

STAFF REPORT

Date: April 10, 2024

To: Mayor and City Council

Through: Doug Thornley, City Manager

Subject: Staff Report (For Possible Action): Approval of Consulting Agreement for Engineering Services with Carollo Engineers, Inc. (Carollo) for the Truckee Meadows Water Reclamation Facility (TMWRF) Granular Media Filter Process Improvements Project in the amount of \$1,049,517 with the City of Reno's share being \$720,283.52. (Sewer Fund)

From: Matt Smith, Senior Civil Engineer

Department: Utility Services

Summary:

Filtration is an integral part of the wastewater treatment process at the Truckee Meadows Water Reclamation Facility (TMWRF) that removes suspended solids and nutrients to keep the facility in compliance with its discharge permit. The filtration process at TMWRF has experienced hydraulic bottlenecks with flows well within the design capacity of the system. This item is an agreement with Carollo Engineers, Inc. (Carollo) to evaluate and design improvements, perform a media comparison pilot study, and develop contract documents for improvements to the existing granular media filters (GMFs) to bring the facility up to its design capacity. Staff recommends Council approve the agreement for engineering services with Carollo as described in the attached scope of work in an amount not to exceed \$1,049,517, with the City of Reno's (Reno) share being \$720,283.52 from the Sewer Fund.

Table 1: Consent Review

Consent Review	Yes	No
1. Is this item an annual or standard item that comes before Council for regular approval?		X
2. Is this item an agreement required based on an item previously approved by Council?	X	
3. Is this item included in the current budget approved and adopted by Council?	X	
Other Considerations		
What percent of the total City budget does this item represent?	0.12%	

Alignment with Strategic Plan:

Infrastructure, Climate Change, and Environmental Sustainability

Fiscal Sustainability

Economic and Community Development

Previous Council Action:

September 14, 2022 – Council approved an agreement with Carollo for the TMWRF Disinfection and Filtration Evaluation and Pre-Design Project

Background:

TMWRF is jointly owned by the Cities of Reno and Sparks and was originally built in 1964; the GMFs were constructed later in 1985. The 2020 TMWRF Facility Plan recommended additional filter cells be constructed before the average annual flow reaches 32 million gallons per day (MGD). Carollo was hired in 2022 by Reno and delivered a design analysis and pre-design documents for a cloth media filter retrofit to retain most of the existing facilities and to improve flow through the process. During the 2022 pre-design effort, it was discovered that the filter facilities are designed for 40 MGD, but some ancillary processes have hindered the performance of the filters which has caused the filtration facility to operate at a lower capacity. Due to the costly changes proposed with the 2022 retrofit, staff directed a further investigation into the bottlenecks and potential solutions to improve the filters and increase the facility's capacity in line with its design capacity.

Discussion:

Carollo has provided the attached scope of work to provide a granular media pilot evaluation, component level capacity analyses, recommended improvements, and modifications to the existing infrastructure to increase operational capacity, flexibility, and maintenance safety.

As part of the TMWRF Capital Improvement Program (CIP), "Risk Ranking" and paired comparison of infrastructure identify project priorities, conditions, and risk of failure. The Fiscal Year 24 ranking process identified filtration rehabilitation and improvements as priority #6.

Based on the recommendation from the 2020 TMWRF Facility Plan and considering the high preliminary construction cost estimate for the previously considered filtration process cloth media retrofit, staff recommends design services to instead rehabilitate and improve the existing granular media filter facility. This agreement will provide design services that include safety planning, pilot testing, structural and mechanical improvements, preparation of technical reports, bid-ready documents, and engineering construction cost estimates.

Financial Implications:

The Filtration Process GMF Improvements Project is included in the current fiscal year's CIP as approved by the TMWRF Joint Coordinating Committee (JCC) and the respective City Councils of Reno and Sparks through the budget process. Reno will administer the agreement and will be reimbursed for a portion of the costs by the City of Sparks (Sparks) through the current cost-sharing agreement for TMWRF operations and maintenance. Reno and Sparks share the cost of this project as follows: 68.63% for Reno and 31.37% for Sparks, as shown in Table 2. Costs for Reno are budgeted in the Sewer Fund.

Table 2 – Cost Sharing Between Reno and Sparks

Total Cost of Agreement	Reno Share	Sparks Share
\$1,049,517	\$720,283.52	\$329,233.48
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 Carollo Engineers, Inc. for engineering services for the TMWRF Filtration Process GMF Improvements Project in an amount not to exceed \$1,049,517 with Reno's portion being \$720,283.52 (Sewer Fund) and authorize the Mayor to sign.

Proposed Motion:

I move to approve staff recommendation.

Attachments:

Area & Vicinity Map for TMWRF GMF Process Improvements Project
Agreement with Carollo - TMWRF GMF Process Improvements Project