



SUMMARY REPORT

Agenda Date: 12/7/2021

To: Boards of Directors, Sonoma County Water Agency, Occidental County Sanitation District, Russian River County Sanitation District, Sonoma Valley County Sanitation District, and South Park County Sanitation District
Department or Agency Name(s): Sonoma County Water Agency, Occidental County Sanitation District, Russian River County Sanitation District, Sonoma Valley County Sanitation District, and South Park County Sanitation District

Staff Name and Phone Number: Jens Salzgeber (707) 524-1173

Vote Requirement: 4/5th

Supervisory District(s): Countywide

Title:

Supervisory Control and Data Acquisition System Support and Related Services

Recommended Action:

- A) Authorize Sonoma County Water Agency's General Manager to execute an agreement with Carollo Engineers, Inc., for supervisory control and data acquisition system support and related services from November 1, 2021, through July 30, 2024, in the not-to-exceed amount of \$2,500,000 in a form approved by County Counsel.
- B) Adopt a Resolution Authorizing Adjustments to the Board Adopted Budget for Fiscal Year 2021-2022 to transfer funds from the Sonoma Water General Fund to the Sonoma Water Facilities Fund in the amount of \$1,178,382 for As-Needed Supervisory Control and Data Acquisition System Support and Related Services.

(4/5th Vote Required)

Executive Summary:

Sonoma County Water Agency, Occidental County Sanitation District, Russian River County Sanitation District, Sonoma Valley County Sanitation District, and South Park County Sanitation District (collectively "Sonoma Water") use various equipment and protocols in supervisory control and data acquisition system operations at Sonoma Water facilities. Sonoma Water requires support for the maintenance, repair, design, programming, installation, and other related services of the supervisory control and data acquisition (SCADA) system, programmable logic controllers, human machine interface, and controllers at its facilities. The proposed agreement will provide for certain engineering services required to support one component of the migration to a new SCADA system.

Discussion:

HISTORY OF ITEM/BACKGROUND

Sonoma Water requires engineering support and services for the maintenance, repair, design, programming, installation, and other services related to the supervisory control and data acquisition (SCADA) system, programmable logic controllers, human machine interface, variable frequency drivers, and controllers at its facilities. The SCADA system provides critical day-to-day operational functionality and regulatory compliance reporting for each water and wastewater system Sonoma Water owns and/or manages. Sonoma Water's current Lookout SCADA software platform's end-of-life is December 31, 2021. After that date, Sonoma Water

would be unable to restore Lookout systems to service if they fail. This platform is prone to failure. Therefore, there is a pressing need to migrate off the existing Lookout software platform. Sonoma Water staff will complete the software component of the migration, but engineering services are required to successfully integrate the software platform and the Water and Wastewater industrial control systems. Primarily the engineering services will include: creation of diagrammatic and narrative specifications for existing control systems; consultancy for Programmable Logic Controller (PLC) hardware architecture; PLC software development; and major revision of existing software object code.

Sonoma Water owns and operates the Airport/Larkfield/Wikiup Sanitation Zone, Geyserville Sanitation Zone, Penngrove Sanitation Zone, and Sea Ranch Sanitation Zone.

Sonoma Water operates and manages Occidental County Sanitation District, Russian River County Sanitation District, Sonoma Valley County Sanitation District, and South Park County Sanitation District under contract with these entities.

SELECTION PROCESS

On February 8, 2021, Sonoma Water issued a Request for Statements of Qualifications to the following 15 firms:

1. Adobe Associates, Inc., Santa Rosa, CA
2. Kennedy/Jenks Consultants, Santa Rosa, CA
3. Brelje & Race Consulting Engineers, Santa Rosa, CA
4. Larry Walker Associates, Santa Rosa, CA
5. Brown and Caldwell, Walnut Creek, CA
6. Lescure Engineers Inc., Santa Rosa, CA
7. Carollo Engineers, Inc., Walnut Creek, CA
8. Schaaf & Wheeler Consulting Civil Engineers, Santa Clara, CA
9. CDM Smith, Concord, CA
10. Stone Creek Environmental Consulting, LLC, Santa Rosa, CA
11. Coastland Civil Engineering, Santa Rosa, CA
12. West Yost and Associates, Davis, CA
13. EBA Engineering, Santa Rosa, CA
14. Woodard & Curran, Walnut Creek, CA
15. GHD, Inc., Santa Rosa, CA

The Request for Statements of Qualifications was also posted on the Sonoma County Water Agency and County of Sonoma Purchasing Department websites.

The 14 firms listed below submitted Statements of Qualifications:

1. Brelje & Race Consulting Engineers
2. Larry Walker Associates
3. Carollo Engineers, Inc.
4. Lescure Engineers, Inc.
5. Environmental Pollution Solutions, LLC, Rohnert Park, CA
6. Sitka Technology Group, Lake Oswego, OR
7. EOA, Inc., Oakland, CA

8. Stone Creek Environmental Consulting, LLC
9. Erofins Eaton Analytical, LLC, Monrovia, CA
10. Trussell Technologies, Inc., Oakland, CA
11. HDR Engineering, Inc., Folsom, CA
12. West Yost Associates
13. HydroScience Engineers, Berkeley, CA
14. Woodard & Curran

The following criteria were used to evaluate each firm:

- 1) Thoroughness of Statement of Qualifications
- 2) Professional qualifications and demonstrated ability to perform the work
- 3) Exceptions to standard terms in the sample agreement
- 4) Local Service Provider Preference

Carollo Engineers, Inc. (Consultant) was selected for this work because Consultant is currently performing similar work for Sonoma Water for an asset management program, and the services to be performed under the proposed agreement naturally follow this work. In addition, Consultant is familiar with Sonoma Water's supervisory control and data acquisition system, and the design work Consultant has performed to date for Sonoma Water has been exemplary.

SERVICES TO BE PERFORMED

Under the proposed agreement, Consultant would provide the following services:

1. Develop Process Control Narratives (PCN) and Process and Instrumentation Diagrams (P&ID) for all major sites. (Estimate \$1,322,300)
 2. Wohler Production Facility (Estimate \$894,606) and Russian River County Sanitation District (Estimate \$283,094):
 - a. Develop PLC software code to replace existing fleet.
 - b. Developing Human Machine Interface (HMI) software objects and visual standards. Provide consultancy and support for system documentation, PLC hardware architecture, programming standards, visual standards, and related tasks.
 3. Additional SCADA engineering support as needed
- Russian River County Sanitation District facilities are proposed to go first in the transition as a pilot, with Wohler following next as the highest priority SCADA system that Sonoma Water operates.

The cost of services under this agreement will not exceed \$2,500,000. This agreement covers services rendered from November 1, 2021, to July 30, 2024.

The agreement includes two options for Sonoma Water to extend this agreement for a period of one year each by providing written notice to Consultant thirty days in advance of the expiration date of the agreement and of the first extension option.

Sonoma Water is evaluating internal resources and scoping additional proposed contracts that will be required in order to migrate to a new SCADA system. Additional proposed contracts will be needed to address the other facilities, including critical communication infrastructure (radio/satellite), remote measurement,

hardware replacement, programming, and cybersecurity.

Strategic Plan:

This item directly supports the County's Five-year Strategic Plan and is aligned with the following pillar, goal, and objective.

Pillar: Resilient Infrastructure

Goal: Goal 4: Implement countywide technological solutions to promote resiliency and expand community access.

Objective: Objective 1: Strengthen critical communications infrastructure, interoperability, and information technology tools relied upon during disasters.

The current SCADA software platform was implemented between 1999 and 2001. All vendor support ended before 2010. The current unsupported platform is subject to frequent crashes and is well behind an appropriate software replacement cycle. This long-needed improvement represents the first phase of improvements to a critical Sonoma Water system. The improvements will result in reliability of the SCADA software itself, implement supported software, and enable much-needed development of water and wastewater plant processes.

Sonoma County Water Agency Strategic Plan Alignment:

Information Technology, Goal 1: Increase security, usability and efficiency of Information Technology (IT) Systems. Upgrades to Sonoma Water infrastructure proposed in this item will support IT system efficiency and usability.

Prior Board Actions:

11/13/2018 Approved agreement between Sonoma Water and CH2M HILL Engineers, Inc., for as-needed support for supervisory control and data acquisition systems and related services. Cost \$1,000,000; term end July 30, 2021.

04/15/2014 Approved agreement between Sonoma Water and CH2M HILL Engineers, Inc., for as-needed support for supervisory control and data acquisition systems and related services. Cost \$450,000; term end June 30, 2016.

06/15/2010 Approved agreement between Sonoma County Water Agency, the Russian River County Sanitation District, and the Sonoma Valley River County Sanitation District and ZSI, Inc., for computer maintenance services at wastewater treatment plants and water systems. Cost \$461,495; term end June 30, 2013.

FISCAL SUMMARY

Expenditures	FY 21-22 Adopted	FY22-23 Projected	FY 23-24 Projected
Budgeted Expenses	\$2,500,000		
Additional Appropriation Requested			
Total Expenditures	\$2,500,000		
Funding Sources			

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General Fund/WA GF	\$1,178,382		
State/Federal			
Fees/Other	\$1,321,618		
Use of Fund Balance			
Contingencies			
Total Sources	\$2,500,000		

Narrative Explanation of Fiscal Impacts:

Budgeted amount of \$1,321,618 is available from FY 2021/2022 appropriations for the Russian River County Sanitation District Operations Fund (\$318,500), the Sonoma Valley County Sanitation District Operations Fund (\$350,000), the Water Transmission Fund (\$300,000), and the Facilities Fund (\$353,118).

Budgeted amount of \$1,178,382 is available from FY 2021/2022 SCADA appropriations for the General Fund. SCADA-related work henceforth will be budgeted in the Facilities Fund.

With Board approval of the attached budgetary resolution, existing SCADA appropriations in Sonoma Water's General Fund will be transferred to the Facilities Fund to encumber funds for this agreement. Additional appropriations are not requested.

Narrative Explanation of Staffing Impacts (If Required):

N/A

Attachments:

Resolution

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

None