

Board Contract Summary

BC 15 - 100

For use with Expenditure Contracts submitted to the Board for approval. Complete information below, print, obtain signature of authorized departmental representative, and submit this form, along with attachments, to the appropriate departments for signature. See also: *Auditor-Controller Intranet Policies->Contracts*.

D1.	Fiscal Year	FY 15-16
D2.	Department Name	PW/Water Agency
D3.	Contact Person	Fray Crease
D4.	Telephone	ext. 3542

K1.	Contract Type (check one): <input checked="" type="checkbox"/> Personal Service <input type="checkbox"/> Capital	
K2.	Brief Summary of Contract Description/Purpose	San Antonio Groundwater Basin Study
K3.	Department Project Number	WA8236
K4.	Original Contract Amount	\$ 673,950
K5.	Contract Begin Date	11/01/14
K6.	Original Contract End Date	10/31/19
K7.	Amendment? (Yes or No)	Yes
K8.	- New Contract End Date	10/31/20
K9.	- Total Number of Amendments	4
K10.	- This Amendment Amount	\$ 97,900
K11.	- Total Previous Amendment Amounts	\$ 393,103, \$246,398 and \$222,605
K12.	- Revised Total Contract Amount	\$ 1,633,956

B1.	Intended Board Agenda Date	August 14, 2018
B2.	Number of Workers Displaced (if any)	N/A
B3.	Number of Competitive Bids (if any)	N/A
B4.	Lowest Bid Amount (if bid)	N/A
B5.	If Board waived bids, show Agenda Date	N/A
	and Agenda Item Number	N/A
B6.	Boilerplate Contract Text Changed? (If Yes, cite Paragraph)	N/A

F1.	Fund Number	3050
F2.	Department Number	054
F3.	Line Item Account Number	7460
F4.	Project Number (if applicable)	WA8236
F5.	Program Number (if applicable)	3012
F6.	Org Unit Number (if applicable)	
F7.	Payment Terms	net 60

V1.	Auditor-Controller Vendor Number	003601
V2.	Payee/Contractor Name	DOI USGS
V3.	Mailing Address	P.O. Box 71362
V4.	City State (two-letter) Zip (include +4 if known)	Philadelphia, PA 19176-1362
V5.	Telephone Number	(916) 278-3040
V6.	Vendor Contact Person	Tammy Seubert
V7.	Workers Comp Insurance Expiration Date	N/A
V8.	Liability Insurance Expiration Date	N/A
V9.	Professional License Number	
V10.	Verified by (print name of county staff)	

V11 Company Type (Check one): Individual Sole Proprietorship Partnership Corporation

I certify information is complete and accurate; designated funds available; required concurrences evidenced on signature page.

Date: 7/5/18 Authorized Signature: [Signature]

Form 9-1366
(May 2018)

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

JOINT FUNDING AGREEMENT

Customer #: 600000816
Agreement #: 15W5CA600081610_A4
Project #: 2G00FUV
TIN #: 96-6002833
Fixed Cost Agreement NO

FOR
WATER RESOURCES INVESTIGATIONS

THIS AGREEMENT is entered into as of the, 12th day of June, 2018 by the U.S. GEOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the SANTA BARBARA COUNTY WATER AGENCY (SBCWA), party of the second part.

1. The parties hereto agree that subject to availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation Geohydrology and Water Availability of San Antonio Creek Valley, California herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50; and 43 USC 50b.

2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) includes In-Kind Services in the amount of \$0.00

(a) by the party of the first part during the period

Amount	Date	to	Date
\$9,727.00	November 1, 2014		October 31, 2020

(b) by the party of the second part during the period

Amount	Date	to	Date
\$97,900.00	November 1, 2014		October 31, 2020

USGS DUNS is 1761-38857. Total USGS funding for this agreement, including this amendment is \$351,242. Total SBCWA funding for this agreement, including this amendment is \$1,633,956.00 Total cost of this agreement is \$1,985,198.00

(c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of: \$0.00

Description of the USGS regional/national program:
No additional funding

(d) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.

(e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.

3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.

4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.

5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the party of the first part to insure the required standards of accuracy subject to modification by mutual agreement.


6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.

9-1366 (Continuation) Customer # 6000000816 Agreement #: 15WSCA600081610 A4

- 7 The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.
- 8. The maps, records or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program, and if already published by the party of the first part shall, upon request, be furnished by the party of the first part, at cost, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records or reports published by either party shall contain a statement of the cooperative relations between the parties.
The Parties acknowledge that scientific information and data developed as a result of the Scope of Work (SOW) are subject to applicable USGS review, approval, and release requirements, which are available on the USGS Fundamental Science Practices website (<https://www2.usgs.gov/fsp/>).
- 9 Billing for this agreement will be rendered.
QUARTERLY
Invoices not paid within 60 days from the billing date will bear Interest, Penalties, and Administrative cost at the annual rate pursuant the Debt Collection Act of 1982, (codified at 31 U.S.C. § 3717) established by the U.S. Treasury.

U.S. Geological Survey		Santa Barbara County Water Agency	
United States			
Department of the Interior			
<u>USGS Point of Contact</u>		<u>Customer Point of Contact</u>	
Name:	Irene A. Rios, Budget Analyst	Name:	Thomas Fayram
Address:	4165 Spruance Rd., Ste 200 San Diego, CA 92101	Address:	130 East Victoria Street, Ste 200 Santa Barbara, CA 93101
Telephone:	619-225-6156	Telephone:	805-568-6436
Email:	iarios@usgs.gov	Email:	tfayram@cosbpw.net

Signatures and Date

Signature		Date:	6-13-18	Signature:	see page 3 for signatures	Date:	
Name:	Eric G. Relchard	Name:		Title:		Title:	
Title:	Director, USGS, CA Water Science Center	Title:					

SANTA BARBARA COUNTY WATER AGENCY

BY: _____
Das Williams, Chair, Board of Directors

Date: _____

ATTEST:


APPROVED AS TO FORM:
MONA MIYASATO
County Executive Officer
Ex Officio Clerk of the Board
of Directors of the Santa Barbara
County Water Agency

BY: _____
Deputy Clerk

RECOMMENDED FOR APPROVAL:
Santa Barbara County Water Agency

BY:  _____
Scott D. McGolpin,
Public Works Director

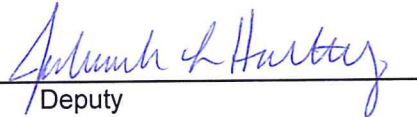
APPROVE AS TO ACCOUNTING FORM:
THEODORE A. FALLATI, CPA
AUDITOR-CONTROLLER

BY:  _____
Deputy

APPROVE AS TO FORM:
RAY AROMATORIO, ARM, AIC
RISK MANAGER

BY:  _____
Risk Manager

APPROVE AS TO FORM:
MICHAEL C. GHIZZONI
COUNTY COUNSEL

BY:  _____
Deputy



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
California Water Science Center
6000 J Street, Placer Hall
Sacramento, CA 95819
Phone: (916) 278-3026 Fax: 916) 278-3045
<http://water.wr.usgs.gov>

June 12, 2018

Mr. Thomas D. Fayram
Deputy Director of Public Works, Water Resources
Santa Barbara County Water Agency
130 East Victoria Street, Suite 200
Santa Barbara, CA. 93101

Attention: Mr. Matthew Scrudato

Dear Mr. Fayram:

This letter confirms discussions between our respective staffs, concerning the continuation of the cooperative water resources program between the Santa Barbara County Water Agency (SBCWA) and the U.S. Geological Survey (USGS), during the period October 1, 2014 to October 31, 2020. This amendment is related to funding covering the next phase of the study.

As described in *Geohydrology and Water Availability of the San Antonio Creek Valley* (study), the study is a cooperative study between the County of Santa Barbara, Vandenberg Air Force Base (VAFB), and the U.S. Geological Survey (USGS). The objectives of the study are to:

- 1) refine the geohydrologic framework of the San Antonio Creek Valley;
- 2) quantify the hydrologic budget of the valley; and
- 3) develop hydrologic modeling tools to evaluate and aid in managing the groundwater resource.

The study will provide hydrologic information needed by Santa Barbara County Water Agency and VAFB to better understand the potential impacts of increasing groundwater use on groundwater levels, stream-aquifer interaction, and water quality, and help develop a management and monitoring plan to evaluate the potential hydrologic effects of future groundwater development on different parts of the valley.

The study is currently planned as a 6-year project starting November 1, 2014 through September 30, 2020. The study includes five main tasks: (1) data compilation, (2) new data acquisition, including an assessment of water quality, (3) model development, (4) analysis of water availability, and (5) report preparation. Work has commenced, on tasks 1, 2, 3, and 5. Work started to date under tasks 1, 2, 3, and 5 includes the following:

- 1) Existing climate, land-use, geologic, water-quality, and geodetic data have been compiled and assembled into a Geographic Information System (GIS) (Task 1).
- 2) Existing water-quality data have been compiled (Task 1).

Mr. Thomas D. Fayram, Deputy Director, Santa Barbara County Water Agency

- 3) A previously operated stream gage at San Antonio Creek near Casmalia (11136100) has been reinstalled and is currently operating (Task 2).
- 4) A new stream gage on Harris Creek has been installed and is currently operating (Task 2).
- 5) Multiple-well site 16C1-4 has been instrumented with pressure transducers and is transmitting water level data in real time (Task 2).
- 6) Eight shallow monitoring wells and two deep multiple-well monitoring sites have been installed.
- 7) Continuous water-level measurements are being recorded in 13 monitoring wells.
- 8) About 25 stream-bed electrical resistance sensors and three temperature sensor rods have been deployed and are currently monitoring stream-flow and duration (Task 2).
- 9) Quarterly measurements of wells (about 25) that are part of the existing groundwater-level monitoring network continues (Task 2).
- 10) Additional wells (about 12) have been canvassed and added to the quarterly groundwater-level monitoring network.
- 11) Groundwater geochemistry samples from 27 wells have been collected and analyzed.
- 12) Construction of the 3-dimensional geohydrologic framework for the groundwater model has commenced (Task 3).
- 13) The project website has been built and is accessible at: <https://ca.water.usgs.gov/projects/san-antonio-creek/index.html>.
- 14) Infiltrometer tests have been collected and processed (12 locations).
- 15) Aquifer/slug tests have been collected on all monitoring wells installed as part of this study (16 wells).
- 16) Differential GPS measurements were taken to establish vertical geodetic control at all accessible wells in the monitoring network.

Total costs for the proposed amendment with SBCWA for CFY 2019 is \$107,627. Of this total SBCWA will contribute \$97,900. and subject to the availability of cooperative matching funds (CMF), the USGS will contribute \$9,727. The proposed program cost associated with this amendment are presented in Table 1. Total agreement cost through this amendment is \$1,985,198. (plus CFY19), total SBCWA including this amendment, is \$1,633,956 (plus CFY19), total contribution by USGS is \$351,242. (plus CFY19). The updated project timeline is presented in Table 2. The planned funding through the end of the study is presented in Table 3.

Enclosed are two originals of Joint Funding Agreement (JFA) 15WSCA600081610 Amendment 4 for your approval. Work performed with funds from this agreement will be conducted on a reimbursable basis. If you are in agreement with this proposed amendment, please sign and return one of the originals to our San Diego office to Irene Rios.

Mr. Thomas D. Fayram, Deputy Director, Santa Barbara County Water Agency

The USGS is required to have an agreement in place prior to any work being performed on a project. Your immediate response to returning the signed JFA will allow us to begin work on this study.

If you have any questions concerning this program, please contact David O'Leary, in our San Diego Projects Office, at (619) 225-6157. If you have any administrative questions, please contact Irene Rios, in our San Diego Office, at (619) 225-6156.

Sincerely,



Eric G. Reichard
Director, USGS California Water Science Center

Enclosures

cc: Claudia Faunt, USGS CA WSC
David O'Leary, USGS CA WSC

Table 1. Geohydrology and Water Availability of the San Antonio Creek Valley, California

2019 Funding Summary

Task #	Task Description	Organization:	Year*		
			SB Co	USGS**	Total
1	Data Compilation (total)		\$0	\$0	\$0
	Originally budgeted costs		\$0	\$0	\$0
	Information requests, communications, and analysis		\$0	\$0	\$0
2	New Data Acquisition		\$0	\$0	\$0
A	Drilling & well installation				
i	Two multiple well monitoring sites		\$0	\$0	\$0
ii	Auger drilling of shallow wells		\$0	\$0	\$0
B	Groundwater levels				
i	Well canvassing		\$0	\$0	\$0
ii	Expanded GW level monitoring		\$0	\$0	\$0
iii	GW level recorders		\$0	\$0	\$0
iv	Measuring point elevations-GPS		\$0	\$0	\$0
C	Streamflow gaging		\$0	\$0	\$0
D	Groundwater/surface-water interaction				
i	Temperature monitoring - GW/SW fluxes		\$0	\$0	\$0
ii	Streamflow duration & location		\$0	\$0	\$0
iii	Streambed infiltration tests		\$0	\$0	\$0
E	Water-Quality sampling		\$0	\$0	\$0
F	Hydraulic properties & profiles data				
i	Collect new slug & aquifer tests		\$0	\$0	\$0
ii	EM & temperature logging		\$0	\$0	\$0
3	Model Development		\$5,150	\$608	\$5,758
4	Water Availability Analysis		\$30,900	\$3,651	\$34,551
5	Reporting		\$61,852	\$5,467	\$67,318
i	Project Website		\$5,150	\$608	\$5,758
ii	Water quality article		\$20,291	\$1,186	\$21,477
iii	Hydrogeologic Setting SIR		\$10,661	\$630	\$11,290
iv	Hydrologic modeling / water availability SIR / fact sheet		\$25,750	\$3,042	\$28,792
TOTAL			\$97,902	\$9,726	\$107,628

*Yearly costs are by county fiscal year (CFY) for Santa Barbara County (SB Co).

**Cooperative matching funds are subject to availability and are awarded by Federal Fiscal Year.

Table 2. Geohydrology and Water Availability of the San Antonio Creek Valley, California - Workplan

Task #	Task Description	Calendar Year:																				
		2015			2016			2017			2018			2019			2020					
		Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3			
		County Fiscal Years (CFY):																				
		Quarters:																				
		Federal Fiscal Years (FFY):																				
		Quarters:																				
1	Data compilation/analysis																					
2	New data collection																					
A	Drilling and well installation																					
	i Two multiple well monitoring sites																					
	ii Auger drilling of shallow wells																					
B	Groundwater levels																					
	i Well Canvassing																					
	ii Expanded groundwater level monitoring																					
	iii GW Level Recorders																					
	iv Measuring point elevation-GPS																					
C	Streamflow gaging																					
	i Installation of two new stations (Casmalia and Harris Creek)																					
	ii Operation																					
D	Groundwater/surface-water interaction																					
	i Temperature monitoring for GW/SW fluxes																					
	ii Streamflow duration & location																					
	iii Streambed infiltration tests																					
E	Water-Quality sampling																					
	i Groundwater																					
	ii Surface water																					
F	Hydraulic properties & profiles data																					
	i Collect new slug & aquifer test data																					
	ii EM & temperature logging - seasonal changes in WQ & flow																					
3	Model development																					
A	Hydrogeologic Framework																					
	i Construction of 3D hydrogeologic framework																					
	ii Definition of textural variations in principal aquifers																					
	iii Aquifer hydraulic properties																					
B	Hydrologic Model																					
	i Recharge Model																					
	ii Recharge Analysis																					
	iii Precipitation/Runoff - Surface Water Model																					
	iv Hydrologic Flow Model																					
	v Groundwater Model																					
	vi Linked Model																					
4	Water availability analysis																					
5	Products																					
	i Project Website																					
	ii Water quality journal article																					
	iii Review and Publication																					
	iv Hydrogeologic Setting - new & existing information (SIR)																					
	v Review and Publication																					
	vi Hydrologic modeling & summary (SIR and Fact sheet)																					
	vii Preparation																					
	viii Review and Publication																					

X	Scheduled Task
X	Completed Task
	Originally Scheduled Task (shifted to later date)
X	Extruded Completion Date (shifted from earlier date)

Table 3. Geohydrology and Water Availability of the San Antonio Creek Valley, California - Study Cooperators and Contributors

Task #	Task Description	Organization:	Year*			2018			2019			2020		
			SB Co	USGS**	VAFB	Total	SB Co	USGS**	VAFB	Total	SB Co	USGS**	VAFB	Total
1	Data Completion (total)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Originally budgeted costs		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	Information requests, communications, and analysis		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
2	New Data Acquisition		\$187,103	\$73,927	\$79,134	\$340,164								
A	Drilling & well installation													
i	Two multiple well monitoring sites		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
ii	Auger drilling of shallow wells		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
B	Groundwater levels													
i	Well canvassing		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
ii	Expanded GW level monitoring		\$14,165	\$14,165	\$3,689	\$32,019								
iii	GW level recorders		\$27,106	\$27,106	\$18,539	\$72,751								
iv	Measuring point elevations-GPS		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
C	Streamflow gaging		\$13,297	\$13,297	\$23,956	\$50,550								
D	Groundwater/surface-water Interaction													
i	Temperature monitoring - GW/SW fluxes		\$17,613	\$4,916	\$8,300	\$30,829								
ii	Streamflow duration & location		\$13,287	\$3,960	\$3,000	\$20,247								
iii	Streambed infiltration tests		\$2,112	\$614	\$0	\$2,726								
E	Water-Quality sampling		\$88,065	\$6,700	\$19,000	\$113,765								
F	Hydraulic properties & profiles data													
i	Collect new slug & aquifer tests		\$5,408	\$1,369	\$0	\$6,777								
ii	EM & temperature logging		\$6,051	\$1,800	\$2,650	\$10,501								
3	Model Development		\$95,275	\$27,304	\$40,000	\$162,579	\$5,150	\$608	\$2,500	\$9,258	\$0	\$0	\$0	
4	Water Availability Analysis		\$15,450	\$4,600	\$7,500	\$27,550	\$30,900	\$3,651	\$15,000	\$49,551	\$0	\$0	\$0	
5	Reporting		\$95,275	\$27,773	\$36,300	\$159,348	\$61,852	\$5,467	\$28,375	\$95,693	\$13,054	\$1,385	\$21,764	
i	Project Website		\$6,438	\$1,896	\$2,500	\$10,834	\$5,150	\$608	\$2,500	\$8,258	\$2,575	\$258	\$4,083	
ii	Water quality article		\$19,673	\$5,523	\$8,500	\$33,696	\$20,291	\$1,186	\$8,800	\$30,277	\$0	\$0	\$0	
iii	Hydrogeologic Setting SIR		\$51,140	\$14,957	\$17,800	\$83,897	\$10,661	\$630	\$4,575	\$15,865	\$3,554	\$355	\$5,434	
iv	Hydrologic modeling / water availability SIR / fact sheet		\$18,025	\$5,397	\$7,500	\$30,922	\$25,750	\$3,042	\$12,500	\$41,292	\$7,725	\$773	\$12,248	
TOTAL			\$393,103	\$133,604	\$163,934	\$689,641	\$97,902	\$9,726	\$45,875	\$153,503	\$13,854	\$1,385	\$21,764	

*Yearly costs are by county fiscal year (CFY) for Santa Barbara County (SB Co) and by federal fiscal year (FFY) for USGS and Vandenberg Airforce Base (VAFB).

**Cooperative matching funds for future fiscal years are subject to availability.