

# ARROYO SANTA ROSA VALLEY BASIN

## GROUNDWATER SUSTAINABILITY AGENCY

### BOARD MEETING AGENDA

**May 25, 2023**

**4:30 P.M.**

Camrosa Water District - 7385 Santa Rosa Road - Camarillo, CA 93012

#### MEMBERS OF THE BOARD

ARNE ANSELM, *Ventura County Public Works Agency*

JEFFREY C. BROWN, *Camrosa Water District*

TERRY L. FOREMAN, *Camrosa Water District*

TIMOTHY H. HOAG, *Camrosa Water District*

ANDY F. NELSON, *Camrosa Water District*

EUGENE F. WEST, *Camrosa Water District*

ALL AGENDA DOCUMENTS ARE AVAILABLE ONLINE  
AT [WWW.ASRGSA.COM](http://WWW.ASRGSA.COM)

#### CALL TO ORDER

#### PUBLIC COMMENTS

At this time, the public may address the Board on any item not appearing on the agenda that is subject to its jurisdiction. Persons wishing to address the Board must fill out a speaker card and are subject to a five-minute time limit.

Matters appearing on the Consent Agenda are expected to be noncontroversial and will be acted upon by the Board collectively, without discussion, unless a member of the Board or staff requests an opportunity to address a given item. Approval by the Board of Consent Items means that the recommendation of staff is approved along with the terms and conditions described in the Board Memorandum.

#### CONSENT AGENDA

1. **Approve the Minutes of the April 20, 2023 Regular Meeting**
2. **Vendor Payments Ratification**

Approve vendor payments as presented by staff.

#### PRIMARY AGENDA

3. **Groundwater Sustainability Plan (GSP) Public Hearing**  
Conduct a public hearing to consider adoption of the GSP.
4. **GSP Numerical Groundwater Model Update**  
Enter into an agreement with Intera Inc. to update the numerical model presented in the GSP.
5. **Management of the Arroyo Santa Rosa Valley Basin Sustainability Plan MOU**  
Enter into a MOU with Fox Canyon Groundwater Management Agency (FCGMA) regarding the management of the ASRVB Groundwater Basin.

**COMMENTS BY THE EXECUTIVE DIRECTOR**

**COMMENTS BY THE BOARD OF DIRECTORS**

**ADJOURN**

# ARROYO SANTA ROSA VALLEY BASIN

## GROUNDWATER SUSTAINABILITY AGENCY

### MINUTES OF THE SPECIAL MEETING OF THE BOARD

**April 20, 2023**

**4:30 P.M.**

Camrosa Water District - 7385 Santa Rosa Road - Camarillo, CA 93012

#### MEMBERS OF THE BOARD

ARNE ANSELM, *Ventura County Public Works Agency*

JEFFREY C. BROWN, *Camrosa Water District*

TERRY L. FOREMAN, *Camrosa Water District*

TIMOTHY H. HOAG, *Camrosa Water District*

ANDY F. NELSON, *Camrosa Water District*

EUGENE F. WEST, *Camrosa Water District*

#### CALL TO ORDER

The meeting was called to order at 4:30 P.M.

**Present:**

Arne Anselm  
Terry L. Foreman  
Timothy H. Hoag  
Eugene F. West

**Staff:**

Tony Stafford, Executive Director  
Tamara Sexton, Camrosa Water District  
Kevin Wahl, Camrosa Water District  
Natalie Roberts, Camrosa Water District  
Greg Johnson, Legal Counsel

**Absent:**

Jeffrey C. Brown, Camrosa Water District  
Andy F. Nelson, Camrosa Water District

**Guests:**

Bryan Bondy, Bondy Groundwater Consulting, Inc. (via teleconference)

#### PUBLIC COMMENTS

None

#### CONSENT AGENDA

- 1. Approve the Minutes of the January 26, 2023 Regular Meeting**
- 2. Approve the Minutes of the February 28, 2023 Special Meeting**
- 3. Vendor Payments Ratification**

**Motion to approve the Consent Agenda:** West. **Second:** Anselm.

**Rollcall:** Hoag-Yes; Foreman-Yes; Anselm-Yes; West-Yes; Nelson-Absent; Brown-Absent.

## **PRIMARY AGENDA**

### **6. Schedule a Public Hearing**

Set a public hearing to consider adoption of the Groundwater Sustainability Plan for May 25, 2023, at 4:30 p.m.

**Motion to approve the Consent Agenda:** West. **Second:** Hoag.

**Rollcall:** Hoag-Yes; Foreman-Yes; Anselm-Yes; West-Yes; Nelson-Absent; Brown-Absent.

### **4. Second Quarter Results**

Received Fiscal Year 2022-23 second quarter results.

*No action was necessary; the item was for information only.*

### **5. Third Quarter Results**

Received Fiscal Year 2022-23 third quarter results.

*No action was necessary; the item was for information only.*

## **COMMENTS BY THE EXECUTIVE DIRECTOR**

No Comments

## **COMMENTS BY THE BOARD OF DIRECTORS**

Director Foreman commented on the need to fund the enterprise and discuss how to accomplish that.

## **ADJOURN**

There being no further business, the meeting was adjourned at 4:40 P.M.

\_\_\_\_\_  
Tony L. Stafford  
Executive Director  
**Arroyo Santa Rosa Valley Basin GSA**

\_\_\_\_\_  
Terry L. Foreman, Chair  
Board of Directors  
**Arroyo Santa Rosa Valley Basin GSA**

(ATTEST)

# ARROYO SANTA ROSA VALLEY BASIN

## GROUNDWATER SUSTAINABILITY AGENCY

Camrosa Water District - 7385 Santa Rosa Road - Camarillo, CA 93012

### MEMBERS OF THE BOARD

ARNE ANSELM, *Ventura County Public Works Agency*

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TIMOTHY H. HOAG, *Camrosa Water District*

ANDY F. NELSON, *Camrosa Water District*

EUGENE F. WEST, *Camrosa Water District*

## BOARD MEMORANDUM

**DATE:** May 25, 2023

**TO:** Board of Directors

**FROM:** Tony Stafford, Executive Director

**OBJECTIVE:** Ratify Vendor Payments as presented by staff

**ACTION:** Ratify accounts payable

**DISCUSSION:** A summary of accounts payable previously paid by the Arroyo Santa Rosa Valley Groundwater Sustainability Agency in the amount of \$5,683.08 is provided for Board information and ratification.

Check Number	Post Date	Vendor Name	Invoice Number	Description	Amount
93	4/11/2023	The Hathaway Law Firm, LLP	203595	GSA Legal Services March 2023	30.58
				Reimbursement for EFT Payment to Bondy Groundwater Consulting-Invoice 077-18. GSP Project Management for March	
94	4/11/2023	Camrosa Water District	1964	2023	1,012.50
95	4/21/2023	Intera	03-23-37	GSP Development and Preparation March 2023	4,600.00
	5/1/2023	Union Bank		April 2023 Bank Fees	40.00
<b>Total Vendor Payments</b>					<b>\$ 5,683.08</b>

The ASRGSA's bank account as of April 30, 2023, was \$181,712.99.

# ARROYO SANTA ROSA VALLEY BASIN

## GROUNDWATER SUSTAINABILITY AGENCY

Camrosa Water District - 7385 Santa Rosa Road - Camarillo, CA 93012

### MEMBERS OF THE BOARD

ARNE ANSELM, *Ventura County Public Works Agency*  
JEFFREY C. BROWN, *Camrosa Water District*  
TERRY L. FOREMAN, *Camrosa Water District*  
TIMOTHY H. HOAG, *Camrosa Water District*  
ANDY F. NELSON, *Camrosa Water District*  
EUGENE F. WEST, *Camrosa Water District*

## BOARD MEMORANDUM

**DATE:** May 25, 2023

**TO:** Board of Directors

**FROM:** Tony Stafford, Executive Director

**SUBJECT:** **Public Hearing to consider Adoption of the Groundwater Sustainability Plan (GSP) for the Arroyo Santa Rosa Valley Basin Groundwater**

**OBJECTIVE:** Conduct a public hearing to consider adoption of the GSP.

**ACTION:**

- 1) Open public hearing and receive public testimony; and
- 2) Close public hearing; and
- 3) Approve adoption of the GSP by Resolution 23-01.

**DISCUSSION:** A public hearing is required prior to adopting the GSP. During the April 20, 2023 board meeting, members of the board set a public hearing date of May 25, 2023 to consider adoption of Resolution 23-01. The public comment period closed March 17, 2023. The Sustainable Groundwater Management Act provides that a GSA may adopt or amend a GSP after a public hearing held at least 90 days after providing notice to a city or county within the area of the proposed plan (Water Code Section 10728.4.). The Executive Director mailed the required city and county consultation notifications on January 17, 2023 to the City of Thousand Oaks, and the County of Ventura. No requests for consultation were received from the City or Ventura County. The public hearing was noticed on the ASRGSA website, e-mailed to those requesting notice of the ASRGSA materials, and published in the Ventura County Star newspaper on May 11, 2023 and May 18, 2023 (attached).

The final GSP, incorporating public comment edits, are available on the ASRGSA website.

# **ARROYO SANTA ROSA VALLEY BASIN GROUNDWATER SUSTAINABILITY AGENCY**

## **MEMBERS OF THE BOARD**

ARNE ANSELM, Ventura County Public Works Agen

JEFFREY C. BROWN, *Camrosa Water District*

TERRY L. FOREMAN, *Camrosa Water District*

TIMOTHY H. HOAG, *Camrosa Water District*

ANDY F. NELSON, *Camrosa Water District*

EUGENE F. WEST, *Camrosa Water District*

## **NOTICE OF PUBLIC HEARING**

NOTICE IS HEREBY GIVEN that a Public Hearing with the Arroyo Santa Rosa Valley Basin Groundwater Sustainability Agency Board of Directors will be held on:

**--Thursday, May 25, 2023 at 4:30pm--**

**CAMROSA WATER DISTRICT**

**7385 Santa Rosa Road - Camarillo, CA 93012**

The purpose of this public hearing is to consider adoption of the proposed Groundwater Sustainability Plan (GSP). Any interested person shall be permitted to present written testimony, oral testimony, or both at this public hearing. Written comments may be filed at any time prior to the conclusion of this public hearing. These comments should be addressed to the attention of the ASRVBGSA Board of Directors at 7385 Santa Rosa Rd., Camarillo, CA 93012. The proposed GSP is available for public review at [www.asrgsa.com](http://www.asrgsa.com). For additional information or if you require assistance in participating in this hearing, please email Donnie Alexander at [DonnieA@camrosa.com](mailto:DonnieA@camrosa.com).



**Tony Stafford, Executive Director**

**Text of Ad:**            **05/08/2023**

**NOTICE OF PUBLIC  
HEARING**

NOTICE IS HEREBY  
GIVEN that a Public  
Hearing with the Arroyo  
Santa Rosa Valley Basin  
Groundwater Sustainability  
Agency Board of Directors  
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**--Thursday, May 25, 2023 at  
4:30pm--**

**CAMROSA WATER  
DISTRICT**

**7385 Santa Rosa Road -  
Camarillo, CA 93012**

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should be addressed to the  
attention of the ASRVBGS  
Board of Directors at 7385  
Santa Rosa Rd., Camarillo,  
CA 93012. The proposed GSP  
is available for public  
review at [www.asrgsa.com](http://www.asrgsa.com).  
For additional information  
or if you require assistance  
in participating in this  
hearing, please email  
Donnie Alexander at  
[DonnieA@camrosa.com](mailto:DonnieA@camrosa.com).  
Tony Stafford, Executive  
Director  
Publish May 11 & 18, 2023  
#5696683



# ARROYO SANTA ROSA BASIN GROUNDWATER SUSTAINABILITY AGENCY

## MEMBERS OF THE BOARD

ARNE ANSELM, *Ventura County Public Works Agency*  
JEFFREY C. BROWN, *Camrosa Water District*  
TERRY L. FOREMAN, *Camrosa Water District*  
TIMOTHY H. HOAG, *Camrosa Water District*  
ANDREW F. NELSON, *Camrosa Water District*  
EUGENE F. WEST, *Camrosa Water District*

January 17, 2023

City Council of Thousand Oaks  
c/o City Clerk  
2100 Thousand Oaks Blvd.  
Thousand Oaks, CA 91362

Transmitted via email attachment to [cityclerk@toaks.com](mailto:cityclerk@toaks.com)

## **Re: Notification of Intent to Adopt the Arroyo Santa Rosa Basin Groundwater Sustainability Plan Under the Sustainable Groundwater Management Act**

Dear Councilors:

The purpose of this letter is to provide you with notice, pursuant to Water Code Section 10728.4, that the Arroyo Santa Rosa Basin Groundwater Sustainability Agency (ASRGSA) intends to adopt a Groundwater Sustainability Plan (GSP) following a public hearing, which will be held no sooner than April 1, 2023 (date, time, and location to be determined). A draft of the GSP is anticipated to be released in late January for a 45-day comment period. It will be available at [www.asrgsa.com/GSP](http://www.asrgsa.com/GSP).

The ASRGSA, a joint powers authority between the Camrosa Water District and the County of Ventura, manages groundwater east of the Bailey Fault; the FCGMA will maintain its jurisdiction over the portion of the Arroyo Santa Rosa Basin west of the Bailey Fault. The ASRGSA is writing the GSP for the entire basin, including the FCGMA area as a "management area" under the new GSP.

Please note that Water Code Section 10728.4 allows you 30 days from the date you receive this notice to request consultation with the ASRGSA about the GSP.

If you have any questions, please contact me at 805.388.0226 or [TonyS@camrosa.com](mailto:TonyS@camrosa.com).

Sincerely,



Tony Stafford  
Executive Director, Arroyo Santa Rosa Groundwater Sustainability Agency

# ARROYO SANTA ROSA BASIN GROUNDWATER SUSTAINABILITY AGENCY

## MEMBERS OF THE BOARD

ARNE ANSELM, *Ventura County Public Works Agency*  
JEFFREY C. BROWN, *Camrosa Water District*  
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TIMOTHY H. HOAG, *Camrosa Water District*  
ANDREW F. NELSON, *Camrosa Water District*  
EUGENE F. WEST, *Camrosa Water District*

January 17, 2023

County of Ventura Board of Supervisors  
c/o Rosa Gonzalez, Chief Deputy Clerk of the Board  
County Government Center  
800 S. Victoria Ave.  
Ventura, CA 93009-1940

Transmitted via email attachment to [Clerkoftheboard@ventura.org](mailto:Clerkoftheboard@ventura.org)

## **Re: Notification of Intent to Adopt the Arroyo Santa Rosa Basin Groundwater Sustainability Plan Under the Sustainable Groundwater Management Act**

Dear Members of the Board:

The purpose of this letter is to provide you with notice, pursuant to Water Code Section 10728.4, that the Arroyo Santa Rosa Basin Groundwater Sustainability Agency (ASRGSA) intends to adopt a Groundwater Sustainability Plan (GSP) following a public hearing, which will be held no sooner than April 1, 2023 (date, time, and location to be determined). A draft of the GSP is anticipated to be released in late January for a 45-day comment period. It will be available at [www.asrgsa.com/GSP](http://www.asrgsa.com/GSP).

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Sincerely,



Tony Stafford

Executive Director, Arroyo Santa Rosa Groundwater Sustainability Agency

# ARROYO SANTA ROSA VALLEY BASIN

## GROUNDWATER SUSTAINABILITY AGENCY

### MEMBERS OF THE BOARD

ARNE ANSELM, *Ventura County Public Works Agency*  
JEFFREY C. BROWN, *Camrosa Water District*  
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EUGENE F. WEST, *Camrosa Water District*

## RESOLUTION OF THE BOARD

### RESOLUTION 2023-01

#### **Adopting a Groundwater Sustainability Plan (GSP) for the Arroyo Santa Rosa Valley Basin Groundwater Sustainability Agency**

**Whereas** the California Legislature passed a statewide framework for sustainable groundwater management, known as the Sustainable Groundwater Management Act (California Water Code section 10720 et seq.), pursuant to Senate Bill 1168, Senate Bill 1319, and Assembly Bill 1739, which was approved by the Governor and Chaptered by the Secretary of State on September 16, 2014; and

**Whereas** the Sustainable Groundwater Management (SGMA) went into effect on January 1, 2015; and,

**Whereas** SGMA requires all high- and medium-priority groundwater basins, as designated by the California Department of Water Resources (DWR) Bulletin 118, to be managed by a groundwater sustainability agency (GSA); and

**Whereas** Arroyo Santa Rosa Valley Groundwater Basin (ASRVGB) (DWR Bulletin 118 Groundwater Basin No. 4-007) priority assigned by DWR was reduced from medium to very low in 2019, making SGMA compliance optional; and

**Whereas** the Camrosa Water District and the County of Ventura formed a Joint Exercise of Powers Agreement (JPA) creating the Arroyo Santa Rosa Basin Groundwater Sustainability Agency (ASRGSA) to act as a groundwater sustainability agency (GSA) for a portion of the ASRVGB in compliance with SGMA; and

**Whereas** Water Code §10723 designates the Fox Canyon Groundwater Management Agency as an exclusive GSA within its statutory boundary, which includes a portion of the ASRVGB; and

**Whereas** the ASRGSA and Fox Canyon Groundwater Management Agency filed initial notifications of each agency's intent to develop a Groundwater Sustainability Plan (GSP) for the ASRVGB on May 14, 2018 and February 24, 2017 respectively; and

**Whereas** the ASRGSA and FCGMA has prepared a single GSP for the ASRVGB in accordance with SGMA and the regulations adopted by DWR for evaluating GSPs; and

**Whereas** the ASRGSA gave notice on January 17, 2023, pursuant to Water Code section 10728.4, to affected cities and counties regarding its intent to adopt a GSP; and

**Whereas** on February 1, 2022, the ASRGSA released a public draft GSP, requesting comments from interested persons and agencies by March 17, 2023; and

**Whereas** on May 11, 2023 and May 18, 2023, notice was published in the Ventura County Star of the public hearing on adoption of the GSP to be held at 4:30 p.m. on May 25, 2023; and

**Whereas** the on April 20, 2023, the tentative final GSP, with responses to public comments received, was posted on the ASRGSA website; and

**Whereas** the ASRGSA held a public hearing on May 25, 2023 for the purpose of receiving public comment and considering adoption of a GSP; and

**Whereas** upon adoption of a GSP, Water Code section 10733.44 requires that GSP to be submitted to DWR for review; and

**Now, Therefore, Be it Resolved**, by the Arroyo Santa Rosa Valley Basin GSA Board of Directors as follows:

1. The foregoing is true and correct.
2. The GSP, in the form presented this day to the Board of Directors and subject to any final non-substantive edits that may be made at the Executive Director's discretion prior to submittal to DWR, is hereby approved and adopted.
3. The Executive Director is authorized and directed to timely provide notification of this approval and adoption to DWR, including a copy of the Resolution, the approved GSP, and any additional information required by law.

**Adopted, signed, and approved** this 25<sup>th</sup> day of May 2023.

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Terry Foreman, Chair  
Board of Directors  
Arroyo Santa Rosa Valley Basin GSA

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(ATTEST)  
Tony Stafford, Executive Director  
Arroyo Santa Rosa Valley Basin GSA

# ARROYO SANTA ROSA VALLEY BASIN

## GROUNDWATER SUSTAINABILITY AGENCY

Camrosa Water District - 7385 Santa Rosa Road - Camarillo, CA 93012

### MEMBERS OF THE BOARD

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EUGENE F. WEST, *Camrosa Water District*

## BOARD MEMORANDUM

**DATE:** May 25, 2023

**TO:** Board of Directors

**FROM:** Tony Stafford, Executive Director

**SUBJECT:** **Update to the GSP Numerical Groundwater Model**

**OBJECTIVE:** Update to the GSP Numerical Groundwater Model.

**ACTION:** Authorize the Executive Director to enter into an agreement and issue a purchase order to Intera Inc., in an amount not to exceed \$96,240.00, to update the numerical model presented in the Groundwater Sustainability Plan (GSP).

**DISCUSSION:** Intera is currently under contract with the ASRGSA to complete a GSP and develop a numerical groundwater model. Track 1 consists of conceptual and numerical modeling along with the GSP documentation and is nearing completion. Track 2 consists of advancing the numerical model to include a watershed model and update the model predictions. The model historical period will include 25 years, 1997-2021, assessing the calibrations, and updating the model Technical Memorandum.

The proposal is attached.

May 5, 2023

Tony Stafford  
Executive Director  
Arroyo Santa Rosa Valley Basin Groundwater  
Sustainability Agency (ASRGSA)  
Camrosa Water District

**RE: Scope and Fee for the Update to the GSP Numerical Groundwater Model**

Dear Mr. Stafford,

INTERA Incorporated (INTERA) is pleased to submit this revised scope of work and cost to ASRGSA for updating the numerical model presented in the Draft Groundwater Sustainability Plan (GSP).

INTERA is currently under contract with ASRGSA to complete a GSP and develop a numerical groundwater model. The scope for the existing contract consists of two “Tracks”, with Track 1 consisting of the conceptual and numerical modeling along with the GSP documentation, and Track 2 following Track 1, consisting of advancing the numerical model to include a watershed model and update the model predictions. Track 1 is currently almost complete, and Track 2 has been revised based on the needs of the ASRGSA, as described in this Scope and Fee document.

The numerical groundwater model represents the Arroyo Santa Rosa Valley Groundwater Basin (ASRVGB or Basin), and in its current state has been completed for the purposes of providing water budget data for the GSP and assess the sustainable management criteria for chronic lowering of groundwater levels, reduction of storage, and depletion of interconnected surface water sustainability indicators. The model is a 3-dimensional, transient, groundwater flow model simulating historical (water years 2012-2021) and projected (water years 2021-2071) groundwater flow conditions for the Basin. The model was calibrated to available groundwater levels and surface water flow observations for the historical period.

This proposal is based on recent discussions between INTERA and the ASRGSA staff, including the Executive Director Tony Stafford, and Board Director Terry Foreman. Communication received via email provided a description of expectations for model updates, which differ from what was originally scoped for Track 2. The updated Track 2 scope consists of extending the modeled historical period by approximately 15 years (from 2011-2021 [10 years] to 1997-2021 [25 years]), assessing the calibration, and updating the model Technical Memorandum. Four tasks have been scoped and are described below:

**Task 1:** Update Historical Model. The model inputs for inflows and outflows for the surface water and groundwater components will be updated and estimated based on available data; however, the model properties are assumed to remain unchanged. The model stress periods will be updated to simulate

from October 1996 to September 2021 (water years 1997 to 2021). The following updates to the MODFLOW model packages will be made to accommodate the transient inputs for the updated historical period:

- The MODFLOW recharge package (RCH) simulates the infiltration of precipitation and return flows from agriculture, urban applications, pipeline distribution losses, and septic systems.
  - The Basin Characterization Model (BCM) will be extended to include the updated historical period and will be reviewed for the inputs of climate data. This subtask assumes the same methodology used for the initial model construction can be applied.
  - An existing watershed model developed by Daniel B. Stephens & Associates, Inc. (DBS&A) in 2017 (Distributed Parameter Watershed Model [DPWM]) will also be reviewed and utilized for any information on land use changes during the extended historical period. INTERA assumes all model files and supporting information associated with the DPWM will be available.
  - The recharge from return flows from urban applications, pipeline distribution losses, and septic systems will be updated based on an extrapolation of available potable and non-potable metered water delivery data provided by Camrosa Water District. FCGMA pumping data (which is available starting in 1983), climate data, and land use information will also be reviewed to inform historical return flows and recharge estimations. In addition, any historical land use changes for the Basin that can be derived from the DPWM will also be considered in the extrapolation. Any documented changes to the distribution system and septic systems (urban development) during the historical period will also be accounted for, and aerial imagery will be reviewed for the 1997-2011 timeframe. The objective for this subtask will be to ensure a smooth transition from pre-2011 to post-2011 methodology.
  - The agricultural return flows will be updated using the extrapolation method described above, metered pumping in the FCGMA area, and unmetered agricultural groundwater wells outside of the FCGMA area (based on estimates for pumping in unmetered areas). Cropped areas based on land use changes during the historical period will also be accounted for based on the available datasets discussed above.
- Mountain-front recharge data for the specified flux boundary condition (using the MODFLOW well [WEL] package) along the northern boundary will be updated based on the extended BCM data and extrapolation of estimated deliveries developed for the recharge estimates within the Basin.
- Streamflow is currently simulated using the MODFLOW streamflow routing package (SFR2), and inputs included gaged streamflow data. Data has been collected from USGS gages 800 (Conejo Creek), 800A (downstream of 800), 838 (peak flows on the Arroyo Santa Rosa), the confluence flume (Arroyo Conejo), effluent from the Hill Canyon Wastewater Treatment Plant (WWTP) and flows from the North Fork and South Fork Arroyo Conejo. Gage 800 has historical flow records covering the 1997-2011 time period and is assumed to be the primary source for



flow estimations of surface water entering the Basin at the Arroyo Conejo, and the Arroyo Santa Rosa and its tributary. Estimations of streamflow (baseflows and stormflows) will be based on methodology consistent with the initial GSP model when data was unavailable. Any streamflow data available within 1997-2011 for gages 800A and 838, including effluent data from the Hill Canyon WWTP, and precipitation data, will also be compiled and reviewed. Data available from Camrosa and Ventura County for any diversions on Conejo Creek (particularly prior to approximately 2002, when Camrosa established agreements with surface water rights holders) will also be reviewed and accounted for in the model. The SFR2 evapotranspiration (ET) rate component for surface water (ETSW) with riparian vegetation will be updated with reference ET data from the California Irrigation Management Information System (CIMIS) station in Camarillo, CA.

- Groundwater pumping modeled using the well package (WEL) will be updated based on available pumping records from FCGMA and extrapolation of estimated deliveries developed for the recharge estimates within the Basin. Active agricultural wells in the Ventura County well GIS data, land use/crop cover based on land use changes derived from the DPWM, California Natural Resources Agency Crop Mapping GIS data, and aerial photo information will also be reviewed to verify the accuracy of pumping estimates.
- The initial heads will be re-established using available groundwater level data and iterative model simulations.

The updated model will be re-run with the extended historical period, and the results will be processed and reviewed following a standardized QA/QC procedure. The annual water budget for the historical period will be updated and calculated for each Management Area (FCGMA and ASRBGSA), in addition to the entire Basin.

**Task 2:** Calibration Assessment. Once the updated historical model results are verified, calibration metrics will be assessed. Simulated versus observed groundwater levels and streamflow data will be updated with the available data for the model and calibration statistics for the mean absolute error (MAE), root mean squared error (RMSE) will be updated. Time-series plots and contour maps for available transient data for the groundwater levels and streamflow data will be generated and evaluated individually to identify any deviations from the calibration achieved in the original model build. A sensitivity/uncertainty analysis of the boundary conditions and model properties will also be included to help focus potential areas of calibration. A summary of the model updates, calibration status, and sensitivity/uncertainty analysis will be documented and presented to the ASRGSA, and suggestions for any necessary calibration moving forward will also be discussed.

**Task 3:** Meetings/Presentations/Project Management. Regular weekly meetings will be held internally (the internal team includes Bryan Bondy as support outside of INTERA, identified as the project technical advisor), along with meetings with the client, scheduled as needed. A higher frequency of meetings with the client is expected during Task 1 as updates to the water budget become available. A milestone meeting to present and discuss the model results and calibration status will be scheduled before the update to the technical memorandum. A final meeting will be held to summarize the work and bring closure to the project.



**Task 4:** Updates to Technical Memorandum (TM). This task assumes the Appendix G presented in the GSP will require updates to the text, figures, and tables to reflect the changes made to the numerical groundwater model and its results, along with any additional information or methods included in the model update (e.g., documenting information derived from the DPWM, and reporting water budget information per Management Area). INTERA will submit a preliminary draft TM for review and comment by Bryan Bondy and ASRGSA supporting staff. Final edits will be incorporated following at least two rounds of revisions, assumed based on multiple reviewers.

A contingency fee of 10% is included for the model update work, which includes potential complications due to data exchange and communication, dataset interpretations and formulations, unforeseen QA/QC procedures, model instability issues, and other factors. The contingency will only be activated upon communication and approval by Camrosa Water District.

The schedule for this task will start after approval of this revised scope and budget and the GSP has been submitted to the DWR SGMA portal. The revised Track 2 duration is estimated to be approximately 14 weeks, ending with the delivery of the updated model Technical Memorandum.

The cost of the complete scope of work is estimated to be \$96,240 (\$105,864 including 10% contingency), as outlined in the cost table below.

Revised Track 2			Hours				Budget				
Section/Task	Section/Task Title		Principal Engineer	Project Manager/ Lead	Hydrologist/ Modeler/ GIS	Engineer/ Scientist	Principal Engineer	Project Manager/ Lead	Hydrologist/ Modeler/ GIS	Engineer/ Scientist	Totals
		Task Total Hours	Hours				\$ 275	\$ 180	\$ 150	\$ 130	
			Hours				Budget				Total
1	Review Data and Update Historical Model -BCM update -DPWM review/integration -FCGMA pumping update -Camrosa Deliveries extrapolation -mountain front recharge update -streamflow updates -pumping updates -results post-processing/QA/QC -water budget updates	284	4	40	180	60	\$ 1,100	\$ 7,200	\$ 27,000	\$ 7,800	\$ 43,100
2	Calibration Assessment -calibration plots and statistics -sensitivity/uncertainty analysis	108	4	16	48	40	\$ 1,100	\$ 2,880	\$ 7,200	\$ 5,200	\$ 16,380
3	Meetings/Presentation/Project Management	92	16	28	24	24	\$ 4,400	\$ 5,040	\$ 3,600	\$ 3,120	\$ 16,160
4	Updates to Technical Memorandum	128	8	40	40	40	\$ 2,200	\$ 7,200	\$ 6,000	\$ 5,200	\$ 20,600
Total		612	32	124	292	164	\$ 8,800	\$ 22,320	\$ 43,800	\$ 21,320	\$ 96,240
										Contingency 10%	\$ 9,624
										TOTAL	\$ 105,864

April 20, 2023

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If you have questions or need additional information, please do not hesitate to contact Abhishek Singh or Steven Humphrey.

Sincerely,



Abhishek Singh, PhD , PE  
Principal Engineer  
INTERA Incorporated



Steven Humphrey, PG  
Project Manager  
INTERA Incorporated

# ARROYO SANTA ROSA VALLEY BASIN

## GROUNDWATER SUSTAINABILITY AGENCY

Camrosa Water District - 7385 Santa Rosa Road - Camarillo, CA 93012

### MEMBERS OF THE BOARD

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## BOARD MEMORANDUM

**DATE:** May 25, 2023

**TO:** Board of Directors

**FROM:** Tony Stafford, Executive Director

**SUBJECT:** **Management of Arroyo Santa Rosa Valley Basin Sustainability Plan Memorandum of Understanding (MOU)**

**OBJECTIVE:** Enter into a MOU with Fox Canyon Groundwater Management Agency (FCGMA).

**ACTION:** Authorize the Executive Director to enter into a MOU regarding the management of the Arroyo Santa Rosa Valley Groundwater Basin (ASRVGB) under the Arroyo Santa Rosa Valley Basin Groundwater Sustainability Plan (GSP) with FCGMA.

**DISCUSSION:** The MOU between FCGMA and Arroyo Santa Rosa Groundwater Sustainability Agency (ASRGSA) establishes the cooperative management framework for sustainable management of the ASRVGB.

Please refer to the attached MOU for more details.

# **Memorandum of Understanding**

## **Regarding the Management of the Arroyo Santa Rosa Valley Groundwater Basin under the Arroyo Santa Rosa Valley Basin Groundwater Sustainability Plan**

This Memorandum of Understanding (MOU) between the Fox Canyon Groundwater Management Agency (FCGMA) and the Arroyo Santa Rosa Valley Basin Groundwater Sustainability Agency (ASRGSA) is intended to establish and generally describe the tenets of cooperative management of the Arroyo Santa Valley Rosa Groundwater Basin (ASRVGB).

The ASRVGB underlies both the FCGMA and the ASRGSA. The Bailey Fault bifurcates the basin, with approximately 20 percent of the basin west of the fault. The FCGMA's eastern boundary in this area is approximately coterminous with the fault. As provided in the Sustainable Groundwater Management Act (SGMA), the FCGMA is the exclusive groundwater sustainability agency (GSA) within its jurisdictional boundaries, including the area of the ASRVGB west of the Bailey Fault.

The ASRGSA, a joint powers authority comprising representation from the Camrosa Water District and the County of Ventura, is the GSA for the area of the ASRVGB east of the Bailey Fault.

The ASRGSA is the lead agency for the development of the groundwater sustainability plan (GSP) for the basin. One GSP is being written for the entirety of the basin. The GSP identifies two management areas within ASRVGB. One management area is coincident with the portion of the ASRVGB located within the FCGMA jurisdictional boundary (FCGMA Management Area). The other management area is the remainder of the ASRVGB (ASRGSA Management Area). As there are not separate GSPs for the management areas, there is no requirement for an official "coordination agreement" as defined by SGMA. Nevertheless, the two parties wish to memorialize in this memorandum their current understanding regarding coordinated management of the areas under their respective jurisdiction. As such, the ASRGSA and the FCGMA understand the following:

- The FCGMA will retain jurisdiction over groundwater management, including regulation of groundwater extraction, in the FCGMA Management Area, including receiving groundwater extraction reports and assessing associated extraction fees.
- The ASRGSA will retain jurisdiction over groundwater management, including regulation of groundwater extraction, in the ASRGSA Management Area. As of the date of this MOU, there is no reporting requirement and no extraction fee.
- Should the ASRGSA require groundwater extraction reporting from pumpers in the ASRGSA Management Area, the ASRGSA and FCGMA will work together to coordinate reporting and data management.
- Should the ASRGSA impose extraction fees, the ASRGSA and FCGMA will coordinate on what, if any, portion of the current extraction fees levied on ASRVGB pumpers within the FCGMA Management Area, or new fees to be levied on ASRVGB pumpers within the FCGMA Management Area, should support administration of the ASRGSA.
- Water supply or other resource management projects may span the jurisdictional boundaries between the FCGMA, ASRGSA, Camrosa, and other overlapping agencies; funding considerations for such projects will, if necessary, be deliberated by each affected agency, separately or jointly as appropriate, on a case-by-case basis.
- The ASRGSA will be responsible for the administration costs and for the cost of monitoring programs within the ASRGSA Management Area and FCGMA will be responsible for the administration costs and the cost of monitoring programs within the FCGMA Management Area.
- Data pertinent to the GSPs and adaptive groundwater management will be shared.
- The forgoing is subject to change upon mutual agreement and coordinated update to this MOU.

The following signatures indicate that the two agencies intend to act in good faith in coordinated management of the ASRVGB in accordance with the understanding outlined in this MOU.

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Tony Stafford, Executive Director  
Arroyo Santa Rosa GSA

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Date

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Jeff Pratt, Executive Officer  
Fox Canyon GMA

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Date