



CITY COMMISSION STAFF REPORT

DEPARTMENT: Utilities

DATE: December 10, 2024

SUBJECT: Motion to approve an Agreement between the City of Cooper City and Hazen and Sawyer, P.C. for the design, permitting, and bidding services to construct a Headworks Process at the City of Cooper City Wastewater Treatment Plant. -
Utilities

CITY MANAGER RECOMMENDATION:

The City Manager recommends approval of Task Order No. 2024-22 in the amount of \$798,209 for the Wastewater Treatment Facility Headworks Design Project. This project will provide for the removal of large, bulky solids and improve odor control at the City's Wastewater Treatment Plant.

BACKGROUND OF ITEM:

The City of Cooper City's George A. Haughney (GAH) Wastewater Treatment Plant includes one primary sedimentation (Surge) Tank, three package wastewater treatment units consisting of contact stabilization/activated sludge with aeration, digestion and clarification, followed by disinfection of the treated, clarified effluent. Settled sludge is sent from the three package wastewater treatment units to high solids dewatering centrifuges prior to these biosolids being hauled to a residual management facility in central Florida. A portion of the treated wastewater effluent gets discharged by vertical turbine pumps to a deep injection well approximately 3,400 feet below the land surface, while the majority (about 1.7 million gallons per day) is pumped to the City of Hollywood for its tertiary treatment and irrigational reuse system.

The GAH treatment scheme currently accumulates bulky solids within the surge tank which becomes problematic to manage, remove, and dispose of since landfills don't accept these liquid wastes, and it's expensive and problematic to stage and dry these waste streams. The Utility has typically staged this material from the surge tank on existing drying beds on the Wastewater Treatment Plant site, allowing them to drain to an on-site wastewater lift station that returns liquid to the surge tank, and dried solids then are picked up and hauled to a landfill. This practice is not desirable and creates undue odors and nuisance concerns. It is therefore desirable and warranted to add a headworks process to the front of the plant such that these bulky solids are removed completely with fine screening on conveyors that drop the solids onto a dumpster, while screened wastewater then gets distributed to the three separate treatment units. A new meter and instruments to measure inflow will be included and sufficient provisions will provide

redundancy for two screens and flow channels to be included for maintenance and capacity requirements to fulfill peak flow and treatment demands for the facility.

Typically, an odor control system and de-gritting operation will be included within a headworks process, but due to limited funding, the de-gritting equipment will be made a part of a future phase to be added at a later date. A task order has been developed with the City's water and wastewater treatment design Consultant (Hazen and Sawyer, P.C.) to include a fine screen selection, determination of peak flows to the facility, review of odor control options to be included in the project, examine the hydraulic profile of the existing treatment train to identify whether an upstream pumping station may be necessary, and review site characteristics, open space for this facility and design piping and related connections necessary for the additional process. The Consultant will also prepare a maintenance and operational plan during construction, cost estimates of various alternatives, estimated construction schedule, obtain permits, and complete bidding services for the construction contract.

ANALYSIS:

Currently, the City's treatment plant operators monitor the existing surge tank for bulky solids and rake incoming coarse bar screens on top of each wastewater treatment unit for depositing these solids to underlying garbage cans at the ground surface. Significant solids accumulate in the surge tank and even carry over into each of the wastewater treatment units. These solids are significant, complicate the City's capability for meeting regulatory requirements, and contribute significantly to the degradation of existing components of the treatment processes including the transfer pumps and impellers, and scraper arm assemblies.

With the addition of a headwork process, the City will be able to screen out these bulky solids at the front of the treatment facility, manage and handle them more appropriately, and better control these contaminants as it will free operators to focus more time on other critical equipment, processes, and logging of their operations for improved treatment reliability.

FISCAL IMPACT:

The funds for this project design services are included in this fiscal year budget and should be adequate to complete these services by the end of 2025.

<u>General Ledger Acct. Number</u>	<u>Budgeted Amount</u>	<u>Requested Amount</u>	<u>Remaining Amount</u>
453-931-563440-535-WWTPR	\$800,000.00	\$798,209.00	\$1,791.00

ATTACHMENTS:

1. Exhibit A – Task Order No. 2024-22 Hazen and Sawyer, P.C. Scope of Services for Wastewater Treatment Facility Headworks Design Project
2. Continuing Services Agreement with Hazen and Sawyer, P.C.
3. Certificate of Insurance for Hazen and Sawyer
4. Vendor Compliance form for Hazen and Sawyer, P.C.