

## Agenda Item Details

Meeting	Aug 13, 2024 - Bryan City Council Second Regular Meeting
Category	6. Statutory (Automatic Approval) Agenda - This agenda consists of items previously approved by Council action such as adoption of items that are part of an approved budget or capital improvement projects, first and only readings of ordinances, interlocal agreements, or action that is required by law or delegated to the City Manager. Items may be removed from the statutory agenda for separate consideration at the request of two Councilmembers.
Subject	A. Approval of a construction contract in the amount of \$6,061,300 with Teal Services, L.L.C., for upgrades to the Still Creek Wastewater Treatment Plant
Type	Action (Statutory)
Preferred Date	Aug 13, 2024
Absolute Date	Aug 13, 2024
Fiscal Impact	Yes
Dollar Amount	6,061,300.00
Budgeted	Yes
Budget Source	Wastewater Fund
Goals	<a href="#">Infrastructure</a> <a href="#">Service</a>

### Summary:

Water Services respectfully requests the City Council's approval of a contract with Teal Services LLC (Anderson, Texas) for construction services provided to Still Creek Wastewater Treatment Plant and Grease Plant in the not to exceed amount of \$6,061,300. The improvements to be made address capacity concerns, replace aged equipment with new, and streamline operations through programmed automation. On June 19, 2024, Request for Bid (RFB) #24-041 was opened for the this project. The bid submitted by Teal Services represents the only bid received for this project. CDM Smith (CDM) is the design engineer for this project, and their recommendation of award is attached to this request.

A summary of each improvement is provided below:

### Grease Plant

The Grease Plant (Still Creek Liquid Waste Processing Facility) serves as a regional disposal site for hauled liquid wastes. Grease traps are used by restaurants to limit fats, oil, and grease from entering the sanitary sewer. The trapped grease and solids are pumped and transported by a vacuum truck to a disposal site for processing. The Grease Plant was constructed in 2003 and currently provides service to 23 liquid waste hauling companies. Customers are billed based upon the waste volume and type transported. The Grease Plant is a net positive operation.

The site's pumps, tanks, and other equipment have reached the end of life and require replacement. The proposed contract will replace the storage tanks, pumps, and piping with new components. Scheduled improvements go a step further by adding a recirculation system for blending of stored contents and installation of a mechanical press and conveyor to replace the use of gravity filter boxes for sludge dewatering.

Gravity filtration is labor dependent, time consuming, and inefficient for this process because grease binds to the filter cloth, which inhibits drainage. The mechanical press dewateres using a flocculation tank where polymer is mixed into the grease solution. The flocculated waste is then fed to a drum auger that conveys the waste through a series of concentric rings that taper in diameter as the waste travels the length of the auger. Pressure is used to squeeze water from the processed sludge. The resulting sludge is landfill ready and requires no additional processing. A conveyor is used to load the dried sludge into a transport container for disposal. Improvement to the dewatering process is expected to reduce offsite odors by minimizing the amount of time sludge is held onsite for processing. The mechanical press is able to operate without human involvement because of programmed automation. This process frees up staff to rededicate attention to other needs in plant.

#### Digester Conversion

Still Creek is currently outfitted with anaerobic digestion. The digesters stabilize the waste solids through microbial decomposition under anaerobic conditions (i.e., without oxygen). The digester system is in need of repair for continued operation. Without repair, the likelihood of failure to the system increases with passing time. Example failures include seal failures, stoppages/obstructions, or damage to the digester lids. A critical failure would impact the plant's ability to process sludge and threaten the plant's ability to meet its discharge permit.

Anaerobic systems are difficult to operate and carry a higher price tag to rehabilitate compared to converting the process to an aerobic system (i.e., with oxygen). Staff evaluated both options and found aerobic conversion to be best-fit. Water Services took a similar position in 2018 when Burton Creek WWTP's anaerobic digester was converted to aerobic. Aerobic systems are generally easier to operate and provide an added benefit in odor reduction because the waste is aerated. Consequently, aerobic systems have a higher operational cost because diffused oxygen must be introduced constantly to the system.

The presented contract allows for demolition of the digester floating lid, evacuation of contained waste, demolition of sludge transfer and gas piping, and installation of new blower pad and motor control center.

#### Bar Screen

The bar screen removes objects such as rags, plastics, and other larger debris from entering the treatment plant. Screening is accomplished through a series of vertical bars that allow water to pass through while stopping big objects, which are removed by a mechanical screening rake. Wear and damage to the bar rack from years of operation have created gaps and pinch points in the bar spacing that allow pass through of rags and debris. The existing bar screen is a single rake model prone to misalignment with the rake's teeth and the bar channels. The bar screen's poor performance is felt in the intermediate pump station that routinely becomes overloaded with rags and debris. Intermediate pump performance drops considerably after a rain event when peaking flows are received. Pumps impacted by foreign objects must be removed from service and cleaned.

The bar screen will be replaced with a multi-rake screen to provide faster cycle times for removal of entrapped debris from the bar rack. Unlike the existing screen, the proposed screen's rakes are integrated into a track affixed to the bar rack. This design keeps the rake's teeth in contact with the screen's bar - ensuring spacing of the bars remains true throughout the life of the screen. The same screen approach was implemented at Burton Creek Wastewater Treatment Plant in 2019 when its single rake bar screen was replaced with a multi-rake. Pumping issues experienced in Burton Creek's intermediate pump station ceased after installation of the multi-rake system. The same success is expected for Still Creek's installation.

Funding for this project is from the Wastewater Fund with a reimbursement resolution from future debt.

#### **Staff Analysis and Recommendation:**

Water Services recommends the City Council award the contract with Teal Services LLC in the not to exceed amount of \$6,061,300 allowing upgrades made to Still Creek Wastewater Treatment Plant and Grease Plant. The improvements performed in the contract are needed to replace aging equipment, minimize risk for service loss or interruption, and improve site operations.

#### **Options:**

1. Approve the proposed contract.
2. Do not approve the proposed contract and provide staff direction.

**Attachments:**

1. Contract
2. Recommendation of Award

[Attachments.pdf \(69,084 KB\)](#)