

CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES

TO: BOARD OF PUBLIC UTILITIES

FROM: RICHEL MAEDA, ASSOCIATE CIVIL ENGINEER
CAPITAL PROJECTS ENGINEERING

SUBJECT: CONTRACT AWARD – DELTA POND DIFFUSER MAINTENANCE,
CONTRACT NO. C02200

AGENDA ACTION: RESOLUTION

SPECIAL NOTE:

This agenda item will be brought forth in accordance with Resolution No. 900 for expedited construction contract awards. The recommendation to award construction contract Delta Pond Diffuser Maintenance, Contract No. C02200 will be provided as a Report Item presented on June 16, 2022. Due to the current potential risk exposure to the Santa Rosa Regional Water Reuse System and in order to complete the project by the regulatory prescribed deadline of October 31, 2022, staff has determined the need to award the project June 16, 2022.

Project bids will be submitted to the City June 14, 2022, and an updated staff report with bidder information will be furnished to the Board of Public Utilities on June 15, 2022.

EXECUTIVE SUMMARY

The recommendation to award construction contract Delta Pond Diffuser Maintenance (Project), Contract No. C02200 will be provided as a Report Item presented on June 16, 2022, in accordance with Resolution No. 900 (see Attachment 2). The Project involves removing accumulated sands and gravels surrounding the main discharge facility serving the Regional Water Reuse System. Work efforts will include both mechanical and hydraulic dredging techniques, installation of turbidity containment curtains, decanting and drying layout areas and a temporary construction access road.

The Engineer's Estimate is \$580,000. Staff will recommend a 15% construction contingency to address unforeseen issues as is customary for construction of capital projects.

BACKGROUND

Tertiary disinfected recycled water produced at the City of Santa Rosa's (City) Laguna Treatment Plant (LTP) is stored in a series of ponds with a total storage capacity of 1.45 billion gallons. Delta Pond is both supplied by, and supplies water to, the recycled water distribution network. When necessary, discharge of recycled water is conveyed from Delta Pond into Santa Rosa Creek near its confluence with the Laguna de Santa Rosa via a diffuser manifold (Diffuser) installed in the creek bottom. The Diffuser at Delta Pond is the primary recycled water discharge facility for the City.

Originally constructed in 2010, the Diffuser facility extends beyond the centerline of Santa Rosa Creek and is comprised of a 48-inch pipe with an array of eleven 24-inch rubber duckbill check valves installed slightly above the channel bottom to maximize mixing, reduce channel scouring, and minimize creek flow turbulence and overall impacts to navigation. Since original installation, the City has completed various inspections to monitor changes in the channel bottom near the Diffuser. As is common in fluvial environments, gravel and sediment bars tend to move based on hydrologic and hydraulic conditions each year. Recent inspections have revealed accumulated sediment completely covering most of the duckbill check valves. Based on these observations, the diffuser's discharge capacity is impeded and not able to be operated at design discharge capacity.

In 2019, an alternative analysis was completed to identify the best approach for mitigating sediment accumulation affecting the Diffuser operation. The analysis evaluated five different alternatives that considered constructability, regulatory implications, cost, operations and maintenance, and anticipated effectiveness. To the extent each of the alternatives posed regulatory and/or efficacy issues, staff determined that the accumulated sediment should be removed via routine dredging operations. As such, no improvements to the facility are proposed and the Project is considered maintenance.

The Project will consist of removing accumulated sediment surrounding the Diffuser via both mechanical and hydraulic dredging techniques. Mechanical dredging will be completed with a long-reach excavator near, but not immediately adjacent to, the Diffuser to remove large quantities of sediment. Hydraulic dredging will be completed within the immediate vicinity to the Diffuser by deployed divers performing vacuum pumping operations of sediment material to significantly reduce the risk of damaging the duckbill check valves. A "U"-shaped turbidity containment curtain will be installed to prevent disturbed sediment from being transported downstream. Material removed will undergo a decanting and drying process and ultimately be removed from the site. The project will require permit or approval from the various agencies: Federated Indians of Graton Rancheria, Sonoma County Permit & Resource Management Department, Sonoma Water, U.S Army Corps of Engineers, North Coast Regional Water Quality Control Board, California Department of Fish and Wildlife and the Federal Emergency Management Agency.

PRIOR BOARD OF PUBLIC UTILITIES REVIEW

On January 20th, 2022, the Board of Public Utilities approved Resolution No. 1281, adoption of a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the Geysers-Delta Pond Connection/Diffuser Improvements, and approval of the Geysers-Delta Pond Connection Improvements Project and the Delta Pond Diffuser Maintenance Project.

ANALYSIS

Given the current estimated construction schedule, staff has determined the need to award the project on June 16th, 2022 in order to comply with regulatory permits dictating that all instream work (i.e., dredging) be complete by October 15th, 2022 and all work in the adjacent floodplain area be complete by October 31st, 2022.

The Engineer's Estimate is \$580,000. Staff will recommend a 15% construction contingency to address unforeseen issues as is customary for construction of capital projects.

The Project was advertised on May 26th, 2022, with an anticipated bid opening date of June 14th, 2022. The Notice to Proceed for the project is anticipated to be issued mid-July 2022, requiring a substantial amount of preparation and submittal review prior to start of work.

Given the constrained schedule, acquisition of required project permits from the agencies is occurring concurrent with the advertising and contract award schedule. Staff will not issue a Notice to Proceed until all necessary permits are acquired.

FISCAL IMPACT

Approval of this contract has no additional impact on the budget. Funds for this project were previously appropriated in Santa Rosa Water's Capital Improvement Program Budget.

ENVIRONMENTAL IMPACT

Pursuant to the California Environmental Quality Act, a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program was prepared for the project and adopted by the Board of Public Utilities on January 20th, 2022. The significance determination was made that although the Project could have a significant effect on the environment, there will not be a significant effect due to the mitigation measures included in the Project and adopted as a part of the Mitigation Monitoring and Reporting Program.

BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

Not applicable.

ATTACHMENTS

- Attachment 1 – Location Map
- Attachment 2 – Resolution No. 900
- Resolution

CONTACT

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