



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7

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ORIGINATING SECTION: Water Supply Engineering

CONTACT: Steven Ellis/Rhett Alzona

AGENDA DATE: October 21, 2020

SUBJECT: Design Services Contract for the MGDP Concentrate Conditioning Project

SUMMARY:

- In order to deliver safe and reliable supply of water, Zone 7 Water Agency (Zone 7) is using the Mocho Groundwater Demineralization Plant (MGDP) to produce higher quality water. The project is in support of Strategic Plan Initiatives: #3 - Continue to effectively implement infrastructure projects in the water system Capital Improvement Program; #5 - Meet or surpass all drinking water health and safety requirements; and #7 - Manage the GSA and implement the groundwater management plan.
- MGDP has been operational since 2009. Over the years, scaling/material builds up on the interior of the pipeline that conveys concentrate water from the MGDP process to Dublin San Ramon Services District's wastewater plant effluent pipeline.
- The material build-up inside the concentrate pipeline reduces the MGDP production capacity by limiting the ability to discharge the concentrate at the proper flow rate needed for producing better water quality. This may also reduce the ability to meet future anticipated PFAS regulatory standards.
- Zone 7 undertook and completed an approximate \$2.3 million acid batch cleaning project in July 2020 to restore the capacity of the concentrate pipeline.
- In order to minimize future scale/material build up, installation of infrastructure for conditioning the concentrate before discharging into concentrate pipeline is necessary. The project will include construction of an acid storage and feed system for concentrate pH adjustment. Without this project, the concentrate pipeline will need another cleaning in future, similar to the cleaning performed in July 2020.
- The overall project cost is estimated to be approximately \$2,150,000. Attached Table 1 provides project cost details. The project design is anticipated to initiate in November 2020 and final project completion is anticipated by the end of 2022.
- In accordance with the Agency Purchasing Policy which allows procurement of professional services based on qualifications and experience (without a bidding process based on pricing), the selection of the consulting firm was done through a competitive professional services procurement process. In response to Request for Qualifications, proposals were requested from firms with experience in water supply related engineering in September 2019; the 20 firms are on the list of eligible consultants approved by the Board. With their familiarity with the MGDP and overall experience, Carollo Engineers is best suited to perform the design and construction support services for the MGDP Concentrate Conditioning Project.

- Staff recommends entering into a contract with Carollo Engineers for engineering/design services for the MGD Concentrate Conditioning Project in an amount not-to-exceed \$363,000 (which includes \$330,000 for initial contract and \$33,000 (10%) as contingency).

FUNDING:

Funding for the project is available from Fund 120 – Renewal/Replacement and System Wide Improvements. A project budget of \$2,215,000 was established for the MGD Concentrate Conditioning Project (formerly known as the MGD Acid Injection Project) in the Capital Improvement Program with project completion in FY 2021-2022. For planning and design, \$445,000 of the \$2,215,000 project budget was established in FY 2020-21 budget.

RECOMMENDED ACTION:

Adopt the attached Resolution

ATTACHMENTS:

1. Board Resolution
2. Table 1 - Project Cost Estimate

ZONE 7
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
BOARD OF DIRECTORS

RESOLUTION NO.

INTRODUCED BY
SECONDED BY

Design Services Contract for the MGD Concentrate Conditioning Project

WHEREAS, Zone 7 of the Alameda County Flood Control and Water Conservation District has a facility known as the Mocho Groundwater Demineralization Plant (MGDP) which helps remove minerals from groundwater using reverse osmosis (RO) membranes to improve water quality to its customers and to implement the Groundwater Management Plan by removing minerals/salts from the groundwater basin; and

WHEREAS, Zone 7 has a project in the Capital Improvement Program to design and construct an MGD Concentrate Conditioning Project to adjust the pH of the RO concentrate in order to reduce scale build-up within the concentrate pipeline that conveys the concentrate from the MGD process to Dublin San Ramon Services District's wastewater plant effluent pipeline; and

WHEREAS, there is a need to procure engineering services to design the MGD Concentrate Conditioning Project; and

WHEREAS, through a professional services selection process, Carollo Engineers was determined to be best suited to provide these engineering services due to their familiarity with MGD and engineering experience with RO plants.

THEREFORE, BE IT RESOLVED that the Board of Director of Zone 7 of the Alameda County Flood Control and Water Conservation District does hereby authorize the General Manager to negotiate, execute, and amend as needed, a contract with Carollo Engineers, Inc. for design services for the MGD Concentrate Conditioning Project, in an amount not-to-exceed \$363,000 (which includes \$330,000 for initial contract and \$33,000 (10%) as contingency).

ADOPTED BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSENT:

ABSTAIN:

I certify that the foregoing is a correct copy of a Resolution adopted by the Board of Directors of Zone 7 of the Alameda County Flood Control and Water Conservation District on October 21, 2020.

By: _____
President, Board of Directors

**Table 1: Mocho Groundwater Demineralization Plant
Concentrate Conditioning Project Cost Estimate**

Component	Total Amount	Description/Comments
Planning/Design Phase		
Zone 7 Staff	\$ 50,000	Project management and support from other departments such as Operations and Maintenance
Design Services	\$ 363,000	Carollo Contract + 10% contingency
Environmental	\$ 50,000	Environmental impact review per CEQA, permitting, & mitigation planning
Constructability review	\$ 10,000	
Permits and Other Fees	\$ 5,000	
Subtotal	\$ 478,000	
Construction Phase		
Zone 7 Staff	\$ 50,000	Project management and support from other departments such as Operations and Maintenance
Construction Management Services (CM Services)	\$ 100,000	CM services such as inspections, schedule reviews, document control to be provided by a consulting firm from qualified list
Engineering Support During Construction (ESDC)	\$ 165,000	ESDC services such as submittal review, design clarifications to be provided by the design firm
Environmental monitoring services	\$ 32,000	Pre-construction surveys, biological monitoring, stormwater plans, etc.
Permits and Other Fees	\$ 5,000	
Construction Contract	\$ 1,250,000	Includes electrical system modifications
10% Construction Contingency	\$ 125,000	Change order budget
Subtotal	\$ 1,727,000	
Total Estimated Project Cost	\$ 2,210,000	