



Department Source: City Utilities - Sewer/Stormwater

To: City Council

From: City Manager & Staff

Council Meeting Date: December 20, 2021

Re: Public hearing: proposed design and construction of an automated debris removal system at the Wastewater Treatment Plant - Wetlands Treatment Unit #3; providing for construction of the proposed improvement using a design/build contract.

Executive Summary

This is the public hearing concerning the proposed construction of Mechanical Screens at the WWTP Wetland Pump Station. An Interested Parties (IP) meeting was held on October 6, 2021, to present the conceptual design for the project. The resolution estimate for this sanitary sewer project is \$3,000,000 and will be paid from Sewer Utility funds.

Discussion

After the wastewater is treated at the mechanical wastewater treatment plant (WWTP), the effluent flows to the constructed wetlands, which provide additional secondary vegetative and biological treatment. Once the effluent has traveled through each of the four wetland treatment cells, the effluent pump station, located at WTU #3, discharges to the Missouri Department of Conservation Eagle Bluffs Conservation Area, see the location map. At the WTU #3 effluent pump station, natural debris (duckweed, cattails, etc.) can accumulate and obstruct the static screens preventing the effluent from entering the pump station. This vegetative debris also has the potential to damage pumps and reduce their effective useful life. Currently, the debris is manually removed, which is labor intensive and hazardous during the winter months due to icy conditions, or when excessive amounts of debris have accumulated from large rain events.

This proposed project will consist of the design and construction of an automated debris removal system to discharge debris to the side of the pump station where it can be safely and more easily removed with a skid loader. The project is located at WTU #3 as shown on the project graphic. Staff is preparing a Request for Qualifications (RFQ) to select a design-build team that will provide a final design, construction plans and construction for the proposed improvements to the WTU #3 effluent pump station.

An Interested Parties (IP) meeting was held on October 6, 2021, to present the conceptual design for the project. Six (6) people attended the meeting. All six (6) were from surrounding areas and representing various engineering and construction firms. The Contact Log is attached.

Staff is proposing that a Design-Build process will be used for the design and construction of this project. The resolution estimate for this project is \$3,000,000, which includes design and construction costs. The project will be funded with Sewer Utility funds and other such funds as may be lawfully appropriated.



Fiscal Impact

Short-Term Impact: Resolution estimate is \$3,000,000.

Long-Term Impact: It is anticipated that this project will have minimal impact to the Sewer Utility's annual operating cost.

Strategic & Comprehensive Plan Impact

Strategic Plan Impacts:

Primary Impact: Reliable Infrastructure, Secondary Impact: Organizational Excellence, Tertiary Impact: Not Applicable

Comprehensive Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Environmental Management, Tertiary Impact: Not Applicable

Legislative History

Date	Action
12/06/2021	R187-21: Setting a public hearing: proposed design and construction of an automated debris removal system at the Wastewater Treatment Plant - Wetlands Treatment Unit #3; providing for construction of the proposed improvement using a design/build contract.
10/06/2021	Interested Parties (IP) meeting

Suggested Council Action

Direct staff to proceed with the design and construction of an automated debris removal system at the Wastewater Treatment Plant - Wetlands Treatment Unit #3 and authorize the City Manager to proceed with selection of a design-build contractor.