

## STAFF REPORT

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**Date:** December 9, 2020

**To:** Mayor and City Council

**Thru:** Doug Thornley, City Manager

**Subject:** Staff Report (For Possible Action): Approval of agreement with Aqua-Aerobics Systems, Inc. (AASI) for the rental of pilot testing equipment and limited technical support for the Truckee Meadows Water Reclamation Facility (TMWRF) Aerobic Granular Sludge Pilot Project

**From:** Matt Smith, Associate Civil Engineer

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**Summary:** The attached proposal with Aqua-Aerobics Systems, Inc.(AASI) will provide a 6-month rental of the Model Nereda®-1 pilot trailer for use at the Truckee Meadows Water Reclamation Facility (TMWRF) and associated limited technical support. This pilot study will evaluate the efficiency of the activated sludge pilot system for the removal of several constituents contained in primary effluent. The results of this pilot study will help evaluate the full scale application of this technology as a potential alternative to the status quo expansion plan. Depending on results, implementation of this technology could benefit the TMWRF by having a new treatment process that utilizes less chemicals and would not require additional downstream treatment infrastructure. Staff recommends Council approve the contract with Aqua-Aerobics Systems, Inc. for rental of pilot testing equipment and limited technical support for the Truckee Meadows Water Reclamation Facility (TMWRF) Granular Activated Sludge Pilot Project in the amount of \$165,000, with the City of Reno's portion being \$113,239.50 (Sewer Fund).

**Background:** The Truckee Meadows Water Reclamation Facility (TMWRF) is jointly owned by the Cities of Reno and Sparks. The City of Reno oversees the Capital Improvement Program (CIP) for TMWRF, while the City of Sparks manages the operations.

The current treatment technologies at TMWRF operate efficiently but do have disadvantages. One of the limitations of the expansion plan based on the current technology utilized at the plant is the large footprint and limited usable real estate on the property. Therefore, in anticipation of increased sewer flows due to future regional growth, staff continues to investigate options for cost effective and efficient expansion technologies.

A concurrent facility plan is still under development by Brown and Caldwell that considers the cost of several different methods for expansion of TMWRF. Their analyses was based on available literature and historical flows and loading to the plant. The options evaluated included footprint, cost, new technology, feasibility, treatment capacity, and efficiency. The pilot testing will provide key data for the future design of a full scale treatment system.

**Discussion:** This contract includes the 6-month rental of pilot scale equipment and limited technical support from AASI to evaluate the efficiency of the treatment unit on TMWRF’s primary effluent. The pilot scale treatment system is comprised of pipes, valves, instrumentation, buffer tank, displays, and appurtenances contained in AASI pilot trailers. Containing the equipment in mobile trailers helps make it easier for relocation and provides protection from the weather. The pilot is scheduled for mid-January so the treatment unit can experience colder weather which is a critical stress test and will provide cardinal data during the pilot.

A recommendation for award of an agreement with HDR Engineering, Inc. for pilot system operational support, testing and evaluation of the pilot treatment process has been approved by the Finance Director as a separate, but related agreement.

**Financial Implications:** The City of Reno will administer the agreement and will be reimbursed for a portion of the costs by the City of Sparks through the current cost sharing agreement for TMWRF operation and maintenance. The City of Reno and the City of Sparks share the cost of this project as follows: 68.63% for Reno and 31.37% for Sparks, as shown in Table 1. Costs for the City of Reno are budgeted in the Sewer Fund. This project is included in the TMWRF Capital Improvement Plan that was approved by the Joint Coordinating Committee (JCC).

**Table 1 – Cost Sharing Between Reno and Sparks**

<b>Total Cost of Contract</b>	<b>Reno Share</b>	<b>Sparks Share</b>
\$165,000	\$113,239.50	\$51,760.50
<b>Percentages</b>	68.63%	31.37%

**Legal Implications:** Legal review completed for compliance with City procedures and Nevada Law.

**Recommendation:** Staff recommends Council approve the agreement Aqua-Aerobics Systems, Inc. for assistance in process operation, testing and performance evaluation of the Truckee Meadows Water Reclamation Facility (TMWRF) Aerobic Granular Sludge Pilot Equipment in the amount of \$165,000, with the City of Reno's portion being \$113,239.50 (Sewer Fund), and authorize the Mayor to execute the attached Agreement.

**Proposed Motion:** I move to approve the staff recommendation.