



ATTACHMENT A

United States Department of the Interior

U.S. GEOLOGICAL SURVEY

California Water Science Center
6000 J Street, Placer Hall
California State University
Sacramento, California 95819-6129
Phone: (916) 278-3000 Fax: (916) 278-3070
<http://water.wr.usgs.gov>

June 28, 2012

Mr. Thomas D. Fayram
Deputy Director of Public Works, Water Resources
Santa Barbara County Water Agency
123 East Anapamu Street
Santa Barbara, California 93101

Attention: Mr. Dennis Gibbs

Dear Mr. Fayram:

This letter confirms discussions between our respective staffs, concerning the continuation of our cooperative water resources program between the Santa Barbara County Water Agency, (SBCWA) and the U.S. Geological Survey (USGS). This work is a continuation of the Geohydrology and Water Availability of the Cuyama Valley, California during the agreement period October 1, 2008 to December 31, 2012.

The purpose of this amendment is to extend the period of performance, and to increase agreement funding with Federal Matching Funds (FMF). Subject to availability of FMF, funding contributed by the USGS is \$94,230.00. The total cost of the program to USGS over all fiscal years, including this amendment, will be \$465,030.00. The total cost of the program to the SBCWA over all fiscal years, including this amendment, remains at \$853,000.00. As an extension to the agreement, the end date of the performance period is being extended from October 1, 2008 to June 30, 2013.

Enclosed are two signed Joint Funding Agreement (JFA) 09W4CAD03910 A5 for your approval. Work performed with funds from this agreement will be conducted on a fixed-price basis. If you are in agreement with this proposed program, please return one signed JFA to our San Diego Project office or via email to Irene Rios at iarios@usgs.gov.

The USGS is required to have an agreement in place prior to any work being performed on a project. Your prompt attention to returning the signed JFA's for the subject period will allow for work on this study to continue uninterrupted.

Mr. Thomas D. Fayram, Deputy Director of Public Works Water Resources - SBCWA

If you have any questions concerning this program, please contact Randy Hanson, in our San Diego Office, at (619) 225-6139. If you have any administrative questions, please contact Irene Rios, in our San Diego Project Office, at (619) 225-6156.

Sincerely,

A handwritten signature in cursive script that reads "Donna Schiffer, acting".

Eric G. Reichard, Director
USGS California Water Science Center

Enclosures

cc: Randy Hanson, USGS CAWSC

Geohydrology and Water Availability of the Cuyama Valley, California: Progress, Plans, and Costs FY2012 Ammendment

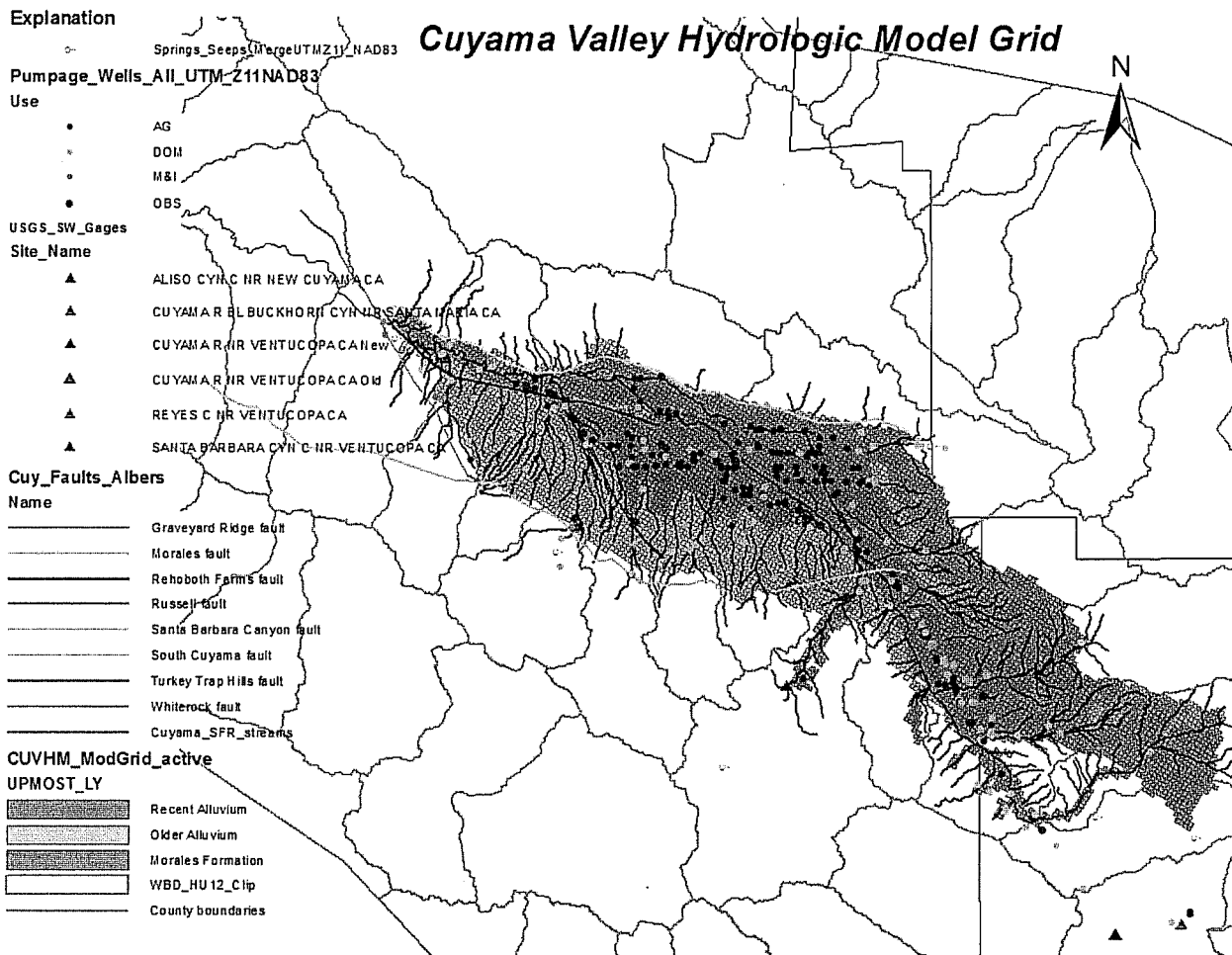
Task 3 – Additional Model Development

The purpose of this task is to develop geohydrologic and hydrologic models to more accurately assess and simulate the storage and flow of water in Cuyama Valley. The models will be developed utilizing the data compiled and collected in Tasks 1 and 2.

Progress

In FFY11, land-use and crop data was developed for the CUVHM integrated hydrologic model (IHM) grid (fig. 1) on a monthly basis for the period January 1938 through December 2009. Wells and related pumpage assignments were determined. In addition, the Basin Characteristics Model (BCM) was developed to estimate runoff and recharge from the surrounding watersheds. The BCM uses average monthly climate data and was developed originally to estimate recharge and runoff for multiple basins throughout the desert southwest. The streamflow network was delineated and linked to the runoff from the BCM model. Streamflow data was compiled for BCM model calibration and initial simulations of runoff were completed. The geohydrologic model is completed and the calibration of the hydrologic model is being completed. The revised delineation of faults that may affect the flow of groundwater and groundwater recharge in Cuyama Valley were established for the HFM and IHM and has been incorporated into our calibration of the IHM (fig. 1).

Figure 1: Model grid for the CUVHM hydrologic model, Cuyama Valley, Santa Barbara County.



Plans

Model construction and calibration will continue in FFY2012. Additional calibration and analysis are required to complete model based on new information from data analysis and geohydrologic framework construction. Additional funds are being contributed by the USGS to support the additional model calibration.

<i>Addition to Total FFY 2012--USGS funding for Task 3 -</i>	<i>\$94,230</i>
<i>Total Additional Funding from USGS -</i>	<i>\$94,230</i>