

STAFF REPORT

Date: October 9, 2024

To: Mayor and City Council

Through: Jackie Bryant, Interim City Manager

Subject: Staff Report (For Possible Action): Approval of Consulting Agreement for professional engineering services with V&A Consulting Engineers for flow monitoring services in an amount not to exceed \$400,800. (Sewer Fund)

From: Roy Flores, Senior Civil Engineer

Department: Utility Services

Summary:

Sanitary sewer flow monitoring provides comprehensive data to support the City's sewer capacity model and helps evaluate/characterize wet-weather and dry-weather flows within our sewer network. This is the final phase of a three-phase flow monitoring plan that will provide information to pinpoint sub-areas of high inflow and infiltration, refine the accuracy of Reno's sewer model, and assist in prioritizing capital improvements to the sewer system. Staff recommends Council approve the consultant agreement with V&A Consulting Engineers in an amount not to exceed \$400,800 for professional engineering services to perform sanitary sewer flow monitoring.

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?		0.042%

Alignment with Strategic Plan:

Fiscal Sustainability

Infrastructure, Climate Change, and Environmental Sustainability

Previous Council Action:

October 11, 2023 – Council approved a Consultant Agreement with V&A Consulting Engineers for Flow Monitoring Services (Phase 2) in an amount not to exceed \$262,500. (Sewer Fund)

October 26, 2022 – Council approved a Consultant Agreement with V&A Consulting Engineers for Flow Monitoring Services (Phase 1) in an amount not to exceed \$622,000. (Sewer Fund)

Background:

Much of Reno’s critical sewer interceptors over the past 15+ years, and most recently the smaller collection-level piping within the McCarran Loop, have undergone capacity evaluations that has led to the development of a large-scale model of Reno’s major sanitary sewer infrastructure.

Monitoring the flow conditions in a sanitary sewer collection system is essential for gathering data to evaluate/characterize wet-weather and dry-weather flows to assist with operational decision making, system optimization, and accommodate future developments. A major area of concern and challenge for all wastewater collection system owners/operators throughout the country is inflow and infiltration, commonly known as I&I. Inflow means water discharged into the wastewater system from sources such as roof, cellar, yard, foundation, and area drains; drains from springs, manhole covers; and cross-connections from storm drains. Infiltration refers to the water that enters the sewer system from underground, usually through pipe and/or manhole joints. I&I commonly occurs during precipitation events such as rain, snow, or a combination of both.

Discussion:

Reno’s flow monitoring efforts over the years have primarily been to support sewer capacity studies for a specific part of the City such as Central & South Reno, North Valleys, Northwest Reno, etc. Reno hired Stantec to develop a Flow Monitoring Plan dated May 22, 2023. This plan identifies three separate phases of flow monitoring that encompass the entire City limits over three years to support the following actions:

1. Prioritize areas for I&I field investigation and possible reduction.
2. Assess current and future sewer capacity needs and identify deficits.
3. Develop an operations plan for the three major diversion structures to maximize the collection system’s capacity.
4. Determine the right balance of I&I reduction versus up-sizing collection system piping.
5. Evaluate and size short- and long-term sewer improvement projects.
6. Expand and enhance the hydraulic model to reflect current dry- and wet-weather conditions.
7. Identify hydraulic triggers to optimize timing for implementation of system improvements.

Staff will use a phased approach to identify areas with high I&I within the sewer collection system. Phase 1 collected data during the 22/23 winter weather months and examined a large contribution area to establish a baseline for understanding regions with high I&I for further monitoring. Phase 2 collected data during the 23/24 winter weather months and further isolated sub-basins with high I&I. Finally, Phase 3 (this agreement) will pinpoint sources of I&I for field investigation and condition assessment.

This consultant agreement is for Phase 3 of the Flow Monitoring Plan and consists of installing 31 temporary flow meters across the collection system including the Reno-Sparks Interceptor for up to four (4) months, shown on the map below. This project will also use the data collected by six (6) permanent existing flow meters. Additionally, five (5) rain gauges will be installed to collect rainfall data to assist with the wet-weather hydraulic modeling analysis.

After all the flow monitoring data has been collected in Phase 3, staff will continue working with our modeling consultant under a separate agreement to develop an I&I reduction strategy, update the hydraulic model, and create a system expansion plan based on hydraulic trigger criteria.

Staff selected V&A Consulting Engineers from the City of Reno 2024-2026 unranked qualified list for Sanitary Sewer Capacity Analysis.

Financial Implications:

The FY25 Capital Improvement Program includes this project (Sewer Fund).

Legal Implications:

Legal review completed for compliance with City procedures and Nevada law.

Recommendation:

Staff recommends Council approve the consultant agreement with V&A Consulting Engineers to perform flow monitoring in an amount not to exceed \$400,800 and authorize the Mayor to sign.

Proposed Motion:

I move to approve staff recommendation.

Attachments:

Agreement with V&A Consulting Engineers