

STAFF REPORT

Date: April 26, 2023

To: Mayor and City Council

Thru: Doug Thornley, City Manager

Subject: Staff Report (For Possible Action): Approval of Consulting Agreement for Engineering Services with Keller Associates, Inc. for the Truckee Meadows Water Reclamation Facility Primary Sludge Screening and Acid Phase Digester Valve and Piping Improvements Project in the amount of \$483,625 with Reno's share being \$331,911.84. (Sewer Fund)

From: Matt Smith, Senior Civil Engineer

Department: Utility Services

Summary:

Primary sludge is collected at the Truckee Meadows Water Reclamation Facility (TMWRF) for gas production through acid phase and methane phase digestion at TMWRF. Without screening the primary sludge, the digesters accumulate rags and other unwanted debris which then must be removed at high cost and potential treatment disruption. This item is an agreement with Keller Associates, Inc. (Keller) to evaluate, provide design improvements, and develop contract documents for the replacement of the existing obsolete primary sludge screens, and improvements to the piping and valves at the Acid Phase Digester (APD) building. Staff recommends Council approve the Agreement for Engineering Services with Keller as described in the attached scope of work in an amount not to exceed \$483,625 (Reno's share being \$331,911.84 from the Sewer Fund).

Alignment with Strategic Plan:

Fiscal Sustainability

Infrastructure, Climate Change, and Environmental Sustainability

Previous Council Action:

There is no recent Council action relevant to this item.

Background:

TMWRF is jointly owned by the Cities of Reno and Sparks and was originally built in 1964. Wastewater coming into TMWRF is separated into liquids and solids through several

processes. The solids streams at TMWRF are screened and then stored for gas production before being dewatered and hauled to the landfill. The primary sludge screening facility was built in 2004 and removes unwanted material from the sludge before being digested. The current screens have recently experienced repeated failures and are obsolete. Due to the make and vintage of these screens, spare parts are not available, and repairs need to be custom fabricated and are costly.

After the solids are screened and thickened, they are pumped to the digestion facilities. The digesters are a two-stage process, the first stage is an Acid Phase Digester (APD) and the second stage is five Methane Phase Digesters. The APD was also constructed in the 2004 TMWRF expansion. Some of the APD building valves are frozen and inoperable warranting replacement, and additional bypass piping is being evaluated to allow for easier repair work to be completed.

As part of the TMWRF Capital Improvement Program (CIP), “Risk Ranking” and paired comparison of infrastructure identifies project priorities, condition, and risk of failure. The Fiscal Year 23 ranking process identified sludge screening, piping, valves, and pumping as priority #16. However after the recent evaluation, the Fiscal Year 24 ranking process separated out primary sludge screens and APD building valves as priority #4.

Discussion:

Staff recommends engineering services to replace the primary sludge screens and APD valves and corresponding piping. This agreement will provide existing facility evaluations, alternative analyses for future equipment, design improvements, bid-ready documents, and engineering construction cost estimates.

Financial Implications:

Screening and Acid Phase Digester Valve and Piping Improvements Project is included in the current fiscal year’s CIP in the Sewer Fund. 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.

Table 1 – Cost Sharing Between Reno and Sparks

Total Cost of Agreement	Reno Share	Sparks Share
\$483,625	\$331,911.84	\$151,713.16
Percentages	68.63%	31.37%

Legal Implications:

The parties are bound by the terms of the agreement as prepared by the Office of the City Attorney.

Recommendation:

Staff recommends Council approval of the consultant agreement with Keller for engineering services for the TMWRF Primary Sludge Screening and Acid Phase Digester Valve and Piping Improvements Project in an amount not to exceed \$483,625 with the City of Reno's portion being \$331,911.84 (Sewer Fund), and authorize the Mayor to sign.

Proposed Motion:

I move to approve the staff recommendation.

Attachments:

Area & Vicinity Map for TMWRF Primary Sludge Screening and APD Valves and Piping Agreement with Keller TMWRF Primary Sludge Screening and APD Valves and Piping