



COUNTY OF SONOMA

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

SUMMARY REPORT

Agenda Date: 6/2/2026

To: Board of Directors, Sonoma County Water Agency

Department or Agency Name(s): Sonoma County Water Agency

Staff Name and Phone Number: Grant Davis 707-547-1900, John Mendoza 707-547-1929

Vote Requirement: Majority

Supervisorial District(s): Countywide

Title:

Russian River ResSim Water Quality Model Update

Recommended Action:

Authorize Sonoma County Water Agency's General Manager to execute an agreement with GEI Consultants, Inc., in substantially the form presented to this Board, for water quality modeling and outreach services through June 30, 2029, in the not-to-exceed amount of \$200,000.

Executive Summary:

Sonoma County Water Agency (Sonoma Water) seeks assistance in updating an existing water quality model developed in 2021 that simulates water quality conditions in Lake Mendocino, Lake Sonoma, Dry Creek, and the Russian River to support analyses related to proposed projects, including projects that would require water quality analysis under the California Environmental Quality Act (CEQA), the Federal and California Endangered Species Acts (FESA and CESA, respectively) and California Water Rights. Model results would be utilized in water quality analyses necessary to fulfill requirements under CEQA. Sonoma Water also seeks assistance in presenting the Water Quality Model details to Sonoma Water and resource agencies that would rely on the model results.

Discussion:

HISTORY OF ITEM/BACKGROUND

In 2021, Resource Management Associates, Inc., developed and calibrated a Hydrologic Engineering Center (HEC) Reservoir System Simulation (HEC-ResSim) Water Quality Model for Sonoma Water to simulate conditions within the Russian River system, including Lake Mendocino, Lake Sonoma, and downstream river reaches to the ocean. The Water Quality Model (Model) was utilized in the Russian River Watershed Resiliency Pilot Study to analyze the impacts of climate change on water quality in the Russian River.

The Model was calibrated for the period of 2000 through 2023, capturing extreme droughts and wet year conditions. While the Model calibration was able to capture water quality trends with previously available data and model capabilities, there has been additional water quality data collected and model enhancements that will substantially improve the Model's representation of Russian River water quality.

The updated model will be used to support analysis of proposed projects, including projects that would require water quality analysis under CEQA, FESA, CESA, and California water rights petitions.

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Resource Management Associates, Inc., has since been acquired by GEI Consultants, Inc. (Consultant).

SELECTION PROCESS

Consultant was selected from a list of qualified consultants developed from a competitive selection process. Attached is a memo that explains the competitive selection process.

Consultant was selected for the subject work because the Consultant developed the HEC-ResSim water quality model in coordination with USACE, making it the most experienced firm to update the model calibration.

SERVICES TO BE PERFORMED

Under the proposed agreement, Consultant will enhance the core HEC-ResSim water quality model software, update the calibration of the Model, perform an alternatives analysis, and present model details to Sonoma Water and resource agency staff.

The cost of services will not exceed \$200,000; the term end date is June 30, 2029.

Through the proposed agreement, the General Manager will be delegated the authority to approve a written amendment to extend the term of the agreement for up to two additional years by providing written notice to the other party thirty days in advance of the term end date and by executing an agreement amendment.

County of Sonoma Strategic Plan Alignment:

N/A

Sonoma Water Strategic Plan Alignment

Goal: Environmental Stewardship

Strategy: Ensure current and future water supply reliability by complying with the Federal and State Endangered Species Acts.

Action: Ensure current and future water supply reliability by complying with the Federal and State Endangered Species Acts.

The Russian River HEC-ResSim water quality model updates and analyses will support Sonoma Water in analyzing potential water quality impacts of changes in water supply operations that is required under the Federal and State Endangered Species Acts.

Racial Equity:

Was this item identified as an opportunity to apply the Racial Equity Toolkit?

No

Prior Board Actions:

12/12/2023 Board approved agreement between Sonoma Water and Resource Management Associates, Inc. to update the ResSim water quality model through December 30, 2026, in the not-to-exceed amount of \$165,658.

08/13/2019 Board approved First Amended Agreement between Sonoma Water and Resource Management Associates, Inc. related to Fish Habitat Flows and Water Rights Project with Resource Management Associates, Inc. to provide water quality modeling. Cost increased by \$80,000 and extended the agreement term by two years for a new not-to-exceed agreement total of \$130,000 and end date of December 31, 2021.

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05/19/2015 Board approved agreement between Sonoma Water and Resource Management Associates, Inc. to provide water quality model updates in the not-to-exceed amount of \$50,000 and end date of June 30, 2017.

FISCAL SUMMARY

Expenditures	FY25-26 Adopted	FY26-27 Projected	FY27-28 Projected
Budgeted Expenses	\$200,000		
Additional Appropriation Requested			
Total Expenditures	\$200,000		
Funding Sources			
General Fund/WA GF			
State/Federal			
Fees/Other	\$200,000		
Use of Fund Balance			
General Fund Contingencies			
Total Sources	\$200,000		

Narrative Explanation of Fiscal Impacts:

Budgeted amount of \$200,000 is available from FY 2025/2026 appropriations for the Watershed Planning and Restoration (\$132,000) and the Warm Springs Dam (\$68,000) funds. No additional appropriation is required.

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

Narrative Explanation of Staffing Impacts (If Required):

N/A

Attachments:

- Attachment 1: Draft Agreement with GEI Consultants, Inc.
- Attachment 2: Competitive Selection Process Memo

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

None.