



COUNTY OF SONOMA

575 ADMINISTRATION
DRIVE, ROOM 102A
SANTA ROSA, CA 95403

SUMMARY REPORT

Agenda Date: 5/21/2019

To: Board of Directors, Sonoma County Water Agency
Department or Agency Name(s): Sonoma County Water Agency
Staff Name and Phone Number: Marcus Trotta 547-1978
Vote Requirement: Majority
Supervisory District(s): First

Title:

Aquifer Storage and Recovery Pilot Study Demonstration Testing (First District)

Recommended Actions:

In an ongoing effort to enhance the region's ability to sustain groundwater resources in Sonoma County:

Authorize Sonoma County Water Agency's General Manager to execute the Second Amended Agreement for Aquifer Storage and Recovery Pilot Study Demonstration Testing with GEI Consultants, Inc. for a Sonoma Valley aquifer storage and recovery groundwater banking pilot study. The amended agreement increases the amount by \$75,000, expands the scope of work to include preparing a hydraulic and geochemical evaluation report and performing as-needed assessment in support of further aquifer storage and recovery programs in Sonoma County, and extends the agreement term by one year, for a new not-to-exceed agreement total of \$290,000 and end date of December 31, 2020.

Executive Summary:

This item requests authorization for the Sonoma County Water Agency (Sonoma Water) to amend an agreement for consultant services to perform aquifer storage and recovery pilot study demonstration testing and support additional evaluation needed for the pilot study. The pilot study testing was recommended in a 2013 Regional Groundwater Banking Feasibility Study and was implemented between March and September of 2018 under the original agreement in order to assess the viability of groundwater banking using wintertime drinking water from Sonoma Water's Russian River facilities as a method for improving local water supply resiliency and addressing requirements under the Sustainable Groundwater Management Act. Sonoma Water conducted a competitive procurement process and selected GEI Consultants, Inc. (Consultant) to provide the services associated with performing the pilot study testing.

Discussion:

HISTORY OF ITEM/BACKGROUND

A Feasibility Study for a Groundwater Banking Program (Feasibility Study) was prepared by Consultant in 2013 for the Sonoma Water in partnership with the City of Sonoma, Valley of the Moon Water District, City of

Cotati, City of Rohnert Park, and Town of Windsor. The Feasibility Study identified opportunities to improve long-term water supply reliability in the region by utilizing wintertime Russian River supplies and existing conveyance infrastructure to meet summertime and dry year water needs as well as potentially reducing summer reservoir releases to provide benefits to fish habitat. The Feasibility Study concluded that aquifer storage and recovery wells would be the most feasible method for performing groundwater banking in Sonoma Valley and the Santa Rosa Plain and recommended conducting incremental pilot studies using existing wells to further assess aquifer storage and recovery in the region. Through grant funding obtained through the California Department of Water Resources Proposition 84 Local Groundwater Assistance Program, a test well was constructed near an existing City of Sonoma municipal well in 2016 to support performance of a pilot study program.

The need for groundwater banking in Sonoma Valley was apparent from declining groundwater levels, including in the vicinity of the City of Sonoma where groundwater level declines have ranged from 20 to 30 feet over the past 15 years. Addressing the declining groundwater levels through groundwater banking was one of the strategies that local stakeholders recommended pursuing through the voluntary Sonoma Valley Groundwater Management Program and was mandated by the State of California, under the Sustainable Groundwater Management Act. The City of Sonoma expressed interest in assessing the feasibility of aquifer storage and recovery for its water supply to increase resiliency and reduce overall demand on local groundwater supplies.

Sonoma Water entered into an agreement with Consultant for assistance with developing construction specifications for wellhead modifications and piping, additional well development of the test well, and aquifer storage and recovery pilot study demonstration testing, on September 12, 2017, in the amount of \$215,000. In coordination with Sonoma Water and the City of Sonoma, Consultant provided these services in implementing the pilot study demonstration testing between March and September 2018, following issuance of a permit from the San Francisco Bay Regional Water Quality Control Board. The pilot study included several iterative phases of successfully recharging a total of approximately 12 acre-feet of drinking water into the test well, short-term storage of the drinking water within the aquifer, and recovery of the water from the test well. Evaluation and reporting of the pilot study results are currently being performed under the original agreement.

Sonoma Water entered into a first amended agreement with Consultant on January 30, 2019, to extend the term of the agreement to December 31, 2019, at no additional cost due to delays in the permit approval process, as well as additional time needed for the pilot study.

SELECTION PROCESS

Consultant was selected from a list of qualified consultants developed from a competitive selection process in June 2015. Consultant was selected for the subject work based on its experience in successfully completing similar projects and project-specific experience in evaluating the feasibility of conducting aquifer storage and recovery projects in Sonoma Valley and designing and managing the construction of the test well, which are necessary for the pilot project.

SERVICES TO BE PERFORMED

Under the proposed amended agreement, Consultant will perform additional evaluation of the pilot study data, including preparing a Hydraulic and Geochemical Evaluation Report, and perform as-needed services to support furthering assessment of aquifer storage and recovery programs in Sonoma County. During the course of the pilot study, additional data was collected and the final storage cycle of the pilot study was extended to allow for a more complete evaluation of water quality conditions. The additional data evaluation under the proposed amended agreement, including the Hydraulic and Geochemical Evaluation Report, will provide detailed evaluation of the geochemical interactions of the recharge water and the native groundwater and the hydraulic conditions of the pilot test, which are needed in order to more accurately scope out and design future pilot studies within Sonoma Valley and other areas of Sonoma County.

In order to fully utilize information developed through the pilot study in advancing the potential for aquifer storage and recovery programs in the region, additional as-needed support services are included in the proposed amended agreement including:

- Planning for and participating in meetings with San Francisco Bay Regional Water Quality Control Board on the pilot study report to discuss findings of aquifer storage and recovery pilot test;
- Responding to any comments from the San Francisco Bay Regional Water Quality Control Board on the pilot study report, including any further numerical analysis of data from pilot test;
- Assistance with scoping implementation for a potential long-term aquifer storage and recovery program in Sonoma Valley;
- Presentation of pilot test findings to interested parties and stakeholders, which could include but not be limited to other water purveyors, Groundwater Sustainability Agencies, and the North Coast Regional Water Quality Control Board;
- Assistance with scoping implementation for potential aquifer storage and recovery pilot studies in other areas of Sonoma County, including the Santa Rosa Plain and Petaluma Valley; and
- Assistance with potential future grant applications that support funding aquifer storage and recovery programs.

The additional cost is \$75,000, for a new not-to-exceed agreement total of \$290,000. The new end date is December 31, 2020.

Prior Board Actions:

09/12/2017: Approved agreement between Sonoma Water and GEI Consultants, Inc. for Aquifer Storage and Recovery Pilot Study Demonstration Testing. Cost \$215,000; term end December 31, 2018.

FISCAL SUMMARY

Expenditures	FY 18-19 Adopted	FY19-20 Projected	FY 20-21 Projected
Budgeted Expenses	\$75,000		
Additional Appropriation Requested			
Total Expenditures	\$75,000		

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Funding Sources			
General Fund/WA GF			
State/Federal			
Fees/Other	\$75,000		
Use of Fund Balance			
Contingencies			
Total Sources	\$75,000		

Narrative Explanation of Fiscal Impacts:

Budgeted amount of \$75,000 is available from FY 2018/2019 appropriations for the Water Transmission Fund. No additional appropriation is required.

Staffing Impacts:			
Position Title (Payroll)	Monthly Salary Range (A - I Step)	Additions (number)	Deletions (number)

Narrative Explanation of Staffing Impacts (If Required):

N/A

Attachments:

Attachment 1: Amended Agreement with GEI Consultants, Inc.

Related Items "On File" with the Clerk of the Board:

None.