Attachment A - Countywide Program Scope

United States Department of the Interior

U.S. GEOLOGICAL SURVEY
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September 18, 2012

Mr. Thomas D. Fayram, Deputy Director
Santa Barbara County Water Agency
130 East Victoria Street, Suite 200
Santa Barbara, California 93101

Dear Mr. Fayram:

This letter confirms discussions between Santa Barbara County Water Agency (SBCWA) and U.S. Geological Survey (USGS), concerning the continuation of the water resources program for the period November 1, 2012 to October 31, 2013.

The USGS has made a policy change regarding Federal Matching Funds (FMF) effective October 1, 2012. The accounting of USGS FMF shown in paragraph 2(a) of the attached Joint Funding Agreement (JFA) no longer reflects the portion of USGS funding associated with facilities and science support at the Bureau level. The USGS continues to provide funding for these support services, but, under a new USGS business practice, this USGS funding is no longer included on the JFA. This change in USGS business practice does not change the overall cost of this work, nor does it diminish the total benefits and services that are provided by the USGS. No additional costs are incurred by SBCWA as a result of this change in accounting.

The proposed program for this period and associated costs are as follows:

I. Santa Barbara County Water Agency

A. *Surface Water Streamgaging Stations:*

Operation and Maintenance

Station number and name		SBCWA Funds	USGS Funds	Total Funds
11119500	Carpinteria Creek near Carpinteria	$ 13,550	$ 6,850	$ 20,400
11119750	Mission Creek near Mission Street at Santa Barbara	13,550	6,850	20,400
11119940	Maria Ygnacio Creek at University Drive near Goleta[1]	-0-	-0-	-0-
11120000	Atascadero Creek near Goleta	13,550	6,850	20,400
11120500	San Jose Creek near Goleta	13,550	6,850	20,400
11123500	Santa Ynez River below Los Laureles Canyon near Santa Barbara	13,550	6,850	20,400

[1] As of FY13, cost of gage funded by National Streamflow Information Program (NSIP).

Surface Water Streamgaging Stations (continued):

Operation and Maintenance

Station number and name		SBCWA Funds	USGS Funds	Total Funds
11124500	Santa Cruz Creek near Santa Ynez	13,550	6,850	20,400
11128250	Alamo Pintado Creek near Solvang	13,550	6,850	20,400
11128300	Alisal Reservoir near Solvang	7,900	-0-	7,900
11129800	Zaca Creek near Buellton	13,550	6,850	20,400
11132500	Salsipuedes Creek near Lompoc	13,550	6,850	20,400
11135800	San Antonio Creek at Los Alamos	13,550	6,850	20,400
11136800	Cuyama River below Buckhorn Canyon	13,550	6,850	20,400
11138500	Sisquoc River near Sisquoc	22,600	-0-	22,600
11140585	Santa Maria River at Suey Crossing	13,550	6,850	20,400
11141050	Orcutt Creek near Orcutt	13,550	6,850	20,400
	SW Streamgaging Stations Subtotal	**$ 206,650**	**$ 89,050**	**$ 295,700**

B. ***Groundwater Monitoring Program:***

1. Water-level monitoring

The USGS will conduct monitoring of approximately 280 wells in the spring and 60 wells in the fall as part of the SBCWA wide monitoring program described by lists A-1 and A-2, files.

The program continues to evolve as groundwater level and quality sites are lost each year due to abandonment by legal owner, obstruction, denied access, etc. Water-level and water-quality sites need to be evaluated on an ongoing basis to ascertain that the program is collecting the best data and is as cost efficient as possible. SBCWA staff will assist the USGS staff on an annual basis to complete this task. This task was identified in the summer of 2002, and has been worked on intensively in recent years.

2. Water-quality monitoring

In 1981, a groundwater quality network was reestablished in selected basins of Santa Barbara County (List B). Water samples from 17 wells in the network will be collected annually, during the pumping season (in July), and analyzed for the constituents shown in List C.

B. ***Groundwater Monitoring Program (continued):***

3. Seawater encroachment monitoring

Four water samples from four different water-bearing zones from each of the two well groups known as Guadalupe #1 and Guadalupe #2 will be obtained once during the year at the end of the pumping season in November (List B). These 8 well samples will be analyzed for the chemical constituents shown in List C. Water-levels will be included.

Water samples noted by single asterisks in List B will be obtained at the same time as prescribed in the Santa Ynez River Water Conservation District program letter. These samples will be analyzed for the constituents on List C, plus barium and iodide. The results of chemical analyses will be provided to the SBCWA as they become available.

A total of 29 water quality monitoring wells will be sampled and analyzed annually for the constituents noted on List C.

C. ***Surface Water Quality Monitoring Program:***

1. Stream-quality stations - Water samples will be collected on a monthly basis, as flow permits, at the following stations. Once per year (as flow permits, and usually during the month of April) samples will be collected for the constituents on List C. Field determinations of pH, alkalinity, dissolved oxygen, specific conductance, temperature, and discharge will also be made. All other monthly samples will be analyzed for pH, total dissolved solids, specific conductance, temperature, and discharge.

11123500	Santa Ynez River below Los Laureles Canyon near Santa Ynez
11124500	Santa Cruz Creek near Santa Ynez
11132500	Salsipuedes Creek near Lompoc
11133000	Santa Ynez River at Narrows near Lompoc
11135800	San Antonio Creek at Los Alamos
11136800	Cuyama River below Buckhorn Canyon near Santa Maria
11138500	Sisquoc River near Sisquoc
11141050	Orcutt Creek near Orcutt

2. Continuous temperature recording, specific conductance, and dissolved oxygen at Santa Ynez River near Santa Ynez (11126000).[2]

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[2] Cost of the continuous water quality monitoring at station 11126000 Santa Ynez River near Santa Ynez is split between four agencies as follows:
Santa Barbara County $3,300
Cachuma Operations Management Board $12,650
Santa Ynez River Water Conservation District $2,450 located on City of Lompoc Program
City of Lompoc $3,350

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

Following is a summary of the work and associated costs for the Santa Barbara County Water Agency during the period November 1, 2012 to October 31, 2013:

	SBCWA Funds	USGS Funds	Total Funds
A. ***Surface Water Streamgaging Stations***			
Operation and Maintenance	$206,650	$ 89,050	$295,700
B. ***Groundwater Monitoring***			
1. Water-levels	38,500	950	39,450
2. Water-quality	18,650	8,450	27,100
3. Seawater encroachment			
- Guadalupe	9,050	4,200	13,250
- Surf	5,200	2,050	7,250
C. ***Surface Water Quality Monitoring***			
1. Stream-quality stations[3]	19,480	9,800	29,280
2. Continuous temperature, specific conductance, and dissolved oxygen[4]	3,300	1,400	4,700
Total	**$300,830**	**$115,900**	**$416,730**

Total cost of the proposed program is $416,730. Cost to SBCWA will be $300,830 and subject to the availability of Federal matching funds, the USGS will provide $115,900.

Enclosed are three originals of Joint Funding Agreement (JFA) 13WSCA03900, signed by our agency, for your approval. If you are in agreement with this proposed program, please return one fully executed JFA to our office. Work performed with funds from this agreement will be conducted on a fixed-price basis. Billing for this agreement will be rendered quarterly.

The USGS is required to have an agreement in place prior to any work being performed on a project. We request that the JFA be returned prior to November 1, 2012. If it is not received by November 1, we will be required to suspend operations until an agreement is received.

If you have any questions concerning this program, please contact Matthew Scrudato, in our Santa Maria Field office, at (805) 928-9539. If you have any administrative questions, please contact Tammy Seubert, in our Sacramento Office, at (916) 278-3040.

Sincerely,

Donna Schiffer, acting

Eric G. Reichard
Director, USGS California Water Science Center

Enclosures

cc: Matthew C. Scrudato , USGS CAWSC

[3] Stream-quality stations average cost for SBCWA is $2,435. The USGS average cost for these stations is $1,225.
[4] SBCWA to be reimbursed $3,300 by the City of Lompoc.

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

List A-1

Groundwater Wells Measured Annually
Santa Barbara County Water Agency
USGS (updated 09/04/12 by M.C. Scrudato)

4N/28W–2P3
4N/28W-16J5
4N/30W-1G1
5N/29W-1C1
5N/29W-31C1
5N/30W-19E1
5N/30W-28R1
5N/30W-28R2
5N/30W-30N2
6N/29W-5A1
6N/29W-6F1
6N/29W-6G1
6N/29W-7L1
6N/29W-8P1
6N/29W-8P2
6N/30W-1R3
6N/30W-7G5
6N/30W-7G6
6N/30W-9N1
6N/30W-11G1
6N/30W-11G2
6N/31W-1P2
6N/31W-1P3
6N/31W-2K1
6N/31W-3A1
6N/31W-4A1
6N/31W-7F1
6N/31W-10F1
6N/31W-11D4
6N/31W-13D1
6N/31W-17F1
6N/31W-17F3
6N/32W-2Q1
6N/32W-16P3
6N/32W-18H1
6N/33W-8R1
6N/33W-8J3
6N/33W-9M1
6N/33W-11L4
6N/34W-6C4
6N/34W-12C5
6N/36W-1K2
6N/36W-26C1
6N/36W-26G1
7N/29W-29R1
7N/29W-29R2
7N/30W-16B1
7N/30W-19H1
7N/30W-22E1
7N/30W-22E2
7N/30W-24Q1
7N/30W-25Q2
7N/30W-27H1
7N/30W-29D1
7N/30W-29N2
7N/30W-30M1
7N/30W-32R1
7N/30W-33M1
7N/30W-35R1
7N/30W-36N2
7N/30W-36N3
7N/31W-22A3
7N/31W-23P1
7N/31W-34M1
7N/31W-35K4
7N/31W-36L2
7N/32W-7B1
7N/32W-31M1
7N/33W-16G5
7N/33W-17M1
7N/33W-17N2
7N/33W-19D1
7N/33W-20G1
7N/33W-21G2
7N/33W-21N1
7N/33W-27G1
7N/33W-27J1
7N/33W-28D3
7N/33W-30B2

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

List A-1 – Continued

Groundwater Wells Measured Annually
Santa Barbara County Water Agency
USGS (updated 09/04/12 by M.C. Scrudato)

7N/33W-36J1
7N/34W-9H5
7N/34W-9H6
7N/34W-12E1
7N/34W-14F4
7N/34W-14L1
7N/34W-15D1
7N/34W-15D2
7N/34W-15D3 (?)
7N/34W-15E1
7N/34W-15P2
7N/34W-20K4
7N/34W-22J6
7N/34W-24N1
7N/34W-26H3
7N/34W-27G6
7N/34W-29E4
7N/34W-29N6
7N/34W-29N7
7N/34W-30L10
7N/34W-31R2
7N/34W-32H2
7N/34W-35L7
7N/34W-35K9
7N/35W-15M1
7N/35W-17M1
7N/35W-18H1
7N/35W-18J2
7N/35W-21G2
7N/35W-22J1
7N/35W-22M1
7N/35W-23B2
7N/35W-23E6
7N/35W-23J5
7N/35W-23Q2
7N/35W-23Q3
7N/35W-23Q4
7N/35W-24J4
7N/35W-24K5
7N/35W-24N3
7N/35W-25F6
7N/35W-25F7
7N/35W-26F4
7N/35W-26L1
7N/35W-26L2
7N/35W-26L4
7N/35W-27C1
7N/35W-27F1
7N/35W-27H?
7N/35W-27P1
7N/35W-30G1
7N/35W-31J2
7N/35W-32N1
7N/35W-35A3
8N/31W-22J1
8N/31W-22J2
8N/31W-25K1
8N/31W-25Q1
8N/31W-36H1
8N/32W-25D1
8N/32W-28P1
8N/32W-28P4
8N/32W-29L2
8N/32W-30D1
8N/32W-30E5

3 neverland not added to letter – courtesy measurement if granted access: 31D1, 30N1, and 25Q2

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

List A-1 – Continued

Groundwater Wells Measured Annually
Santa Barbara County Water Agency
USGS (updated 09/04/12 by M.C. Scrudato)

8N/33W-13C1
8N/33W-13Q1
8N/33W-19K1
8N/33W-20Q2
8N/33W-22K3
8N/33W-24B3
8N/33W-25B5
8N/34W-2M1
8N/34W-9K1
8N/34W-14L1
8N/34W-15F2
8N/34W-15F4
8N/34W-16C1
8N/34W-16C2
8N/34W-16C3
8N/34W-16C4
8N/34W-16F1
8N/34W-16G3
8N/34W-17E1
8N/34W-17H1
8N/34W-17K2
8N/34W-17Q1
8N/34W-21A1
8N/34W-23B1
8N/34W-24E1
8N/35W-12M1
9N/24W-32C1
9N/24W-33M1
9N/25W-13B1
9N/26W-1F3
9N/32W-6D1
9N/32W-16L1
9N/32W-17G1
9N/32W-22D1
9N/32W-23K1
9N/32W-33F1
9N/32W-33M1
9N/32W-33M2
9N/33W-2A7
9N/33W-6G1
9N/33W-12C1
9N/33W-12R2
9N/33W-22K1
9N/33W-22L1
9N/33W-? (Golden State Water)
9N/33W-24L1
9N/34W-3A2
9N/34W-3F2
9N/34W-6C1
9N/34W-8H1
9N/34W-9R1
9N/34W-34P1
10N/26W-18F1
10N/26W-20M1
10N/26W-20P1
10N/27W-11A1
10N/32W-19M2

List A-1 - Continued

Groundwater Wells Measured Annually
Santa Barbara County Water Agency
USGS (updated 09/04/12 by M.C. Scrudato)

10N/33W-7M1
10N/33W-7R1
10N/33W-7R6
10N/33W-18G1
10N/33W-16L1
10N/33W-19B1
10N/33W-19K1
10N/33W-20H1
10N/33W-21P1
10N/33W-26N1
10N/33W-27G1
10N/33W-28A1
10N/33W-28F2
10N/33W-29F1
10N/33W-30G1
10N/33W-30M2
10N/33W-31Q2
10N/33W-34E1
10N/33W-35B1
10N/34W-6N3
10N/34W-9D1
10N/34W-13C1
10N/34W-13G1
10N/34W-13H1
10N/34W-13J1
10N/34W-14E4
10N/34W-14E?
10N/34W-20H3
10N/34W-24K1
10N/34W-24K3
10N/34W-26H2
10N/34W-29N2
10N/35W-5P2
10N/35W-7E5
10N/35W-9E5
10N/35W-9F1
10N/35W-9N2
10N/35W-11E4
10N/35W-14P1
10N/35W-18F2
10N/35W-21B1
10N/35W-23M2
10N/35W-24B1
10N/35W-24Q1
10N/35W-35J2
10N/36W-12P1
11N/34W-30Q2
11N/34W-29R2
11N/34W-33J1
11N/35W-19E3
11N/35W-20E1
11N/35W-25F3
11N/35W-26M3
11N/35W-28F1
11N/35W-29E2
11N/35W-28M1
11N/35W-33G2

List A-1 - Continued

Groundwater Wells Measured Annually
Santa Barbara County Water Agency
USGS (updated 09/04/12 by M.C. Scrudato)

DISCONTINUED WELLS

6N/29W-9J1 (FY07)
6N/32W-6K1 (FY12)
6N/36W-1K1 (FY12)
7N/33W-16G3 (FY07)
7N/33W-36J2 (FY07)
7N/34W-15P1 (FY05)
7N/35W-13N2 (FY07)
7N/35W-17Q6 (FY12)
7N/35W-23E2 (FY12)
7N/35W-25F5 (FY07)
7N/35W-27H1 (FY12)
8N/30W-30R1 (FY12)
8N/33W-20R1 (FY05)
8N/33W-24C1 (FY12)
9N/25W-27C1 (FY08)
9N/32W-7A1 (FY07)
9N/32W-8N1 (FY07)
9N/33W-5A1 (FY07)
9N/34W-3F10 changed to 3F2 (FY12)
10N/25W-18J2 (FY08)
10N/25W-21E1 (FY05)
10N/25W-21G1 (FY07)
10N/25W-23E1 (FY07)
10N/25W-21F1 (FY08)
10N/25W-21G1 (FY07)
10N/25W-23E1 (FY07)
10N/25W-27L2 (FY07)
10N/25W-29K2 (FY07)
10N/25W-30F1 (FY08)
10N/26W-4R1 (FY08)
10N/26W-9H1 (FY08)
10N/26W-15N1 (FY07)
10N/26W-16Q1 (FY08)
10N/26W-21A1 (FY08)
10N/26W-22Q1 (FY08)
10N/32W-19M1 (FY05)
10N/33W-16N1 (FY07)
10N/33W-16N2 (FY07)
10N/33W-28F1 (FY08)
10N/34W-6N1 (FY12)
10N/34W-14E5 (FY12)
11N/34W-30Q1 (FY07)
11N/35W-28F2 changed to 28F1 (FY12)
11N/35W-33G1 (FY12)

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

List A-2

Groundwater Wells Measured Annually (September)
Santa Barbara County Water Agency
USGS (updated 09/04/12 by M.C. Scrudato)

6N/34W-6C4	E of San Pasqual Rd
7N/33W-16G5	Mid Santa Rita Valley
7N/33W-17M1	Upper Cebada Canyon
7N/33W-19D1	Lower Cebada Canyon
7N/33W-20G1	W of Tularosa Road
7N/33W-21G2	Mid Santa Rita Valley
7N/33W-21N1	W Santa Rita Valley
7N/33W-28D3	W Santa Rita Valley
7N/34W-9H5	Vandnbrg Village CSD
7N/34W-9H6	Vandnbrg Village CSD
7N/34W-12E1	N of Mission Hills
7N/34W-14F4	Mission Hills CSD
7N/34W-14L1	Mission Hills CSD
7N/34W-15D1	Vandnbrg Village CSD
7N/34W-15D2	Vandnbrg Village CSD
7N/34W-15P2	Uplands E of Hyw 1
7N/34W-20K4	USPrison E of Floradale
7N/34W-24N1	Purisima Mission nr 246
7N/34W-26H3	Eastern Lompoc Valley
7N/34W-27G6	E of North A Street
7N/34W-30L10	SW cor Central & Leege
7N/34W-35K9	Eastern Lompoc Valley
7N/35W-22M1	W of VAFB entrance N
7N/35W-17M1	Surf (near RR xing)
7N/35W-17Q6	Surf (old barrier bridge)
7N/35W-21G2	W of 22M1 in field
7N/35W-22J1	W Valley: Jordan Farm
7N/35W-23B2	N of SY River on VAFB
7N/35W-23E2	W Valley: Jordan Farm
7N/35W-24J4	At N end of Douglas Ave
7N/35W-24K5	DeWolf Ave: Henning
7N/35W-25F6	NW of DeWolf & Central
7N/35W-25F7	NW of DeWolf & Central
7N/35W-26F4	W Valley: Jordan Farm
7N/35W-27C1	Ocean Ave & Renwick
7N/35W-27F1	E. of So. VAFB entrance
7N/35W-27H?	
9N/34W-6C1	Laguna Sanitation Yard
10N/34W-6N3	
10N/34W-29N2	Taylor Residence
10N/35W-5P2	W. end of Thornberry
10N/35W-7E5	North of 18F2 - Gamble
10N/35W-9E5	Guadalupe City Well
10N/35W-9F1	Guadalupe: Waller Seed
10N/35W-9N2	SW Main St - Hyw166
10N/35W-11E4	Silva Farm N of Hyw 166
10N/35W-14P1	N of Brown Road
10N/35W-18F2	SW from Guadalupe
11N/35W-20E1	Oso Flaco Lake Road
10N/35W-21B1	Mahoney Bros Farm
10N/35W-23M2	S of Brown Road
10N/35W-24B1	SW Jct Ray & Brown rd
10N/35W-24Q1	Ex B&W feedlot well
10N/35W-35J2	Field E of Hwy 1
10N/36W-12P1	E of Guadalupe Dunes
11N/35W-19E3	Mike Mills
11N/35W-25F3	Division @ Bonita Road
11N/35W-26M3	O Flaco Rd E of Hwy 1
11N/35W-28F1	Hwy 1 S of O Flaco Rd
11N/35W-28M1	E of Guadalupe dunes
11N/35W-29E2	Oso Flaco next to RVR
11N/35W-33G2	

DISCONTINUED

7N/33W-16G3 (FY07)
7N/33W-16G4 (FY07)
7N/35W-13N2 (FY07)
7N/35W-25F5 (FY07)
7N/35W-27H1 (FY12)
11N/35W-28F2 changed to 28F1 (FY12)
11N/35W-33G1 (FY12)

List B

Groundwater Quality Sampling
Santa Barbara County Water Agency
(updated 08/29/12 by M.C. Scrudato)

July Groundwater

7N/30W-33M1
7N/33W-27G1
8N/32W-30E6
9N/24W-33M1
9N/25W-3F(?)
9N/33W-2A7
9M/33W-10M1, Bucio (alternate)
9N/33W-17B1, Addamo
9N/34W-3A2
10N/25W-21Q2 (Kidds)
10N/25W-34N1
10N/26W-20M1
10N/33W-19K1 (alternate?)
10N/33W-20H1
10N/33W-22N3
10N/33W-30G1
10N/34W-4R2
10N/34W-14E4 (alternate)
10N/34W-14E5
10N/34W-29N1
10N/35W-14D3

TOTAL – 17 Samples

DISCONTINUED

10N/25W-20H2
10N/25W-20H3 (alternate)
10N/26W-9H1(alternate)
10N/26W-10M1
10N/26W-15B1(alternate)
10N/26W-16R1 (alternate)
10N/26W-22Q2
10N/26W-24J4

August Groundwater (Lompoc)

7N/34W-27P5*
7N/35W-21G2*
7N/35W-26F5*
7N/35W-27F1*

TOTAL – 4 Samples

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

List B Continued

Groundwater Quality Sampling
Santa Barbara County Water Agency
(updated 07/01/10 by M.C. Scrudato)

November Groundwater (Guadalupe Dunes)

10N/36W-2Q1**
10N/36W-2Q3**
10N/36W-2Q4**
10N/36W-2Q7**
11N/36W-35J2**
11N/36W-35J3**
11N/36W-35J4**
11N/36W-35J5**
TOTAL – 8 Samples

GRAND TOTAL – 29 groundwater samples

Wells will be selected to replace discontinued monitoring sites as needed.

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

List C

Chemical Constituents
(mg/L or as indicated)

Dissolved boron (µg/L)

Dissolved calcium

Dissolved chloride

Dissolved fluoride

Dissolved iron (µg/L)

Dissolved manganese (µg/L)

Dissolved magnesium

Dissolved nitrogen (nitrate + nitrite)

Dissolved orthophosphate (PO_4)

Dissolved orthophosphorus (P)

Dissolved potassium

Dissolved silica

Dissolved sodium

Dissolved sulfate

Dissolved solids (sum)

Sodium adsorption ratio

Percent sodium

Total alkalinity ($CaCO_3$)

Total hardness ($CaCO_3$)

Temperature °C

pH

Specific conductance (microsiemens)

Schedules used: 101, 117

Lab Codes used: 27

Additional analysis for monitoring wells noted by a single asterisk in List B includes: Lab Codes as 1202, Iodine and 1786 as Barium

Double asterisk for lab code 1246 as Bromide.