



AGENDA MEMORANDUM

Action Item for the City Council Meeting of October 12, 2021

DATE: October 12, 2021

TO: Peter Zanoni, City Manager

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Preventative Maintenance and Repairs for Breakpoint Chlorination Equipment Feed System

CAPTION:

Resolution authorizing a two-year service agreement with an additional two-year option period, in an amount not to exceed \$433,890.21 and a maximum amount not to exceed \$883,890.21 if the option period is exercised, for preventative maintenance and repairs of the Breakpoint Chlorination equipment feed system at the Oso Water Reclamation Plant with Grace Water Services, LLC from Katy, Texas, effective upon issuance of notice to proceed, with first-year funding in the amount of \$216,945.11 available from the FY 2022 Wastewater Fund.

SUMMARY:

This is a two-year service agreement, with an additional two-year option period, for preventative maintenance and repairs of the Breakpoint Chlorination System (BPC) that removes ammonia from wastewater during the treatment process at Oso Water Reclamation Plant (WRP). This service is necessary to maintain the normal operations of Oso WRP in compliance with environmental regulatory requirements. The contract price is the same as the current contract.

BACKGROUND AND FINDINGS:

The Oso WRP is the largest of the City's six wastewater treatment plants and serves approximately 50% of the City's population. The Oso WRP was constructed in 1941 and has a rated treatment capacity for average daily flows of 16.2 million gallons per day (MGD) and peak 2- hour flows up to 98.0 MGD.

In 2011, the Texas Commission on Environmental Quality (TCEQ) implemented stringent restrictions on ammonia levels with the intention of protecting grasses in bay ecosystems. A renewal permit issued to the City by the TCEQ on April 29, 2011, required the effluent limit for ammonia at the Oso WRP be in compliance with new regulations by October 29, 2013. To attain compliance within the allotted time frame, the City adopted a two-phase implementation strategy for improvements at the Oso WRP. The two phases consist of the short-term BPC & Step Feed project and the long-term Oso WRP Phase 2 Biological Nutrient Removal and Upgrade Capital Improvement Project.

The short-term BPC & Step Feed project is a temporary solution that was executed through construction of step feed pumps and a BPC process facility that chemically removes ammonia to meet the new TCEQ ammonia limit. The BPC system was intended to be temporary due to high chemical costs, risks from potential over-dosing of sodium hypochlorite, and the frequent required maintenance that demands the operator's time and attention. The BPC & Step Feed project has been in service since September 2013.

Grace Water Services, LLC, a contractor based in Katy, Texas, installed the original BPC equipment and configured the automatic programming function of the control system. Since 2013, Grace Water Services, LLC has provided maintenance services to the system, including the following:

- Monthly preventative maintenance, such as checking on operations, analyzing system performance, and cleaning of system components (chemical feed pumps, tanks, analyzers, sample pumps, strainers, mixers, lines, injection points)
- Analyzer and chemical feed pump replacement
- Adjustment and calibration of instrumentation and control system
- Computer programming maintenance for chemical feed and dosing control system
- On-call services to address emergencies and any additional problem-solving

The BPC system is a complicated process that exceeds the skillsets of in-house operators. One purpose of the Oso WRP Process Upgrade and BPC Facility Decommissioning Capital Improvement Project (CIP), which is expected to begin construction in Fiscal Year 2022, is to decommission the BPC system at the Oso WRP and significantly reduce the plant's chemical consumption.

This service contract is necessary to maintain normal operations of the BPC system at the Oso WRP until the planned CIP is completed in FY 2025.

PROCUREMENT DETAIL:

This is a sole source procurement. Grace Water Services, LLC is the sole source manufacturer and supplier of the items needed for the Breakpoint Chlorination equipment feed system. Grace Water Services is the vendor that has provided this service to the City since 2013. This is a new agreement to continue to provide the same service.

ALTERNATIVES:

An alternative is to not enter into a service agreement, which would require separate procurements on an as needed basis, potentially reducing the economies of scale pricing secured through a long-term contract and increasing the time delay due to the procurement process, which in turn could increase the system downtime and negatively impact operations, potentially resulting in TCEQ violations.

FISCAL IMPACT:

The fiscal impact for the Wastewater Fund in FY 2022 is \$216,945.11. The remaining amount will be budgeted in future years through the annual budget process.

FUNDING DETAIL:

Fund:	4200	Wastewater
Organization/Activity:	33110	Oso Water Reclamation Plant
Mission Element:	064	Treat wastewater
Project # (CIP Only):	N/A	
Account:	530215	Maint & repairs - contracted

RECOMMENDATION:

Staff recommends approval of this resolution authorizing a two-year service agreement with Grace Water Services, LLC for preventative maintenance and repairs of the breakpoint chlorination equipment feed system for the Utilities Department as presented.

LIST OF SUPPORTING DOCUMENTS:

Price Sheet
Service Agreement
Resolution