 2013.

These ongoing services consist of developing and obtaining approval of water transfers, water orders and delivery scheduling, coordination with State Water Contractors, water supply reporting and accounting, and district improvements.

District Engineer, Kings County Water District, Kings County, California – Since 1994 has served as the District Engineer for the District. Duties have included feasibility studies, preparation of plans and specifications for capital facilities, investigation of the surface water supply systems and groundwater investigations. Bi annual groundwater measurement and mapping has occurred as well as construction and installation of dedicated monitor wells in a number of locations throughout the District.

**Brian Ehlers, PE** *(continued)*

## Quality Control

Water Augmentation Project, James Irrigation District, San Joaquin, California, Principal-in-Charge – The project will excavate the existing Basin 3 as needed, and the material will be used to construct four recharge cells and a distribution canal from north of Basin 3 to Manning Avenue within the Fresno Slough Bypass (FSB). Improvements to the FSB Auxiliary Channel will include an earthen water control structure to pond and regulate flood water deliveries to recharge cells, and reconstruction of the eastern bank along the bypass from the earthen dam to roughly 4,000-feet upstream (to the Conspan bridge). To connect the James Irrigation District's Main Canal to the FSB facilities, a turnout will be built on the Main Canal, with a double barrel siphon that will convey water to and from the facilities in the bypass. Additionally, modifications will be made to E-Booster Check to regulate flows into the FSB improvements. Within the FSB, a pipeline will deliver water to Basin 3, and a pump structure and pipeline will return water from Basin 3 to the JID Main Canal. Considerations will be made for future build-out which includes up to five wells, connection to Basin 1, and a connection to Basin 2.

Proposition 218 Election James Irrigation District, San Joaquin, California, Principal-in-Charge – Mr. Ehlers provided oversight of the Proposition 218 election process and preparation of the associated report for the James Irrigation District. The scope of work included gathering data and developing and writing the engineer's report to meet the requirements of Proposition 218. This also involved geographic information system services to create a map showing the parcelization and zones of benefit. In addition, the project team developed the materials necessary for the initial public hearing, and mailed notices and the assessment ballots for the final hearing, and counted ballots.

Proposition 218 Financial Analysis and Study, North Kern Water Storage District, County of Kern, California, Principal-in-Charge – Mr. Ehlers provided oversight of the Proposition 218 election process and preparation of the associated financial analysis for the North Kern Water Storage District. The scope of work included gathering data and developing and writing the financial report to meet the requirements of Proposition 218. This also involved geographic information system services to create a map showing the parcelization and zones of benefit. In addition, the project team developed the materials necessary for the initial public hearing, and mailed notices and the assessment ballots for the final hearing, and counted ballots.

Madera Ranch Groundwater Monitoring, Madera Irrigation District, Madera, California, QA/QC – Mr. Ehlers quality assurance/quality control oversight of the engineering services provided for the monitoring and reporting of requirements outlined by the Monitoring and Operational Constraints Plan (MOCP) for the Madera Irrigation District Water Supply Enhancement Project (WSEP) located at the Madera Ranch. The scope of work consisted of water level monitoring, groundwater and surface water quality monitoring, meteorological monitoring, and reporting.

Proposition 218 Financial Analysis and Study, San Luis Water District, Los Banos, California, Principal-in-Charge – Mr. Ehlers provided oversight of the Proposition 218 election process and preparation of the associated financial analysis for the San Luis Water District. The scope of work included gathering data and developing and writing the financial report to meet the requirements of Proposition 218. This also involved geographic information system services to create a map showing the parcelization and zones of benefit. In addition, the project team developed the materials necessary for the initial public hearing, and mailed notices and the assessment ballots for the final hearing, and counted ballots.

**Owen E. Kubit, PE, PG,  
CHG, CFM**  
Principal Water Resources Engineer

---

Education

- ✓ M.S. Geology,  
California State University, Fresno
- ✓ M.S. Civil Engineering (Water  
Resources), University of Iowa,  
Iowa City
- ✓ B.S. Civil Engineering,  
Colorado School of Mines, Golden

Licenses/Registrations/Certifications

- ✓ Civil Engineer, California #66552
- ✓ Civil Engineer, Illinois #062-52935
- ✓ Professional Geologist, California  
#9373
- ✓ Certified Hydrogeologist #1041
- ✓ Certified Floodplain Manager,  
US-13-07187

Affiliations

- ✓ United States Committee on Irrigation  
and Drainage (Conference Planning  
Committee)
- ✓ Association of State Floodplain  
Managers
- ✓ International Association of  
Hydrological Sciences
- ✓ Project Management Institute

Areas of Expertise

- ✓ Surface Water Hydrology
- ✓ Groundwater Hydrology
- ✓ Water Resources Planning &  
Management
- ✓ Groundwater Management
- ✓ Floodplain Management
- ✓ Dam Rehabilitation
- ✓ Grant Writing

**Professional Summary**

Owen Kubit is a principal water resources engineer at Provost & Pritchard with over 24 years of broad-based experience in the planning, design, construction, and management of various water resources projects. He has worked for public and private clients throughout the United States and overseas, including over 50 water supply agencies in California. Mr. Kubit is a seasoned technical writer and has authored numerous reports, feasibility studies, and successful grant applications. He has an interdisciplinary background with significant experience and professional licenses in both civil engineering and geology. Mr. Kubit has extensive knowledge in the fields of dam inspection and rehabilitation, groundwater recharge, groundwater management, water balance analysis and water resources planning. In addition, he has experience in the fields of groundwater hydrology, surface water hydrology, floodplain management, coastal engineering, river engineering, and engineering geology.

**Relevant Experience**

North Kings Groundwater Sustainability Plan, North Kings Groundwater Sustainability Agency, Fresno County, California  
– Project Engineer and lead author for a Groundwater Sustainability Plan for a 312,000-acre Groundwater Sustainability Agency in Fresno County. Topics addressed in the Plan include groundwater conditions, groundwater monitoring, hydrogeologic conceptual model, water budget, groundwater policies, overdraft analysis, development of long-term goals, identification of overdraft mitigation measures, and identification and conceptual evaluation of overdraft mitigation projects. Also developed sustainable management criteria that incorporated measurable objectives, minimum thresholds, operational flexibility, and defined undesirable results. Challenges included preparing a plan that meets the needs of thirteen different agencies with different priorities and water supplies.

McMullin Area Groundwater Sustainability Plan, McMullin Area Groundwater Sustainability Agency, Fresno County, California  
– Project Engineer responsible for developing a Groundwater Sustainability Plan in Fresno County. Challenges include achieving groundwater sustainability in an area with no permanent surface water supply. Topics addressed in the Plan include groundwater conditions, groundwater monitoring, hydrogeologic conceptual model, water budget, groundwater policies, overdraft analysis, development of long-term goals, and identification and conceptual evaluation of overdraft mitigation project. Worked closely with local farmers and agency

**Owen E. Kubit, PE, PG, CHG, CFM** *(continued)*Principal Water Resources Engineer

---

representatives to solve groundwater problems in an area with poor overall water supplies,

Kings Basin Groundwater Evaluations, Multiple Groundwater Sustainability Agencies, Fresno County, California – Project engineer that assisted with effort to evaluate long-term overdraft and groundwater flows for seven Groundwater Sustainability Agencies in the 976,000-acre Kings Groundwater Subbasin. Also assisted with identifying the base of the unconfined aquifer, regional specific yield values, and establishing a hydrologic study period.

Kings Basin Water Budget Analyses, Various agencies, Fresno and Tulare Counties, California – Project Engineer/Manager for developing detailed analytical water budgets for six Groundwater Sustainability Agencies in the Kings Groundwater Subbasin. Collected hydrologic data, developed water budget methodologies and assumptions, and simulated historical, current and predicted future conditions to assist in estimating the groundwater safe yield.

Kings/Westside Groundwater Basin Boundary Monitoring Project, Fresno County California – Project Manager for a project to improve groundwater monitoring along the boundary of the Kings Groundwater Subbasin and Westside Groundwater Subbasin. Work included evaluating the current monitoring network, expanding the monitoring network with private wells, designing and installing double-completion nested wells, developing a basin boundary monitoring program, and preparing an ordinance that allows the County to convert private abandoned wells to monitoring wells.

Groundwater Resource Recovery Evaluation, Confidential Client, Project Engineer – Mr. Kubit was responsible for evaluating the potential for using groundwater with marginal quality as a regular supply for a water district in the southern San Joaquin Valley. Work included reviewing geologic, hydrogeologic, well construction and water quality data to identify

the best locations for new wells, and preparing a conceptual design for a well network and conveyance system.

Groundwater Management Plan Update, Buena Vista Water Storage District, Kern County, California, Project Manager – Mr. Kubit was responsible for updating a groundwater management plan for a 50,000-acre water district. His responsibilities included updating the plan to meet Senate Bill 1938 and Assembly Bill 359 requirements, adding recent accomplishments, and providing recommendations for improving groundwater management. Challenges included addressing groundwater management in a District with unique geologic conditions.

Groundwater Management Plan Update, Root Creek Water District, Madera County, California, Project Manager – Mr. Kubit was responsible for updating a groundwater management plan for a 9,200-acre water district to be compliant with California Senate Bill No. 1938. He updated the plan to include new information on the district's facilities, policies and goals. In addition, he recommended several new water management strategies that were included in the final groundwater management plan.

Madera-Chowchilla Groundwater Monitoring Plan, Madera-Chowchilla Basin Groundwater Monitoring Group, Madera County, California, Project Engineer – Mr. Kubit was responsible for developing a regional groundwater-level monitoring network and monitoring plan for five water agencies in the Madera and Chowchilla groundwater subbasins. The regional monitoring area covers 789 square miles. His responsibilities included selecting wells to include in the network, preparing a groundwater monitoring plan report, coordinating efforts among five participating agencies, and submitting the monitoring plan to the California Statewide Groundwater Elevation Monitoring (CASGEM) program.

**Shay Overton, PG, CHG**

Senior Geologist

**Education**

- ✓ M.S. Geology, California State University, Fresno
- ✓ B.S. Dual Major, Geology & Environmental Biology, California State University, Fresno

**Licenses/Registrations/Certifications**

- ✓ Professional Geologist, California #8424
- ✓ Certified Hydrogeologist #CHG 1017

**Areas of Expertise**

- ✓ Hydrogeology
- ✓ Fluvial Geomorphology
- ✓ Environmental & Engineering Geology
- ✓ Hydrology

**Professional Summary**

Shay Overton has over 15 years of project experience in the fields of geology, hydrogeology, fluvial geomorphology, and engineering/environmental geology. Mr. Overton has had exposure to a wide variety of fluvial geomorphic and hydrogeologic projects for clients including the California Department of Transportation (Caltrans), California Department of Fish and Wildlife, and the Department of Water Resources and numerous private clients. He has presented his research at professional conferences as diverse as Society for Ecological Restoration to the Groundwater Resources Association of California and American Water Resources Association. He was a part-time lecturer at California State University, Fresno, where he taught a class focused on fluvial geomorphology and stream habitat restoration. A substantial portion of his work is in the fields of environmental geology focusing on regulatory compliance and hydrogeology studies for numerous Groundwater Management Plans. Over nearly 15 years at Provost & Pritchard Mr. Overton has been instrumental in the design of several challenging waste water disposal projects for clients as diverse as P,G&E and Mariposa County. The past several years, SGMA driven basin boundary modifications, review of groundwater models and preparing Groundwater Sustainability Plans have been a significant parts of his work. His area of expertise is in the collection and analysis of hydrogeologic data, planning geologic and hydrogeologic data collection programs for a wide variety of project types, and writing and providing oversight of preparation of subsequent hydrogeologic reports.

**Relevant Experience**

Groundwater Sustainability Plans (in process), Various Groundwater Sustainability Agencies, Central Valley, California, Hydrogeologist – Mr. Overton is currently working as the hydrogeologist for more than ten GSP currently being prepared critically over-drafted groundwater basins in the Central valley. Several of the GSP being prepared are not using groundwater models, therefore a major portion of Mr. Overton's SGMA related work has been developing creative ways to develop the information for use in water budgets required by SGMA. As well, Mr. Overton was instrumental in getting two basin boundary modification approved and portions of a third. Tasks associated with SGMA that Mr. Overton has been instrumental in include:

- Regional Groundwater Contour Maps
- Calculation of groundwater boundary flows, both internal and external to groundwater basins
- Prepare Technical Memoranda and present technical data to stake holder groups

**Shay Overton, PG, CHG** *(continued)*

Senior Geologist

- Basin Boundary Modifications
- Development/estimates of aquifer parameters
- Development of Hydrogeologic Conceptual Models (HCMs)
- Participate in inter-basin and intra-basin coordination meetings
- Develop monitoring networks for individual GSAs and Subbasins
- Part of a team developing methodologies for setting Sustainable Management Criteria (SMCs)
- Critical Evaluation of Surface Water-Groundwater Interactions

Groundwater Management Plans, Various Irrigation & Water Districts, Fresno, Madera, Kern, Kings and Tulare Counties, California, Project Geologist – Mr. Overton was integral in developing, writing and updating groundwater managements plans for several local irrigation and water districts including Root Creek Water District, James Irrigation District, Tranquillity Irrigation District, Fresno Slough Water District, City of San Joaquin, Tulare Irrigation District, Kings County Water District, and Delano-Earlimart Irrigation District. The emphasis of these efforts was to update or create groundwater management plans compliant with the September 2002 California State Senate Bill 1938. Mr. Overton's contributions included critical review of existing groundwater data, development and writing of detailed geology and hydrogeology, development of the goals and objectives of the groundwater management plans, and identification of critical data gaps.

Groundwater Contour Mapping, Kings County Water District, Kings County, California, Project Geologist – Mr. Overton has assisted with developing semi-annual district-wide groundwater contour maps for two San Joaquin Valley aquifer zones in Kings County Water District for the past ten years. This includes working closely with GIS staff on database management for data from over 500 wells that the District either

monitors directly or from Agencies that the District has data sharing agreements with. This effort includes working with numerous agencies, including the USBR and several neighboring water conservation and irrigation districts, that collect water level data in the District or border the District. After collection of the water level data Mr. Overton provides oversight and quality control for preparation of groundwater contour maps for a shallow unconfined aquifer and a regional perched aquifer. Key to producing the groundwater contours is an in-depth understanding of the hydrogeology in Kings County and regional stresses to groundwater. This work also includes keeping a tabulated summary of changes in groundwater levels by township on a yearly and five year basis and on-going hydrographs of average water level changes.

Apex Ranch Conjunctive Use Project, Kings County Water District, Kings County, California, Project Geologist – Mr. Overton was responsible for gathering field measurements from onsite and off-site wells. He used the information from onsite monitoring wells and dataloggers to generate depth to water graphs for use in calculating aquifer parameters. Mr. Overton updated and streamlined data acquisition and storage into a more user-friendly format. More recently his work related to the Project has been to prepare the Annual Operations Reports.

Groundwater Monitoring and Drought Preparedness Program, Orange Cove Irrigation District, Fresno County, California, Project Geologist – Mr. Overton prepared a hydrogeologic literature review and was the geologist onsite for drilling and logging of subsurface materials. He oversaw construction for the installation of six monitoring wells, provided training to district staff on the use and installation of pressure transducers in the monitoring wells, and provided quality control in support of the geographic information system (GIS) linked database.

## Lynn Groundwater, PE

Associate Engineer

---

### Education

- ✓ M.S., Civil and Environmental Engineering, Stanford University
- ✓ B.S., BioResource and Agricultural Engineering (minor in Geographic Information Systems), California Polytechnic State University, San Luis Obispo

### Licenses/Registrations/Certifications

- ✓ Civil Engineer, California #84194
- ✓ Agricultural Engineer, California #578

### Affiliations

- ✓ American Society of Civil Engineers (ASCE)
- ✓ American Society of Agricultural and Biological Engineers (ASABE)

### Areas of Expertise

- ✓ Groundwater Assessment
- ✓ Wastewater Engineering
- ✓ Water Resources Engineering
- ✓ Data Analysis
- ✓ Field Sampling
- ✓ Report Preparation
- ✓ AutoCAD, ArcGIS

## Professional Summary

Lynn Groundwater is an Associate Engineer with Provost & Pritchard with nearly six years of experience in civil and agricultural engineering. She has experience in a variety of different projects, including groundwater assessment studies and evaluating water systems. She has worked on water well projects, SGMA projects including Basin Boundary Modifications, feasibility studies, and water resources design projects.

## Relevant Experience

North Kings Groundwater Sustainability Plan, North Kings Groundwater Sustainability Agency, Fresno County, California – Ms. Groundwater is assisting in the preparation of the Groundwater Sustainability Plan for a 312,000-acre Groundwater Sustainability Agency in Fresno County. Topics addressed in the Plan include groundwater conditions, groundwater monitoring, hydrogeologic conceptual model, water budget, groundwater policies, overdraft analysis, development of long-term goals, identification of overdraft mitigation measures, and identification and conceptual evaluation of overdraft mitigation projects. Also developed sustainable management criteria that incorporated measurable objectives, minimum thresholds, operational flexibility, and defined undesirable results. Challenges included preparing a plan that meets the needs of thirteen different agencies with different priorities and water supplies.

McMullin Area Groundwater Sustainability Plan, McMullin Area Groundwater Sustainability Agency, Fresno County, California – Ms. Groundwater is assisting in the preparation of the Groundwater Sustainability Plan in Fresno County. Challenges include achieving groundwater sustainability in an area with no permanent surface water supply. Topics addressed in the Plan include groundwater conditions, groundwater monitoring, hydrogeologic conceptual model, water budget, groundwater policies, overdraft analysis, development of long-term goals, and identification and conceptual evaluation of overdraft mitigation project. Worked closely with local farmers and agency representatives to solve groundwater problems in an area with poor overall water supplies.

Basin Boundary Modification, Pleasant Valley Water District, Coalinga, California, Project Engineer- This project successfully completed the Basin Boundary Modification request that led to the approval of subdividing the Pleasant Valley Subbasin. Ms. Groundwater was responsible for filling out and submitting the Basin Boundary Modification Request, coordination and outreach with agencies in Pleasant Valley Groundwater Basin to gain their support for the subdivision, review local hydrographs, and on-going



## Lynn Groundwater, PE *(continued)*

Associate Engineer

---

communication with DWR regarding Modification request to answer any questions DWR had regarding the Modification request. This boundary subdivision request was the only approved request submitted.

Aliso Ranch On-Farm Capture Project, Britz, Inc., Madera, California, Project Engineer- The project allows the landowner to divert flood water from the Chowchilla Bypass to the land owner's property while alleviating downstream pressure in the channel. This project consisted of a conceptual and final design of a steel walkway, head gate, and grower connection, documenting permitting requirements, initial identification of alignments and facilities as well as a biological review and a CEQA Initial Study. Ms. Groundwater helped manage the project, delegated tasks, and kept track of the budget. She designed the diversion, coordinated biological and cultural surveys, coordinated with permitting agencies including the United States Army Corps of Engineers and Lower San Joaquin Levee District. She reviewed construction plans and solicited and reviewed construction bids.

Groundwater Quality Assessment Report (GAR), Westlands Water District, Fresno, California, Project Engineer – For the project, Ms. Groundwater summarized current and past agricultural practices from available information. She classified crops and other land uses into categories for the purpose of vulnerability designation and prioritization; mapped recent land use from WWD, DWR, and USDA; summarized land use changes and trends through time within the Coalition area and identified commodities that comprise the top 80 percent of irrigated lands. The Coalition is required to develop a GAR in accordance with their new Long-Term Irrigated Lands Regulatory Program (LTILRP) WDRs. The overall goal of the LTILRP is to restore and/or maintain the highest responsible quality of state waters, and minimize waste discharges from irrigated lands to maintain safe and reliable drinking water.

Pressure Transducer Evaluation, Pleasant Valley Water District, Coalinga, California, Project Engineer- This project provided a plan to install pressure transducers on wells that will be used to monitor the groundwater levels within the Pleasant Valley Water District to establish a water balance for the District. The process involved selecting wells that represent the district area and coincides with the California Statewide Groundwater Elevation Monitoring Program (CASGEM). Ms. Groundwater helped manage the project, delegated tasks, and monitored the budget. She conducted site visits, coordinated with the client, researched pressure transducers, communicated with various pressure transducer companies, selected wells to be monitored, researched CASGEM requirements, and prepared a memo summarizing the pressure transducer findings and CASGEM requirements.

Stream Gage Evaluation, Pleasant Valley Water District, Coalinga, California, Project Engineer- This project provided a plan to install new stream gages within the Pleasant Valley Subbasin streams to obtain data that has a direct effect on the Pleasant Valley Subbasin water balance. This project identified deficient data which will ultimately benefit the Basin in reaching sustainability by understanding the flows within the District. Ms. Groundwater helped manage the project, delegated tasks, and monitored the budget. She conducted site visits, coordinated with DWR, compiled and reviewed existing stream gage data, researched open channel flow measurement devices, communicated with various flow measurement devices companies, and prepared a memo summarizing the stream gage findings.

## Kaitlin Palys

Associate Water Resources Specialist

### Education

- ✓ B.S., Environmental Science, Water Science & Quality Option, Wetland Science Minor, Virginia Polytechnic Institute & State University (Virginia Tech)

### Licenses/Registrations/Certifications

- ✓ Virginia Department of Mines, Minerals and Energy (DMME) Certified
- ✓ Mine Safety & Health Administration (MSHA) Certified

### Affiliations

- ✓ Association of Environmental Professionals Member
- ✓ City of Visalia Waterways and Trails Committee Member

### Areas of Expertise

- ✓ Environmental Regulations
- ✓ Sustainable Groundwater Management Act
- ✓ Integrated Regional Water Management Program
- ✓ Irrigated Lands Regulatory Program
- ✓ Water Budgets
- ✓ Environmental Planning (CEQA/NEPA)
- ✓ Data Management
- ✓ Water Quality
- ✓ Wetland Soils & Mitigation
- ✓ Groundwater Well Installation and Sampling
- ✓ Infiltration Tests
- ✓ Wetland Delineation
- ✓ Soil Descriptions
- ✓ Field Soil and Water Chemistry
- ✓ CalEEMod 2016.3.2.

## Professional Summary

Kaitlin Palys is an Associate Water Resources Specialist with Provost & Pritchard, providing technical assistance to the firm's Planning and Environmental Departments. A graduate from Virginia Tech University, Ms. Palys has a strong understanding of major environmental laws, regulations, and programs, soil science, water quality, wetland science, and is familiar with permitting procedures. Ms. Palys is primarily involved with the Sustainable Groundwater Management Act and Integrated Regional Water Management Program. She also has experience in Brownsfields, Superfund sites, remediation planning, risk assessment, and site assessment. Ms. Palys is also skilled in groundwater well installation and sampling, infiltration tests, wetland delineation, soil descriptions, and soil and water chemistry.

## Relevant Experience

Grassland Groundwater Sustainability Plan, Water Resources Specialist – Ms. Palys is assisting the development of the Grassland Groundwater Sustainability Plan (GSP) and is involved in providing technical, report, and data inventory services. Ms. Palys assists on water budget development, GSP report writing and review, sustainable management criteria development, monitoring network development, GIS coordination, groundwater dependent ecosystem determinations, data review and inventory, and stakeholder outreach.

North & Central Delta-Mendota Groundwater Sustainability Plan, Water Resources Specialist – Ms. Palys is involved in providing data management, technical, and report services for the North & Central Delta-Mendota GSP group, which is comprised of nine Groundwater Sustainability Agencies and spans from Patterson, CA to Tranquillity, CA. Her responsibilities include assisting with data requests, inventory and review, GIS coordination, groundwater dependent ecosystem determinations, and data specific GSP or technical memo writing.

Aliso Water District Groundwater Sustainability Plan, Water Resources Specialist – Ms. Palys is assisting the development of the Aliso Groundwater Sustainability Plan (GSP) and is involved in providing technical and report services. Ms. Palys assists on water budget review, GSP report writing and review, sustainable management criteria development, groundwater dependent and ecosystem determinations.

Tranquillity Irrigation District Annual Report and Data Management System, Water Resources Specialist – Tranquillity Irrigation District (TID) is developing an Annual Report and Data

**Kaitlin Palys** *(continued)*Associate Water Resources Specialist

---

Management System in response to growing reporting requirements. Ms. Palys is involved in the Annual Report writing and Data Management System development. Ms. Palys is also involved in TID's monitoring and reporting requirements associated with its involvement in the North & Central Delta-Mendota GSP Group.

Delta-Mendota Subbasin Coordinated Effort, Water Resources Specialist – The Delta-Mendota Subbasin is comprised of six GSP groups and is developing a common chapter to meet coordination requirements identified in regulations associated with the Sustainable Groundwater Management Act (SGMA). Ms. Palys is involved in GIS coordination, data management system facilitation, and coordinated decision recording for the Delta-Mendota Subbasin's technical and coordination committees.

Kings River East Groundwater Sustainability Agency Water Budget, Water Resources Specialist – Ms. Palys is assisting the data requests and development of the historic, current, and projected water budgets for the Kings River East Groundwater Sustainability Agency.

Westside-San Joaquin Integrated Regional Water Management Program, Water Resources Specialist – Ms. Palys assisted in the Westside-San Joaquin Integrated Regional Water Management (WSJ IRWM) Plan 2018 Update. Ms. Palys' responsibilities included public outreach and project inventory, selection, and prioritization. Ms. Palys is also involved in developing the Prop 1 grant application for the WSJ IRWM Plan's projects in the San Joaquin River Funding Area.

Pleasant Valley Water District Prop 1 Grant Services, Water Resources Specialist – Ms. Palys is involved in providing grant services for Pleasant Valley Water District (PVWD). PVWD is located in the WSJ IRWM Region and overlaps the Tulare Kern Funding Area. Ms. Palys is specifically involved in Project Information Form development and submission of projects to the WSJ IRWM Plan 2018 Update.

Surface Water Monitoring and Consulting, Kern River Watershed Coalition Authority, Kern County, California, Project Planner – Ms. Palys has been involved in providing monitoring and report support services for the surface water component of the Monitoring and Reporting Program (MRP) for the Kern River Watershed Coalition Authority (KRWCA) since its inception. Her specific responsibilities include assisting with monthly water quality monitoring and quarterly submittals.

Surface Water Monitoring and Consulting, Kaweah Basin Water Quality Association, Tulare County, California, Project Planner – Ms. Palys has been assisting the Kaweah Basin Water Quality Association (KBWQA) in the surface water component of the Monitoring and Reporting Program (MRP). Her responsibilities include assisting with the preparation of monthly water quality monitoring and quarterly submittals.

Soil and Lysimeter Sampling, Land Application of Wastewater Reports, Los Gatos Tomato Products – Ms. Palys has been assisting Los Gatos Tomato Products in the sampling, data analyses and reporting consistent with their Waste Discharge Requirements (WDR) Monitoring and Reporting Program (MRP).

Initial Study/Mitigated Negative Declaration to Support the Riverdale Public Utilities District Wastewater Treatment Plant, Visalia, California, Senior Project Planner – Ms. Palys is assisting the project team that is designing a wastewater treatment plant for Riverdale Public Utilities District. The scope of work includes CEQA documents and accompanied Air Quality Modeling.

## Gavin O’Leary, GISP

Senior GIS Specialist

---

### Education

- ✓ B.S. Fisheries Biology & Management, Humboldt State University, California

### Licenses/Registrations/Certifications

- ✓ Certified GIS Professional (GISP), #99203
- ✓ GIS Certificate Program, American River College

### Areas of Expertise

- ✓ Geographic Information Systems (GIS)
- ✓ Disadvantaged Communities
- ✓ Groundwater Analysis
- ✓ Water Agency Facilities Data
- ✓ Irrigated Lands Regulatory Program
- ✓ Sustainable Groundwater Management Act

## Professional Summary

Gavin O’Leary is a geographic information systems (GIS) specialist and project manager with 18 years of experience. He has an extensive background in spatial analysis and database creation with geospatial data. Mr. O’Leary’s areas of expertise include mapping and analysis of well water depth data, spatial analysis of groundwater storage, management of water agency facilities data, assessor parcel data, and data conversion and creation from historic sources.

## Relevant Experience

Multiple Groundwater Sustainability Agencies, Groundwater Sustainability Plan (GSP) Preparation, California, GIS Specialist – Mr. O’Leary is currently supporting the spatial data needs for more than 10 GSP documents currently in process for critically over drafted groundwater basins. This includes a variety of tasks for each GSP.

- Managing large data sets (+100,000 records) for multiple disciplines
- Performing spatial analysis to calculate groundwater flow direction, change in groundwater storage, and aquifer characteristics
- Analysis of groundwater quality data
- Review of historic groundwater conditions
- Review of local agency service areas and disadvantage communities’ locations
- Classification of groundwater wells from construction details
- Data cleaning and conversion for analysis
- Merging data from multiple stakeholders for coordinated subbasin analyses
- Preparation of map figures for final report
- Generate statistical data summaries
- Implement data management systems to organize data for SGMA compliant data collection and annual reporting

Tulare Kern Funding Area IRWM DAC Involvement Program, DAC Needs Assessment, Tulare County, California, GIS Specialist – Mr. O’Leary was the lead spatial data analyst leading the GIS needs of the project. Data for incorporated and unincorporated communities was compiled and standardized for review by the project working group and stakeholders. A GIS web-based Story Map was created to convey information about communities in the study area and a geodatabase was compiled to contain all of

## Gavin O'Leary, GISP *(continued)*

Senior GIS Specialist

---

the standardized information collected about each community. A report was generated (in DRAFT) showing summaries of the compiled GIS data as maps and tables.

Kern River Watershed Coalition Authority (KRWCA), Kern County, California, GIS Specialist – Mr. O'Leary performs ongoing data management and spatial analysis in support of the State Water Resources Control Board reporting requirements for the KRWCA. This included managing coalition membership and associated parcels to support reporting and outreach needs. The analysis included combining data from hydrogeologic, topographic, soils, water quality and field level crop data in a GIS to prioritize vulnerable lands. Extensive analysis maps and tabular summaries were created in support of this ongoing project.

Kings County Water District (KCWD), Kern County, California, GIS Specialist – Mr. O'Leary provides ongoing GIS support for KCWD. This includes data creation, locating historic data, converting data formats, analysis and map creation. District data is maintained in a geodatabase. A wide variety of data is utilized to help answer questions and solve problems that relate to spatial data.

San Joaquin Valley IRWMP Support, Fresno, Kings, Tulare, and Kern Counties, California, GIS Specialist – Mr. O'Leary has performed GIS mapping support for successful IRWM grant applications as well as GIS data analysis for several IRWM projects. Tasks included review of disadvantage communities, potential project locations, census data, historic and current irrigated crop information from multiple sources, review of natural and artificial waterways, NRCS soils, and FEMA flood data. Final products included detailed maps and data summary tables to support projects and grant proposals.

Enterprise Canal Watershed Survey, City of Clovis and City of Fresno, California, GIS Specialist – Mr. O'Leary performed a sanitary survey to assess possible sources of contamination to the Enterprise Canal which provides drinking water for the cities of Clovis and Fresno. He utilized a global positioning system (GPS)-enabled mobile GIS (moving map display) to collect feature locations, evaluated potential source threats, and summarized survey findings with detailed GIS map book.

Groundwater Contaminant Plume Mapping, City of Merced, California, GIS Specialist – This project consisted of the preparation of bi-annual report map figures showing analysis surfaces and contours for predicted values of constituents in groundwater. Mr. O'Leary worked with a hydrogeologist to interpret data from lab samples to create representative surfaces in GIS.

Water Supply and Land Use Assessment, City of Clovis, Fresno County, California, GIS Specialist – Mr. O'Leary is responsible for ongoing GIS support providing analysis for consulting with the city engineer. Project responsibilities include maintaining GIS data layers for existing and proposed water pipeline features, calculating water demand for existing and proposed city land use in designated planning zones, and maintaining a current city GIS base map with water facilities, parcels, sphere of influence, planning villages, proposed and existing land use and city boundary.

## Abhishek Singh, PhD, PE

Senior Engineer  
INTERA

---

### Education

- ✓ PhD, Civil and Environmental Engineering, University of Illinois
- ✓ M.S., Civil and Environmental Engineering, University of Illinois
- ✓ B.E., Civil Engineering, Birla Institute of Technology and Science

### Licenses/Registrations/Certifications

- ✓ Civil Engineer, California, #89384
- ✓ Professional Engineer, Texas, #130858

### Affiliations

- ✓ Associate Editor: Journal of Water Resources Planning and Management
- ✓ Co-Chair: Groundwater Resources Association (GRA) Technical Committee
- ✓ Chair: Groundwater Council, Environmental & Water Resources Institute (EWRI) of the American Society of Civil Engineers (ASCE)
- ✓ Review Panel: Water Resources Research, Groundwater, Journal of Hydrology, Journal of Hydrologic Engineer, and Journal of Hydroinformatics, DOD/SERDP Proposals

### Specialized Training & Software

- ✓ SGMA: Full-Day DWR Workshop on GSP Development
- ✓ Software: C2VSim, GoldSim, PEST, MODFLOW-USG

## Professional Summary

Abhishek Singh, PhD, PE, has over 16 years of research and consulting experience in the areas of water resources planning and management. Dr. Singh leads INTERA's California Operations and currently manages several projects for California water agencies and utilities related to regional planning and SGMA implementation. His projects focus on modeling complex hydrogeologic systems and surface-water/groundwater interactions, estimating basin-wide water budgets, groundwater project assessments, managing and mitigating seawater intrusion and contaminated groundwater, and planning for drought and climate change. He has applied his expertise on projects across the United States involving hydrogeologic modeling; assessment of the impact of climate change on water planning; modeling to support permitting, licensing, and compliance for radioactive waste disposal facilities; optimization of groundwater remediation and monitoring design; and incorporating uncertainty in regional and project-level planning. Dr. Singh also provides a variety of permitting and regulatory support to water agencies. Dr. Singh's experience with modeling software includes ESRI® ArcGIS Tools, MODFLOW, MODFLOW-USG, MODFLOW-SURFACT, C2VSim, GoldSim, LeapFrog, MT3DMS, RT3D, STOMP, VS2DI, TOUGH2, HYDRUS, MIKE-SHE, PEST, and GSLIB. Dr. Singh is adept at developing integrated GIS and geodatabases in support of water resource projects. He is adept at data-processing and work-flow automation using C, C++, Perl, Python, Matlab, and Fortran.

## Relevant Experience

Development of A Groundwater Flow Model of the East and South Las Posas Basins for SGMA Planning, Calleguas Municipal Water District, California, Task Manager/Modeling Lead - Developed a groundwater flow model of the East and South Las Posas groundwater basins for the Calleguas Municipal Water District. Worked collectively with CMWD, Bondy Groundwater, Fox Canyon Groundwater Management (FCGMA) - the local GSA, the GSA's Technical Advisory Group (TAG), and their Groundwater Sustainability plan (GSP) consultant to support GSP development process. The basins are characterized by complex hydrostratigraphy (faulting and folding) and dynamic interactions with surface water flows in the Arroyo Las Posas. Led the development of an integrated surface/groundwater boundary package to route Arroyo flows and simulate dynamic interactions between the surface-flows and the alluvial aquifer. Calibrated the model with respect to recent head and streamflow data. The model was used to support the SGMA planning process for the East and South Las Posas Subbasins, which included simulating future conditions

**Abhishek Singh, PhD, PE** *(continued)*

Senior Engineer

impacted by climate-change as well as several regional groundwater management actions and projects. The model was documented in a comprehensive report, as well as several technical memoranda that were communicated to various stakeholders. Led regular interactions with and made presentations to the TAG, incorporating TAG comments and suggestions into the model development process. On-going and future work includes modeling to evaluate basin sustainable yields, optimize ASR operations, and perform sensitivity analyses.

Modeling to Support Integrated Water Resources Planning, Inland Empire Utilities Agency (IEUA), Chino, California, Project Manager - Leading a project to develop a planning-level model of the surface water and groundwater supplies and infrastructure for the IEUA regional system to support phase-II of IEUA's Integrated Regional Plan (IRP2). IEUA provides imported water from the State Water Project and reclaimed water service to multiple water agencies in the Chino Basin. On-going work entails project scoping and data-gathering. Data from IEUA and member agencies is being compiled within a GIS framework. Data-gaps have been identified in a matrix with prioritization for different data-sets. Currently organizing and attending meetings with IEUA's member agencies focused on data-collection and model scoping. Different modeling alternatives have been summarized in presentations made to IEUA and member-agencies. Once complete, the model will represent imported supplies, local water supplies managed by retail and wholesale agencies, and interconnections between agencies. The model will serve as a decision-support tool to evaluate operational constraints and identify infrastructure and operational strategies to improve the reliability of the regional water supply system in the event of reduction/interruption of supplies. The model will allow the assessment of supply resiliency resulting from future projects proposed to meet the planning objectives of IEUA, member agencies, and the Chino Basin Water Master.

SGMA Evaluation of Groundwater Flow and Transport Model of the San Pasqual Basin for GSP Development, City of San Diego, Southern California. Project Manager/ Technical Lead - Reviewed an existing groundwater flow and transport model to evaluate its suitability for use in Groundwater Sustainability Planning as required under the Sustainable Groundwater Management Act (SGMA). Evaluated model boundaries, structure, parameters, and water budget with respect to California Department of Water (DWR) Basin Studies. Assessed the representation of flows and groundwater/surface-water interactions along the Guejito Creek, Santa Ysabel Creek, and the San Dieguito River. Compared model flows against USGS gage data. Assessed model calibration in terms of simulated hydraulic head and TDS/Nitrate concentration trends against groundwater data from the San Pasqual Basin. Assessed applicability of the model for identification of SGMA undesirable results – lowering of water levels, reduction of groundwater storage, degraded water quality, and depletion of interconnected surface water. Provided recommendations on model enhancements and revisions to make it suitable for SGMA planning purposes.

Feasibility Assessment of Conjunctive Use Projects to Support Long Range Planning in the San Diego River Basin, San Diego, California, Project Manager/ Technical Lead - Led the development of a decision-support framework to support long range planning for conjunctive use and system optimization of the San Vicente Reservoir, El Capitan Reservoir, and groundwater injection/extraction/storage in the El Monte Valley and/or Moreno Valley groundwater subbasins within the San Diego River Basin. Reviewed existing literature on groundwater recharge and storage capacity of the El Monte and Moreno groundwater subbasins within the San Diego River Valley.

## Joan Blainey, PhD, PG

Senior Hydrogeologist  
INTERA

---

### Education

- ✓ PhD, Hydrology and Water Resources, The University of Arizona
- ✓ M.S., Hydrology and Water Resources, The University of Arizona
- ✓ B.S., Mathematics, University of Washington

### Licenses/Registrations/Certifications

- ✓ Professional Geoscientist, Texas, #11191
- ✓ Professional Geologist, California, #9677

### Affiliations

- ✓ Member, National Ground Water Association

### Software & Specialized Training

- ✓ Surface Water: CE-Qual-W2, HEC-RAS
- ✓ Groundwater & Transport: FEHM, HYDRUS, MODFLOW, MODFLOW-SURFACT, MT3DMS, MODPATH, PEST, PHREEQC, PLUMECALC, STOMP, UCODE, Groundwater Vistas, FloPy
- ✓ Statistical, Geospatial, & More: S-PLUS, R, MATLAB, ArcMap, Python, Leapfrog Geo
- ✓ Estimating Groundwater Recharge, National Ground Water Association, 2015
- ✓ Advanced PEST Training, 2012
- ✓ FEHM Training, 2010
- ✓ CE-QUAL-W2 Training, 2008

## Professional Summary

Joan Blainey has 22 years of experience in developing and applying groundwater flow, solute transport, and water availability models at both regional and local scales. She applies these models in support of environmental restoration activities, licensing and permitting of radioactive and hazardous waste disposal facilities, and water resources development and management with expertise in uncertainty and risk analysis. Working on some of the largest and most complex projects involving the cleanup of legacy contamination resulting from the production of plutonium and testing of nuclear weapons, Dr. Blainey uses models to help determine the nature and extent of subsurface contamination, evaluate remedial alternatives, define regulatory boundaries for corrective actions, and design long-term monitoring well networks. Her modeling expertise is also applied to water resources management, where she uses these tools to evaluate the impacts of future groundwater pumping, locate and design water supply wells, estimate spatially distributed precipitation to assess variations in climate, and quantify recharge and runoff potential in arid and semi-arid basins. For state, regional, and municipal water management agencies and river authorities, Dr. Blainey contributes to projects involving evaluations of brackish groundwater as an alternative water source, the protection of water supplies from seawater intrusion and other types of potential contamination, and the transfer of water rights. In completing this work, she brings expertise with a wide variety of groundwater flow and transport codes, geostatistical and mathematical software, programming languages, optimization codes, and geographic information system (GIS) software. She has specialized expertise in development and application of statistical models including artificial neural networks (ANNs), kriging, Markov chain Monte Carlo (MCMC) methods, and stochastic simulation (e.g., sequential Gaussian simulation).

## Relevant Experience

Development of A Groundwater Flow Model of the East and South Las Posas Valley Basins, Calleguas Municipal Water District, Ventura County, California, Water Budget Technical Lead and Modeler - Ongoing work developing a conceptual model, water budget, and a groundwater flow model to support the development of long term operational planning of the Las Posas Valley Basin Aquifer Storage and Recovery (ASR) project. Preliminary water budget is complete, groundwater flow model is calibrated, and draft report will undergo review by a technical advisory group.



**Joan Blainey, PhD, PG** *(continued)*  
Senior Hydrogeologist

---

Modeling of Seawater Intrusion Barrier for Protecting Groundwater Resources, West Basin Municipal Water District, Southern California, Senior Hydrogeologist - Providing annual regulatory reporting materials to the District based on groundwater flow and transport modeling for the West Coast Basin seawater intrusion barrier using recycled water for injection. The reporting materials are used by the District to meet the annual metrics of the recycled-water injection permit granted by the Los Angeles Regional Water Quality Control Board. Responsible for calculating travel times and concentrations of the recycled water injected at the barrier as it moved inland towards water supply wells, documenting the work, and interfacing with the District to convey and interpret the modeling results and assumptions.

Water Supply Evaluation for Swarthout Valley, Golden State Water Company, San Bernardino County, California, Senior Hydrogeologist - Developed a conceptual hydrogeologic model for a small, shallow alluvial groundwater system located along the San Andreas Fault zone. Devised a transient monthly water budget for the past 15 years that included recharge, and calculated basin yield to evaluate water supply conditions and the reliability of meeting water demands. Analyzed the water budget to predict scenarios with consecutive years of below average precipitation that could result in insufficient water supply to meet system demands, historically unprecedented events. Primary author of report documenting the work.

Aquifer Storage and Recovery (ASR) Business Case, Northern Trinity and Woodbine Aquifers, Tarrant Regional Water Authority (TRWD), Tarrant County, Texas, Groundwater Modeler - Supported the TRWD as a subcontractor in a project aimed at developing a business case for the use of Aquifer Storage and Recovery (ASR) in the TRWD System. Performed detailed hydraulic modeling to further define an ASR project near three potential water treatment plants in the TRWD System. Calculated the Total Storage

Volume expected for the ASR projects, the recovery efficiencies, drawdowns, as well as the associated groundwater infrastructure costs to support a system-level cost estimate versus benefit evaluation for TRWD and their partner cities.

Evaluation of Impaired Groundwater as an Additional Water Source, Tarrant Regional Water District, Fort Worth, Texas, Senior Hydrogeologist - Supporting assessment of impaired groundwater resources with regard to supply, cost, and transmission to identify additional water supply sources. As part of estimating groundwater availability in six counties, developed transmissivity maps, prioritized sites for potential well fields based on analytic element modeling of the groundwater system, and identified impaired groundwater resources. Led client and subcontractor communications for scheduling, meetings, and development of the report to document assessment findings. Results are providing the District with the information necessary to determine how available groundwater resources fit into future water supply strategies.

Hydrogeological Assessment for Groundwater Well Options for the City of Wharton Texas, Halff Associates Inc., Wharton County, Texas, Groundwater Modeler - Conducted simulation of groundwater flow to estimate drawdown and land subsidence impacts from increased pumping to meet future water supply demands. Simulations considered two sources of water supply: groundwater from proposed new wells and injection of treated wastewater effluent as part of Aquifer Storage and Recovery. Results of the groundwater modeling study were included as part of a feasibility analysis for the cities of Wharton and East Bernard, Texas that was funded by a Texas Water Development Board Regional Facilities Planning Grant.

## Raghavendra Suribhatla,

### PhD, PE

Hydrogeologist  
INTERA

#### Education

- ✓ PhD, Civil Engineering, State University of New York at Buffalo
- ✓ M.S., Civil Engineering, State University of New York at Buffalo
- ✓ B. Tech, Civil Engineering, Indian Institute of Technology-Madras

#### Licenses/Registrations/Certifications

- ✓ Civil Engineer, California #87025

#### Specialized Training/Software

- ✓ Modeling: MODFLOW, MODHMS, SEAWAT, MT3D, HydroGeoSphere (FRAC3DVS), PEST, Split, Visual Bluebird, EarthImager, RES2DINV, VSAFT2, C2VSim
- ✓ Programming: MATLAB, FORTRAN, MPI, VB .NET
- ✓ GSLIB, ESRI ArcGIS, TECPLOT, SURFER, Leapfrog
- ✓ Modeling Environments: GMS, Groundwater Vistas, Visual MODFLOW
- ✓ Code Development: Split, HydroImage

## Professional Summary

r. Suribhatla is a California-licensed professional engineer with 14 years of research and consulting experience in computational groundwater and surface water hydrology, and hydrogeophysical data integration. He has led or managed modeling projects for government, private, and legal clients and has authored/co-authored innovative research proposals to DoD, DoE and secured external and internal competitive research funds. His project experience includes developing and updating numerical models for several water resources and remediation projects in California. Dr. Suribhatla specializes in stochastic modeling, analytical methods, integrated surface water-groundwater modeling and data integration methods. His research background includes developing new analytical techniques for modeling flow in anisotropic domains and implementation of non-Gaussian conductivity models for anisotropic formations, inverse modeling and quantification of parameter uncertainty, innovative techniques for subsurface characterization including hydraulic tomography, and geophysical data integration. He has extensive parallel programming experience in Fortran MPI and MATLAB Distributed Computing. He has authored/co-authored seven peer-reviewed articles in applied mathematics, water resources, and environmental engineering journals and has developed design tools for groundwater remediation.

## Relevant Experience

Review of Groundwater Flow and Transport Model of the San Pasqual Basin for SGMA Planning Purposes, City of San Diego, California, Modeler and Hydrogeologist - Reviewed an existing groundwater flow and transport model to evaluate its suitability for use in Groundwater Sustainability Planning as required under the Sustainable Groundwater Management Act (SGMA). Evaluated model boundaries, structure, parameters, and water budget with respect to DWR Basin Studies. Assessed model calibration in terms of simulated hydraulic head and TDS/Nitrate concentration trends against groundwater data from the San Pasqual Basin.

Economic Analysis to Support Dynamic System Model for Water-Supply Planning, Albuquerque Bernalillo County Water Utility Authority (ABQWUA), New Mexico, Modeler - Provided support for a comprehensive economic analysis of supply alternatives in the ABQWUA's water resources portfolio for a planning horizon extending to year 2120. Updated and utilized spreadsheet-based modules to calculate the discounted present value (DPV) for each alternative in the portfolio and existing supply components. DPV for each alternative was calculated using common assumptions

**Raghavendra Suribhatla, PhD, PE** *(continued)*Hydrogeologist

---

about future inflation and discount rates. Cost of existing supply components included all current O&M for existing supplies and planned capital improvements, along with the opportunity costs for utilization of groundwater beyond a specified management level. Economic analysis of the relative cost of alternative new supply strategies was performed using a consistent projection of supply and demand, the cost time-series of each considered strategy was compared with the current practice.

Upper Santa Clara River Integrated Groundwater-Surface Water Model Updates, Los Angeles County Sanitation Districts (LACSD), California, Project Modeler - Project Modeler for updating MODHMS model of the Upper Santa Clara River and implementation of future scenarios involving different types of water treatment and varying quality of imported State Water Project water. The Santa Clara River flows through Los Angeles and Ventura Counties and provides beneficial uses that include agricultural and urban water supply, groundwater recharge and biological habitat. Portions of the river basin have undergone significant urbanization over the last two decades, creating salinity management challenges for the groundwater and surface water systems. Portions of the Santa Clara River in the Santa Clarita Valley and downstream agricultural areas are now listed on California's 303(d) list of impaired waters with respect to chloride, resulting in the Los Angeles Regional Water Quality Control Board (LARWQCB) adopting a total maximum daily load (TMDL) for chloride in 2002. To address the TMDL requirements, an integrated groundwater/surface- water interaction model (called GSWIM) capable of simulating flow and chloride transport throughout the TMDL study area was developed and is being used to evaluate impacts of different water use scenarios and point source loadings from water reclamation plants. Worked with Principal Engineer and in close collaboration with LACSD staff to implement future scenarios, developed detailed data preparation and documentation procedures along with customized

codes to translate data from client provided EXCEL files to model input and perform numerical simulations to evaluate chloride concentration in the Santa Clara river basin till year 2030. Assisted LACSD staff with presentation of results to the LARWQCB and communication of specifics of modeling process and representation of various components.

Central Basin Wellfield Feasibility Study, Los Angeles Department of Water and Power, Southern California, Technical Lead - Led a desktop and modeling study to identify potential wellfield locations and evaluate feasibility of producing up to 9,000 acre-feet per year of groundwater from the Central Basin. Study was conducted in three-phases, starting with a Phase-1 initial ranking of eight potential areas for siting new wellfields based on the presence of major regional aquifers and proximity to LADWP's infrastructure. Phase-2 involved a comprehensive hydrogeological and water quality evaluation for four of the top-ranked areas. Datasets reviewed included published cross-sections and well logs, driller's reports, oil and gas geophysical logs, WRD regional groundwater monitoring reports, USGS' GAMA studies in the Central Basin, as well as production data from existing wellfields in the vicinity. Phase-3 involved assessment of available volume and maximum drawdowns at each area, and utilized a site-specific groundwater flow model. The groundwater model for each area was derived from the coarse regional-scale USGS model, and refined further to incorporate high-resolution cross-section data.



Fresno • Clovis • Visalia • Bakersfield • Modesto • Los Banos • Chico • Merced • Sacramento  
[www.ppeng.com](http://www.ppeng.com) • [info@ppeng.com](mailto:info@ppeng.com)

## MEMORANDUM

---

**TO:** Board of Directors

**FROM:** General Manager/General Counsel

**RE:** Social Media Policy

**DATE:** June 17, 2019

### **Summary:**

At the request of the Water Conservation and Education Committee, the General Counsel has drafted a social media policy for the Board to discuss. The purpose of this proposed action is for the Board to discuss and, if desired, adopt the policy as drafted or with revisions.

### **Background:**

At the May Water Conservation and Education Committee meeting, Agency intern Casmir Olaivar reported on a CSDA Webinar that she participated in at the request of the General Manager. Based on her report of that webinar, the Committee recognized the importance of having a policy on social media if the Agency is going to be active on social media. Hence the Committee's request to draft such a policy for Board discussion and consideration.

### **Detailed Report:**

The use of social media by public agencies has brought about the need for policies to protect the public agencies, as well as those who respond to social media posts by those agencies. Use of social media, as well as responses to social media posts, must be reviewed for acceptance with social norms and all applicable laws, and the Agency must have the ability to remove offensive or illegal posts. The policy drafted by the General Counsel does this.

### **Fiscal Impact:**

There is no fiscal impact to adoption of the proposed policy.

### **Recommendation:**

Staff recommends that the Board consider the attached policy and adopt it or a reasonable facsimile of it.

## **SAN GORGONIO WATER PASS AGENCY SOCIAL MEDIA POLICY**

### **1. Purpose and Scope**

This document shall serve as the San Gorgonio Pass Water Agency (“Agency”) Social Media Policy and shall govern the use of Social Media sites used for Agency purposes.

### **2. Definitions**

“Social Media sites” shall be defined as services through which multiple users can easily publish and share a wide variety of content, including written commentary, pictures, and video/audio files via the Internet. Social Media sites may include Facebook, Twitter, Instagram, LinkedIn, or any other site that meets the definition provided in this subchapter.

### **3. General Policy**

(a) The General Manager, or his/her designee, shall review and pre-approve the Agency’s establishment and use of any Social Media site.

(b) All Agency Social Media sites shall adhere to applicable Federal, State and local laws as well as Agency policies and regulations.

(c) All Agency Social Media sites are subject to the California Public Records Act. Any and all content on an Agency Social Media site, including, but not limited to, subscribers, postings, comments, and private messages may be considered a public record and may be subject to public disclosure.

(d) Agency Social Media sites shall be maintained by designated Agency employee(s) and shall be used for Agency business purposes only. This Social Media Policy governs use of any Agency-administered Social Media site regardless of whether the site(s) is (are) accessed from Agency computers, computers outside the Agency, or mobile devices.

(e) Upon the General Manager or his/her designee’s approval, Agency Social Media sites shall bear the name and/or official logo of the Agency and shall link to the Agency’s website. Wherever applicable, Agency Social Media sites shall be classified and registered with the service provider as “Official” and/or governmental entity sites.

(f) The Ralph M. Brown Act (“Brown Act”) requires that public agencies deliberate and take action openly. Content and/or comments made by Agency officials via a Social Media site on Agency-related issues within their jurisdiction could be subject to the requirements of the Brown Act. Agency public officials should refrain from discussing, deliberating, or expressing opinions on any Agency-related issue on an Agency Social Media site. Brown Act issues also have the potential to arise on private Social Media sites. As such, Agency public officials should also refrain from discussing, deliberating, or expressing opinions on any Agency-related issue on private Social Media sites.

(g) The Agency reserves the right to restrict or remove any content that is in violation of any applicable law or the Agency's Social Media Policy. Any content which is removed will be retained by the Agency for a reasonable period of time under the applicable records retention policy and will include the time, date, and user name (or screen name) of the content originator, when possible.

(h) All Social Media sites established and administered by the General Manager or his/her designee will clearly provide that they are sponsored by the Agency. Whenever possible, the Agency's Social Media sites shall contain links directing users back to the Agency's official website for in-depth information, forms, documents, online services, and other information necessary to conduct business with the Agency.

(i) The General Manager, or his/her designee, is responsible for assigning staff to update, respond to inquiries, and keep information current on Social Media sites.

(j) The objectives for participating in Social Media sites are to:

- (1) Disseminate information to our community and neighboring communities;
- (2) Demonstrate commitment to outreach and engagement and to monitor issues affecting the Agency; and
- (3) Build and engage an "online community" of residents and businesses.

(k) All staff time used on Social Media sites shall be for the purposes of conducting Agency business only.

(l) Staff shall not express personal views or concerns. Postings shall reflect the view of the Agency as expressed in Agency policies and actions taken by the Board of Directors.

(m) No communications made with the Agency through Social Media sites shall be deemed to constitute public comment or legal notice to the Agency or any of its agencies, officers, employees, agents or representatives where notice to the Agency is required by any federal, state, local laws, rules or regulations. Any comment or notice shall be submitted to the Agency and not through a Social Media site. Information posted to an Agency Social Media site will supplement, and not replace, required notices and standard methods of communication.

(n) To ensure compliance with this section and the Policy, the Agency shall post on each Social Media Site that all Agency business shall be conducted through the Agency's website at <https://www.sgpwa.com> or other applicable venues not including a Social Media site.

(o) The Agency reserves the right to terminate any Agency Social Media site at any time without notice.

#### **4. Comment Policy**

(a) The Agency is committed to serving the online community in a civil and unbiased manner as a limited public forum.

(b) The Agency disclaims liability for any direct comments or postings, and reserves the right to remove any direct comments or postings that contain any of the following:

- (1) Comments in support of or opposition to political campaigns or ballot measures;
- (2) Profane or obscene language or content;
- (3) Content that promotes, fosters, or perpetuates discrimination on the basis of race, creed, color, age, religion, gender, marital status, status with regard to public assistance, national origin, physical or mental disability or sexual orientation;
- (4) Sexual content or links to sexual content;
- (5) Solicitations of commerce;
- (6) Conduct or encouragement of illegal activity;
- (7) Information that may tend to compromise the safety or security of the public or public systems;
- (8) Defamatory statements;
- (9) Content that violates a legal ownership interest, such as a copyright, of another party;
- (10) Spam; and
- (11) Threats of violence or injury to any person, property, or organization.

(c) Any Agency staff member who finds content on an Agency Social Media site that is potentially inappropriate or inconsistent with this Social Media Policy will notify his or her supervisor, who will consult with the General Manager and/or the Agency's legal counsel for direction on further handling of the potentially inappropriate or inconsistent content to ensure compliance with the Social Media Policy. The Agency disclaims any and all responsibility and liability for any materials that the Agency deems inappropriate for posting that cannot be removed in an expeditious and otherwise timely manner.

Agency Social Media sites may contain content over which the Agency has no control, including but not limited to, advertisements or hyperlinks. The Agency does not endorse any hyperlink or advertisement on Agency Social Media sites by the social media site's owners, vendors, or partners.

(d) The Agency reserves the right to deny access to an Agency Social Media site to any individual who violates the Agency's Social Media Policy at any time, and without prior notice. Any removal of a direct third party post or comment or denial of access or "blocking"



from an Agency Social Media site shall not be based on the viewpoint of the third party individual or entity who posted content to a Social Media site.

**5. Code of Conduct for Agency Employees**

(a) All employees shall be provided with a copy of this Policy and be directed to familiarize themselves with it.

(b) Employees' use of Agency Social Media sites for official business is governed by this Policy, as well as applicable Agency Rules and Regulations. Disciplinary action, up to and including dismissal, may be imposed for violation of this Policy. If findings warrant, disciplinary action will be initiated in accordance with all relevant sections of the Agency's Personnel Rules and Regulations.