



BOARD OF SUPERVISORS
AGENDA LETTER

Agenda Number:

Clerk of the Board of Supervisors
105 E. Anapamu Street, Suite 407
Santa Barbara, CA 93101
(805) 568-2240

Department Name: Water Agency
Department No.: 054
For Agenda Of: July 9, 2019
Placement: Administrative
Estimated Tme: N/A
Continued Item: No
If Yes, date from:
Vote Required: Majority

TO: Board of Directors, Water Agency

FROM: Department Scott D. McGolpin, Public Works Director, 805-568-3010
Director(s)
Contact Info: Thomas D. Fayram, Deputy Public Works Director, 805-568-3436

SUBJECT: San Antonio Groundwater Basin Study, Third, Fourth and Fifth Supervisorial Districts

County Counsel Concurrence

As to form: Yes

Auditor-Controller Concurrence

As to form: Yes

Other Concurrence: Risk Management

As to form: Yes

Recommended Actions:

- a) Approve and authorize the Chair to execute Amendment No. 5 to the Joint Funding Agreement #15WSCA600081610.A5 with the United States Geological Survey increasing the amount to fund the project with the amount of \$15,239 to a not to exceed amount of \$2,000,437 (in which \$1,647,810 will be funded by the County Water Agency and \$352,627 will be funded by the United States Geological Survey) to continue a comprehensive study of the San Antonio Groundwater Basin in order to assess current and future water availability; and
- b) Determine that the amendment to the agreement for San Antonio Groundwater Study is exempt under California Environmental Quality Act guidelines, Section 15262; Feasibility and Planning Studies and Section 15306 (Class 6) Basic data collection, research, experimental management, and resource evaluation activities, as previously approved by the Board on November 4, 2014 <https://santabarbara.legistar.com/LegislationDetail.aspx?ID=1940549&GUID=F61F7286-71F1-431B-8A55-561FDD88ADAA>.

Summary Text:

This item is on the agenda for approval of Amendment No. 5 to the Joint Funding Agreement with the United States Geological Survey (USGS) to continue the San Antonio Groundwater Basin Study.

The San Antonio Groundwater Basin serves as the sole source of water to meet the agricultural and municipal needs of the greater Los Alamos Valley. The basin also augments Vandenberg Air Force Base's (VAFB) water supply, which includes State Water. The Water Agency is working in cooperation with the San Antonio Creek Valley Consultation Committee, and has elected to conduct this study with the USGS. The USGS have the most expertise and highest level of credibility in water resources science investigations. VAFB is also partnering in this study.

Study Update

The study consists of five main tasks, which include: (1) data compilation, (2) new data acquisition, including an assessment of water quality and groundwater/surface water interactions, (3) model development, (4) analysis of water availability, and (5) report preparation. Work has commenced on all tasks and work to date 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) was reinstalled and was monitored into December 2018 (Task 2).
- 4) A new stream gage on Harris Creek was installed and was monitored into December, 2018 (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 16 monitoring wells.
- 8) Twenty-six stream-bed electrical resistance sensors and three temperature sensor rods were deployed and were monitored into March 2019 (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 (Task 2).
- 11) Groundwater geochemistry samples from 27 wells have been collected and analyzed (Task 2).
- 12) Construction of the preliminary 3-dimensional geohydrologic framework for the groundwater model has been completed (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 at 12 locations (Task 2).
- 15) Aquifer/slug tests have been collected on all monitoring wells (16 wells) installed as part of this study (Task 2).
- 16) Differential GPS measurements were taken to establish vertical geodetic control at all accessible wells in the monitoring network (Task 2).
- 17) Preliminary watershed recharge model has been completed (Task 3).
- 18) Preliminary groundwater flow model and integrated hydrologic model development and calibration is underway (Task 3).
- 19) Report preparation is underway for infiltrometer analysis, 3D geohydrologic framework model, and hydrologic system evaluation (Task 5)

This project is being conducted over a six-year period in order to allow adequate time to collect and analyze the necessary data. Amendment 5 to the Joint Funding Agreement provides for the continuation of Tasks 3 and 5 (Tasks 1, 2, and 4 are complete), and is the final year of this project. It is expected that Tasks 3 and 5 will be completed by July 1, 2020. The USGS has agreed to cost share for some elements of the project. Total cost to the Water Agency over the six-year study period will be \$1,647,810.

The culmination of this project will be a detailed report and fact sheet on current and future water availability in the San Antonio Groundwater Basin under current and future cultural and climatic scenarios. This project will provide a valuable tool for the San Antonio Basin Groundwater Sustainability Agency and the development of a Groundwater Sustainability Plan for this basin due to the Department of Water Resources by 2022 as required by the Sustainable Groundwater Management Act.

Background:

The San Antonio Creek Valley is located in western Santa Barbara County about 15 miles south of Santa Maria and 55 miles north of Santa Barbara. Land in the San Antonio Creek Valley is used primarily for agriculture. Historically, the upland parts of the Valley have been used for dry farming or pastureland and the flatlands along the streams for irrigated farming.

Significant changes in land use have occurred since the San Antonio Groundwater Basin was last comprehensively studied in the early 1980s. Since then, large sections of formerly non-irrigated pastureland in the upland parts of the Valley have been converted to irrigated vineyards. Data has thus far been limited in the uplands but in some areas, there have been water level declines of over 50 feet since the early 1980s. The western quarter of the Valley is owned by VAFB and they have agreed to participate in the project with a discrete level of funding and interaction.

Fiscal and Facilities Impacts:

Budgeted: Yes

Fiscal Analysis:

<u>Funding Sources</u>	<u>Current Cost:</u>	<u>Annualized On-going Cost:</u>	<u>Total 6-year Project Cost</u>
Federal USGS	\$ 352,627.00		\$ 352,627.00
Water Agency	\$ 1,647,810.00		\$ 1,647,810.00
VAFB	\$ 533,174.00		\$ 533,174.00
Total	\$ 2,533,611.00	\$ -	\$ 2,533,611.00

Narrative:

Costs for this study were included in the Adopted 2019-2020 budget in the Water Resources Division of the Public Works Department on page D-305 in the budget book. No General Fund monies will be utilized for this study.

The USGS is providing a cost share for specific project costs. Including Amendment No. 5, the USGS has funded a total of \$352,627 and the Water Agency has funded a total of \$1,647,810. VAFB is also partnering in this study but under a separate contract with the USGS.

Key Contract Risks

The key contract risks for this agreement are low.

Special Instructions:

Direct the Clerk of the Board to return a signed original of the agreement and a copy of minute order of these actions to the Water Agency office, Attn: Christina Lopez.

Attachments:

- Attachment A: Amendment No. 5 to the Joint Funding Agreement #15WSCA600081610.A5 with contract summary (2 originals)
- Attachment B: Joint Funding Agreement (original agreement)

Authored by:

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