



REPORT TO CITY COUNCIL

To: Honorable Mayor and Members of the City Council

From: Jason Simpson, City Manager

Prepared by: Shannon Buckley, Assistant City Manager

Date: June 14, 2022

Subject: Professional Services Agreement with Wood Environment & Infrastructure, Inc. to Conduct a Pilot Study for the Physical Harvesting of Algal Biomass in Lake Elsinore

Recommendation

1. Authorize the City Manager to execute a Professional Services Agreement with Wood Environment & Infrastructure, Inc. to Conduct a Pilot Study for the Physical Harvesting of Algal Biomass in Lake Elsinore in an amount not to exceed \$236,920.00 in such final form as approved by the City Attorney; and
2. Authorize the City Manager to execute any Change Orders not to exceed a 10% contingency amount of \$23,692.00.

Background

Lake Elsinore is Southern California's largest natural, freshwater lake with more than 3,000 surface acres and 14 miles of shoreline. It is a shallow lake that it is reliant on rain and runoff from the Lake Elsinore and San Jacinto Watersheds. Conditions for algae blooms are ideal when there is an oversupply of nutrients in a lake, such as phosphorus and nitrogen, high temperatures, low oxygen levels in the water, little water movement, and low water levels.

Due to Lake Elsinore suffering from all these conditions mentioned above, the City of Lake Elsinore aims to take a more proactive approach to address the health of residents, tourists, wildlife, and the lake as part of our Lake Watch program.

In 2019, the Santa Ana Watershed Project Agency (SAWPA) awarded the City a Proposition 1, Round 1 grant for \$297,000 for a Physical Harvesting of Algal Biomass in Lake Elsinore Pilot Study.

The grant is funded by the California Department of Water Resources (DWR) and is in under the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (i.e., Proposition 1). SAWPA serves as the lead agency with more than \$23 million authorized in round one.

Algal Biomass Treatment & Removal at Lake Elsinore

The proposed Physical Harvesting of Algal Biomass in Lake Elsinore Pilot Study is designed to determine the feasibility of improving water quality in Lake Elsinore through the physical removal of algal biomass, both reactively and proactively. The feasibility and cost-effectiveness of potential removal strategies will be evaluated. The two major components of the study are: 1) to collect empirical data on algal biomass removal technologies; and 2) to use this data to analyze the feasibility of each removal technology in reducing water column chlorophyll-a, phosphorous, Cyanobacteria, and Cyanotoxins concentrations and subsequent water quality responses.

SAWPA is the regional watershed planning organization for the Santa Ana River Watershed and has been facilitating efforts to develop a watershed planning framework to guide water resource managers.

Wood Environment and Infrastructure, Inc. is the City's ongoing preferred company for the monitoring of cyanotoxins in order to protect the public health and safety of visitors to the Lake. Wood Environment and Infrastructure, Inc. has been providing services to City since 2016 and the Lake Elsinore & San Jacinto Watersheds Authority for the last seven years.

Water quality in Lake Elsinore is vulnerable due to periodic and seasonal algae blooms, especially during hot summer months. This decision support tool is designed to determine the feasibility of improving water quality in Lake Elsinore through physical removal of algal biomass in a safe and cost-effective manner.

The projected expenditure deadline is a minimum period of three (3) years or for any longer period required by law, from the date of final payment to Consultant to this Agreement.

Discussion

Wood Environment and Infrastructure, Inc. has continued to be the City's top candidate for this project based on their existing services and previous experience in implementing and managing this project. More specifically, they will assist in managing multiple vendors selected to perform small-scale algae removal projects using various techniques. The qualified consultant and project manager will perform pilot data collection, analysis, and final report preparation. To further the safety of the community, a Secure Community Engagement Consultant will be selected by the City to develop a strategy to educate the community about the complexities of Lake Elsinore and the project.

As part of these efforts, Wood Environment and Infrastructure, Inc. will assist the City with the selection of qualified contractors to participate in the Pilot/Feasibility Study. An RFQ was issued on Monday April 11, 2022, and responses are due May 20, 2022.

The proposed study is scheduled to take place this summer within the months of July and August of 2022 with a final report expected by early 2023.

The pilot-scale study will have a timeframe of August 1 – October 31, 2022. The Respondent may also suggest technical or procedural innovations that have been used successfully on other projects and may facilitate the completion of this project.

The results of scope of work/analysis will subsequently be used to determine whether the City should seek funding and plan for a future long-term, large-scale strategy and project for the lake to address algae blooms. The proposed budget for this project is \$297,000. The project was selected by SAWPA as a Disadvantaged Community (DAC) project and, if selected by DWR,

Algal Biomass Treatment & Removal at Lake Elsinore

would be exempt from the grant match requirements. The project is estimated to take place at any time between 2022 and 2023 depending on the condition of the Lake.

Attached is a scope of work from Wood Environment and Infrastructure, Inc.

Fiscal Impact

The total project cost is estimated to be approximately \$297,000. This will be included in next year's budget and will be covered fully through the funding approved by SAWPA and DWR.

Exhibits

A – Agreement

B – Proposal