



## REPORT TO CITY COUNCIL

**To:** Honorable Mayor and Members of the City Council

**From:** Jason Simpson, City Manager

**Prepared by:** Adam Gufarotti, Community Support Manager

**Date:** December 10, 2024

**Subject:** Purchase of Mobile Nanobubble System

### **Recommendation**

Approve and authorize the City Manager to execute a purchase order with Moleaer, Inc., in an amount not to exceed \$262,685 plus applicable sales tax for the purchase of a mobile nanobubble system in such final form as approved by the City Attorney, and waive the formal bidding process per Municipal Code Section 3.08.070(G) for the purchase since it is a non-replicable, custom water treatment system.

### **Background**

As Southern California's largest freshwater lake, Lake Elsinore is crucial for wildlife and recreation. Situated at the bottom of the San Jacinto Watershed, the lake has faced algae blooms and water quality issues due to nutrient-rich sediment from the watershed.

In 2023, the City Council passed our first Lake Management Plan and has since installed three nanobubble barges that inject oxygen into the lake and prevent phosphorus release from the sediment. Early results show promising improvements in the lake's appearance, dissolved oxygen levels, and Oxidative Reduction Potential (ORP).

## **Discussion**

In September 2024, a minor fish die-off in the lake caused by the Airport Fire led to the installation of a temporary nanobubble system to increase oxygen levels. Our current shore-powered barges are immobile, creating a need for a mobile nanobubble unit to improve oxygen levels in poorly mixed areas like the northwest corner, inlet channel, coves near the levee, and back basin, which are prone to algal blooms. Additionally, the Summerly Detention Ponds required additional support, and this unit was deployed in late November 2024 to provide H<sub>2</sub>S (odor) control, algae mitigation, muck digestion, and nutrient management.

To address these problem areas and enhance our treatment capacity, staff recommends purchasing a mobile nanobubble trailer. This trailer, equipped with the same advanced nanobubble technology as our floating barges, can pump 1.4 million gallons per day and be deployed to target specific hot spots.

Investing in this mobile nanobubble unit will allow us to efficiently treat the entire lake and respond to emergencies like the Airport Fire's effects.

## **Fiscal Impact**

Funding costs are included in the Fiscal Year 2024/2025 Measure Z Budget.

## **Attachments**

Attachment 1 - Quote  
Manager's Office