

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 | 2 |
| K10. | - This Amendment Amount | \$ 222,605 |
| K11. | - Total Previous Amendment Amounts | \$ 246,398 |
| K12. | - Revised Total Contract Amount | \$ 1,142,953 |

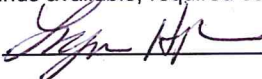
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|-----|---|----------|
| B1. | Intended Board Agenda Date | 11/15/16 |
| B2. | Number of Workers Displaced (if any) | N/A |
| B3. | Number of Competitive Bids (if any) | N/A |
| B4. | Lowest Bid Amount (if bid) | N/A |
| B5. | If Board waived bids, 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: 10/25/16 Authorized Signature: 

BC 15-100

Form 9-1366
(April 2015)

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Customer #: 6000000816
Agreement #: 15WSCA600081610_A2
Project #:
TIN #: 96-6002833
Fixed Cost Agreement NO

JOINT FUNDING AGREEMENT

FOR
WATER RESOURCES INVESTIGATIONS

THIS AGREEMENT is entered into as of the, 17th day of October, 2016 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 the study "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

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

| Amount | Date | to | Date |
|--------------|------------------|----|------------------|
| \$102,933.00 | November 1, 2014 | | October 31, 2020 |

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

| Amount | Date | to | Date |
|--------------|------------------|----|------------------|
| \$222,605.00 | November 1, 2014 | | October 31, 2020 |

USGS DUNS is 1761-38857. Total SBCWA funding for this agreement, including this amendment is \$1,142,953. Total USGS funding for this agreement, including this amendment is \$207,911. Total cost of this agreement is \$1,350,864.

(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:

(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 #: 600000816 Agreement #: 15WSCA600051610.A2

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 costs, 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.
9. USGS will issue billings utilizing Department of the Interior Bill for Collection (form DI-1040). Billing documents are to be rendered QUARTERLY. Payments of bills are due within 60 days after the billing date. If not paid by the due date, interest will be charged at the current Treasury rate for each 30 day period, or portion thereof, that the payment is delayed beyond the due date. (31 USC 3717; Comptroller General File B-212222, August 23, 1983).

**U.S. Geological Survey
United States
Department of the Interior**

Santa Barbara County Water Agency

USGS Point of Contact

Customer Point of Contact

Name: Irene Rios, Budget Analyst
Address: 4165 Spruance Rd, Ste 200, San Diego, CA 92101
Telephone: 619-225-6156
Email: iarios@usgs.gov

Name: Thomas Fayram
Address: 130 East Victoria Street, Ste 200, Santa Barbara, CA 93101
Telephone: 805-568-6436
Email: tfayram@cosbpw.net

Signatures and Date

Signature: _____ Date: _____ Signature: _____ Date: _____

See page 3 for signatures

Name: Eric G. Reichard
Title: Director, California Water Science Center

Name: _____
Title: _____

Customer No. 6000000816
Agreement No. 15WSCA600081610.A2
TIN #: 95-6002833

Signature Page Continued - Page 3

SANTA BARBARA COUNTY WATER AGENCY


By: _____
Peter Adam, Chair, Board of Directors

Date: _____

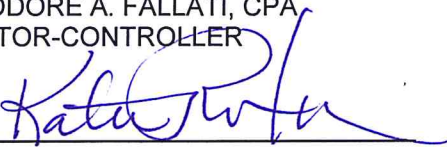
ATTEST:
MONA MIYASATO
COUNTY EXECUTIVE OFFICER
EX OFFICIO CLERK OF THE BOARD
OF DIRECTORS OF THE SANTA BARBARA
COUNTY WATER AGENCY

BY: _____
Deputy

APPROVED AS TO FORM:
MICHAEL C. GHIZZONI
COUNTY COUNSEL

BY: 
Deputy

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

BY: 
Deputy

RECOMMENDED FOR APPROVAL:
SCOTT D. MCGOLPIN
PUBLIC WORKS DIRECTOR

BY: 

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

BY: 
Risk Manager



United States Department of the Interior

U. S. GEOLOGICAL SURVEY

California Water Science Center San Diego Projects Office

4165 Spruance Road, Suite 200 San Diego, CA 92101

Phone: (619) 225-6100 Fax: (619) 225-6101

<http://water.wr.usgs.gov>

October 18, 2016

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: Ms. Fray Crease

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.

The purpose of this **amendment** is to allocate funding covering **the next phase of the this study**.

As described in The study, *Geohydrology and Water Availability of the San Antonio Creek Valley* (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 was originally planned as a five year project starting October 1, 2013 and ending September 30, 2018. Project costs were calculated based on the anticipated 2013-2018 study period. The start of the study was delayed one year from the original plan to allow Santa Barbara County to obtain additional input on the planned study from stakeholders and San Antonio Creek basin residents. Agreements between Santa Barbara County and the USGS and VAFB and the USGS to fund the study were signed in the fall of 2014; the agreements specified a study period from October 2014 (start of Federal Fiscal Year (FFY) 2015) through September 30, 2019 (end of FFY 2019). At the request of Santa Barbara County, the project timeline was extended to FFY 2020 (project now ending September 30, 2020) to accommodate delays in commencement of work. In addition, at the request of Santa Barbara County, costs have been shifted to align with the county's fiscal year (CFY), which extends from July 1 through June 30. As a result costs for CFY 2017 have been reduced by 25% while the costs for CFY 2018 have increased 25%, since the final three months of FFY 2017 (July – September) are now covered under the CFY 2018. Estimated costs for the 4th quarter (Q4) of FFY 2016 have been moved to CFY 2017 to accommodate the shift from FFY to CFY. Please note that these Q4 costs are estimates pending fiscal year-end close-out. Costs for subsequent years have remained unchanged.

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

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, in part, 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).
- 3) A previously operated stream gage at San Antonio Creek near Casmalia (11136100) has been reinstalled and is currently operating during the study (Task 2).
- 4) A new stream gage on Harris Creek has been sited and will be installed pending permit approval from CalTrans.
- 5) Multiple-well site 16C1-4 has been instrumented with pressure transducers and is transmitting water level data in real time (Task 2).
- 6) Three of eight shallow monitoring wells and two of two deep multiple-well monitoring sites have been installed. Permits have been obtained for the remaining shallow monitoring wells; these wells have been sited and permits have been prepared and submitted. Installation of the remaining shallow monitoring wells is tentatively scheduled for November 2016 (Task 2).
- 7) 25 stream-bed electrical resistance sensors and three temperature sensor rods have been deployed and are currently monitoring stream-flow and duration (Task 2).
- 8) Quarterly measurements of wells that are part of the existing groundwater-level monitoring network continues (Task 2).
- 9) Ten additional wells have been canvassed and added to the quarterly groundwater-level monitoring network.
- 10) Construction of the 3-dimensional geohydrologic framework for the groundwater model has commenced (Task 3).

Table 1 presents County of Santa Barbara costs. The updated project timeline is presented in Table 2 and individual cooperator costs (County of Santa Barbara and VAFB) and estimated cooperative matching funds (CMF) are presented in Table 3. The USGS is committed to the proposed funding level for the first year of the study. However, due to a number of potential variables (inflation, fiscal policy changes currently taking place within the USGS that will likely affect our costing structure, modification of the project work during the lifespan of the study), we would like the opportunity to review the budgets for the future years of this study prior to the beginning of each new fiscal year, and to discuss any program or financial changes throughout the study period.

Total costs for the proposed program with SBCWA for CFY 2017 are \$325,538.00. Of this total SBCWA will contribute \$222,605. Subject to the availability of cooperative matching funds (CMF), the USGS will contribute \$102,933.00. These cost are included in the attached amendment to the existing agreement. Total agreement cost, including this amendment, is \$1,350,864.00, total contribution by SBCWA is \$1,142,953.00, and total contribution by USGS is \$207,911.00.

Enclosed are two originals of Joint Funding Agreement (JFA) 15WSCA600081610 Amendment 2 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 return two signed JFA's to our office. Upon approval, a fully executed JFA will be forwarded for your records.

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.

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

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 - Budget Update

| # | Task | FFY15 10/1/2014 - 9/30/2015 | | FFY16 ⁽¹⁾ 10/1/2015 - 6/30/2016 | | FFY17 7/1/16 - 6/30/2017 | | FFY18 7/1/2017 - 6/30/2018 | | FFY19 7/1/2018 - 6/30/2019 | | FFY20 7/1/2019 - 6/30/2020 | | TOTAL 10/1/2014 - 6/30/2020 |
|--------------|---|--------------------------------|-------------------|---|-------------------|-----------------------------|-------------------|-------------------------------|-------------------|-------------------------------|-------------------|-------------------------------|-------------------|--------------------------------|
| | | Expended (FFY) | Budgeted (FFY) | Expended (CFY) | Original (FFY) | Revised (CFY) | Original (FFY) | Revised (CFY) | Original (FFY) | Revised (CFY) | Original (FFY) | Revised (CFY) | Original (FFY) | Revised (CFY) |
| 1 | Data Compilation (total) | \$32,067 | \$82,969 | \$60,340 | \$0 | \$22,629 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$115,036 |
| | Budgeted costs | \$10,867 | \$61,133 | \$44,100 | \$0 | \$17,033 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$72,000 |
| | Information requests, communications, and analysis | \$21,200 | \$21,836 | \$16,240 | \$0 | \$5,596 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$43,036 |
| 2 | New Data Acquisition | \$42,408 | \$701,150 | \$57,981 | \$189,686 | \$785,433 | \$148,716 | \$196,138 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,081,960 |
| A | Drilling & well installation | \$1,000 | \$386,250 | \$0 | \$0 | \$386,250 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$387,250 |
| i | Two multiple well monitoring sites | \$2,104 | \$10,753 | \$8,065 | \$11,066 | \$10,988 | \$11,398 | \$14,165 | \$0 | \$0 | \$0 | \$0 | \$0 | \$35,322 |
| ii | Auger drilling of shallow wells ⁽²⁾ | \$0 | \$64,993 | \$5,500 | \$28,254 | \$80,684 | \$29,077 | \$36,141 | \$0 | \$0 | \$0 | \$0 | \$0 | \$122,325 |
| B | Groundwater levels | \$0 | \$19,300 | \$0 | \$0 | \$19,300 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$19,300 |
| i | Well canvassing | \$0 | \$2,688 | \$2,016 | \$0 | \$672 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$2,688 |
| ii | Expanded GW level monitoring | \$0 | \$17,612 | \$0 | \$0 | \$17,612 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$17,612 |
| iii | GW level recorders | \$0 | \$64,993 | \$5,500 | \$28,254 | \$80,684 | \$29,077 | \$36,141 | \$0 | \$0 | \$0 | \$0 | \$0 | \$122,325 |
| iv | Measuring point elevations-GPS | \$0 | \$19,300 | \$0 | \$0 | \$19,300 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$19,300 |
| C | Streamflow gaging | \$17,800 | \$10,094 | \$4,200 | \$10,388 | \$13,685 | \$10,700 | \$13,297 | \$0 | \$0 | \$0 | \$0 | \$0 | \$48,982 |
| D | Groundwater/surface-water interaction | \$0 | \$35,020 | \$24,500 | \$16,480 | \$22,880 | \$13,493 | \$17,613 | \$0 | \$0 | \$0 | \$0 | \$0 | \$64,993 |
| i | Temperature monitoring - GW/SW fluxes | \$19,500 | \$19,055 | \$13,700 | \$16,480 | \$17,715 | \$9,167 | \$13,287 | \$0 | \$0 | \$0 | \$0 | \$0 | \$64,202 |
| ii | Streamflow duration & location | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| iii | Streambed infiltration tests | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| E | Water-Quality sampling | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| F | Hydraulic properties & profiles data | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| i | Collect new slug & aquifer tests | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| ii | EM & temperature logging | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | Model Development | \$1,519 | \$60,235 | \$31,200 | \$31,500 | \$67,660 | \$82,400 | \$95,275 | \$5,150 | \$5,150 | \$0 | \$0 | \$0 | \$21,630 |
| 4 | Water Availability Analysis | \$0 | \$0 | \$0 | \$0 | \$0 | \$15,450 | \$15,450 | \$30,900 | \$30,900 | \$0 | \$0 | \$0 | \$9,682 |
| 5 | Reporting | \$0 | \$0 | \$0 | \$0 | \$0 | \$81,370 | \$95,275 | \$61,852 | \$61,852 | \$13,854 | \$13,854 | \$0 | \$46,350 |
| i | Project Website | \$0 | \$0 | \$0 | \$0 | \$0 | \$5,150 | \$6,438 | \$5,150 | \$5,150 | \$2,575 | \$2,575 | \$0 | \$18,025 |
| ii | Water quality article | \$0 | \$0 | \$0 | \$0 | \$0 | \$19,673 | \$19,673 | \$20,293 | \$20,293 | \$0 | \$0 | \$0 | \$39,964 |
| iii | Hydrogeologic Setting SIR | \$0 | \$0 | \$0 | \$0 | \$0 | \$41,097 | \$51,140 | \$10,661 | \$10,661 | \$3,554 | \$3,554 | \$0 | \$95,481 |
| iv | Hydrologic modeling / water availability SIR / fact sheet | \$0 | \$0 | \$0 | \$0 | \$0 | \$15,450 | \$18,025 | \$25,750 | \$25,750 | \$7,725 | \$7,725 | \$0 | \$59,225 |
| TOTAL | | \$75,994 | \$844,354 | \$149,522 | \$296,806 | \$917,437 | \$327,938 | \$402,138 | \$97,902 | \$97,902 | \$13,854 | \$13,854 | \$13,854 | \$1,656,845 |

Notes:

- (1) Budgets have been shifted from federal fiscal year (FFY) to county fiscal year (CFY) starting FFY16 (ending June 30, 2017). Estimated costs for 4th quarter FFY16 have been shifted to 1st quarter CFY17
- (2) Three auger wells were completed in FFY16, but costs associated with these wells will be billed in FFY17 when all wells are completed.

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

| Task # | Task Description | Year* | | | | | | | | | | | | TOTAL | | | | | | | | | | | | | | | |
|--------|---|----------|----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-------------|-------------|-----------|----------|-----------|-----------|-----------|-------------|-----------|-----------|-------------|----------|-------------|-----------|-----------|-------------|-----|
| | | 2015 | | | 2016** | | | 2017** | | | FFY18 | | | 2019 | | | 2020 | | | TOTAL | | | | | | | | | |
| | | SB Co | USGS | VARB | Total | SB Co | USGS | VARB | Total | SB Co | USGS*** | VARB | Total | SB Co | USGS*** | VARB | Total | SB Co | USGS*** | VARB | Total | | | | | | | | |
| 1 | Data Compilation (total) | \$2,067 | \$16,000 | \$17,500 | \$45,567 | \$0 | \$0 | \$0 | \$0 | \$22,629 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$115,036 | \$41,953 | \$17,500 | \$174,489 | | | | | | | |
| | Originally budgeted costs | \$10,867 | \$4,000 | \$17,500 | \$32,367 | \$41,120 | \$6,488 | \$0 | \$47,608 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$72,000 | \$10,488 | \$17,500 | \$99,988 | | | | | | | |
| | Information requests, communications, and analysis | \$21,220 | \$12,000 | \$0 | \$33,220 | \$16,240 | \$19,465 | \$0 | \$35,705 | \$5,596 | \$0 | \$0 | \$5,596 | \$0 | \$0 | \$0 | \$0 | \$0 | \$43,036 | \$31,465 | \$0 | \$74,501 | | | | | | | |
| 2 | New Data Acquisition | \$42,008 | \$20,500 | \$112,613 | \$175,121 | \$97,981 | \$33,253 | \$117,927 | \$209,161 | \$785,433 | \$44,910 | \$79,134 | \$909,477 | \$1,996,138 | \$34,346 | \$0 | \$0 | \$230,484 | \$0 | \$1,881,960 | \$133,009 | \$309,674 | \$1,224,643 | | | | | | |
| A | Drilling & well installation | \$1,000 | \$500 | \$0 | \$1,500 | \$0 | \$811 | \$0 | \$811 | \$386,250 | \$0 | \$0 | \$386,250 | \$0 | \$0 | \$0 | \$0 | \$0 | \$87,250 | \$1,311 | \$0 | \$88,561 | | | | | | | |
| | Two multiple well monitoring sites | \$2,004 | \$1,000 | \$0 | \$3,004 | \$0 | \$1,622 | \$0 | \$1,622 | \$152,996 | \$0 | \$0 | \$152,996 | \$0 | \$0 | \$0 | \$0 | \$0 | \$155,000 | \$2,622 | \$0 | \$157,622 | | | | | | | |
| B | Groundwater levels | \$0 | \$0 | \$0 | \$0 | \$2,016 | \$0 | \$0 | \$2,016 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$2,688 | \$0 | \$0 | \$2,688 | | | | | | | |
| | Expanded GVI level monitoring | \$2,104 | \$1,000 | \$5,460 | \$8,564 | \$0,065 | \$1,221 | \$5,584 | \$12,271 | \$10,988 | \$3,692 | \$3,689 | \$18,369 | \$14,165 | \$7,799 | \$0 | \$17,964 | \$0 | \$35,322 | \$10,113 | \$10,753 | \$56,189 | | | | | | | |
| iii | GW level recorders | \$0 | \$0 | \$34,533 | \$34,533 | \$5,500 | \$0 | \$18,015 | \$23,515 | \$80,684 | \$9,418 | \$18,539 | \$108,642 | \$36,141 | \$9,692 | \$0 | \$44,833 | \$0 | \$122,325 | \$19,111 | \$71,087 | \$212,522 | | | | | | | |
| iv | Measuring point elevations-GPS | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$19,300 | \$0 | \$0 | \$19,300 | \$0 | \$0 | \$0 | \$0 | \$19,300 | \$0 | \$0 | \$0 | \$19,300 | | | | | | | |
| C | Streamflow gaging | \$17,800 | \$8,000 | \$42,600 | \$68,400 | \$4,200 | \$12,977 | \$23,278 | \$40,455 | \$13,685 | \$2,599 | \$23,956 | \$40,240 | \$13,297 | \$2,675 | \$0 | \$15,972 | \$0 | \$48,982 | \$26,251 | \$89,834 | \$165,066 | | | | | | | |
| D | Groundwater/surface-water interaction | \$0 | \$0 | \$20,000 | \$20,000 | \$24,500 | \$0 | \$10,000 | \$34,500 | \$22,880 | \$5,150 | \$8,300 | \$36,330 | \$17,613 | \$4,223 | \$0 | \$21,836 | \$0 | \$64,993 | \$9,273 | \$38,300 | \$112,666 | | | | | | | |
| i | Temperature monitoring - GW/SW fluxes | \$19,500 | \$10,000 | \$12,000 | \$41,500 | \$13,700 | \$16,221 | \$5,000 | \$34,921 | \$17,715 | \$4,120 | \$19,000 | \$24,835 | \$13,287 | \$2,987 | \$0 | \$16,274 | \$0 | \$64,202 | \$33,228 | \$20,000 | \$117,530 | | | | | | | |
| iii | Streamflow duration & location | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$5,100 | \$5,100 | \$6,335 | \$2,781 | \$0 | \$9,116 | \$2,112 | \$0 | \$0 | \$2,112 | \$0 | \$8,446 | \$2,781 | \$5,100 | \$16,327 | | | | | | | |
| E | Water-Quality sampling | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$39,000 | \$39,000 | \$54,075 | \$10,300 | \$19,000 | \$83,375 | \$88,065 | \$10,300 | \$0 | \$98,365 | \$0 | \$142,140 | \$20,600 | \$58,000 | \$220,740 | | | | | | | |
| F | Hydraulic properties & profiles data | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$3,000 | \$3,000 | \$16,223 | \$6,180 | \$0 | \$22,403 | \$5,408 | \$0 | \$5,408 | \$0 | \$21,630 | \$6,180 | \$3,000 | \$30,810 | | | | | | | | |
| ii | EM & temperature logging | \$1,519 | \$86 | \$70,000 | \$72,005 | \$31,200 | \$869 | \$25,000 | \$97,069 | \$67,660 | \$34,333 | \$40,000 | \$147,994 | \$95,275 | \$54,933 | \$23,000 | \$152,708 | \$5,150 | \$200,804 | \$94,105 | \$87,500 | \$382,410 | | | | | | | |
| 3 | Model Development | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | | | | | | | |
| 4 | Water Availability Analysis | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | | | | | | | |
| 5 | Reporting | \$0 | \$5,000 | \$0 | \$5,000 | \$0 | \$4,866 | \$24,800 | \$29,666 | \$41,715 | \$23,690 | \$36,300 | \$101,705 | \$95,275 | \$34,024 | \$28,375 | \$157,674 | \$64,832 | \$30,849 | \$6,525 | \$99,225 | \$13,854 | \$8,051 | \$21,005 | \$104,480 | \$96,000 | \$413,175 | | |
| i | Project Website | \$0 | \$5,000 | \$0 | \$5,000 | \$0 | \$4,866 | \$2,500 | \$7,366 | \$3,863 | \$3,433 | \$2,500 | \$9,796 | \$6,438 | \$3,433 | \$2,500 | \$12,371 | \$5,150 | \$3,433 | \$1,250 | \$9,833 | \$2,575 | \$1,717 | \$4,292 | \$18,025 | \$19,883 | \$8,750 | \$46,658 | |
| ii | Water quality article | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| iii | Hydrogeologic setting SIR | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| iv | Hydrologic modeling / water availability SIR / fact sheet | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| TOTAL | | \$75,994 | \$40,096 | \$150,113 | \$266,148 | \$149,522 | \$64,443 | \$167,727 | \$382,121 | \$317,437 | \$162,933 | \$182,934 | \$1,183,505 | \$402,138 | \$139,604 | \$45,875 | \$87,627 | \$97,902 | \$54,882 | \$6,525 | \$159,808 | \$13,854 | \$8,051 | \$21,005 | \$1,566,845 | \$404,448 | \$533,174 | \$2,594,467 | |

*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 (VARB).
 **4th quarter FFY16 costs are estimates pending end-of-fiscal year (federal) closeout. These costs will be included with 1st quarter CFY17 costs.
 ***Cooperative matching funds for future fiscal years are subject to availability.