AGENDA MEMORANDUM
Action Item for the City Council Meeting June 17, 2025

DATE: June 17, 2025

TO: Peter Zanoni, City Manager

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Preventative Maintenance and Repairs for Breakpoint Chlorination System

CAPTION:

Resolution authorizing a two-year service agreement, with one two-year option to renew, with Grace Water Services, LLC, of Katy, Texas, in an amount up to $564,744.00, with a potential amount up to $1,129,488.00 if the option is exercised, for preventative maintenance and repairs of the breakpoint chlorination system at the Oso Water Reclamation Plant, with FY 2025 funding of $69,624.00 from the Wastewater Fund.

SUMMARY:

This resolution authorizes a two-year service agreement with an additional two-year option period with Grace Water Services, LLC for preventative 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.

BACKGROUND AND FINDINGS:

The Oso Water Reclamation Plant (WRP) is the largest of the City's six wastewater treatment facilities, serving approximately 50% of the population. Originally constructed in 1941, the plant has a rated treatment capacity of 16.2 million gallons per day (MGD) under normal conditions and can handle peak two-hour flows of up to 98.0 MGD.

In 2011, the Texas Commission on Environmental Quality (TCEQ) established stricter ammonia limits to safeguard grasses in bay ecosystems. The City's wastewater discharge permit, renewed by the TCEQ on April 29, 2011, mandated compliance with these new ammonia regulations by

October 29, 2013. To meet the requirements within the given timeline, the City adopted a two-phase improvement strategy for the Oso WRP: 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 was designed as a temporary solution, incorporating step feed pumps and a BPC process facility that chemically removes ammonia to comply with the updated TCEQ limits. Due to high chemical costs, the risk of sodium hypochlorite overdosing, and frequent maintenance demands, the BPC system was intended for short-term use. It has been operational since September 2013.

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

- Monthly preventative maintenance to ensure efficient operations, system performance analysis, and cleaning of key components (chemical feed pumps, tanks, analyzers, sample pumps, strainers, mixers, lines, and injection points)
- Replacement of analyzers and chemical feed pumps
- Instrumentation and control system adjustments and calibration
- Computer programming maintenance for chemical feed and dosing control
- On-call emergency services and troubleshooting

Due to the complexity of the BPC system, its operation requires specialized expertise beyond the skillset of in-house staff. As part of the Oso WRP Process Upgrade and BPC Facility Decommissioning Capital Improvement Project (CIP) expected to begin construction in Fiscal Year 2022, the BPC system will be phased out, significantly reducing the plant's reliance on chemical treatment.

This service contract remains essential for maintaining stable operation of the BPC system at the Oso WRP.

PROCUREMENT DETAIL:

This procurement is a sole source contract, as Grace Water Services, LLC is the exclusive manufacturer and supplier of the components required for the Breakpoint Chlorination system. Since 2013, the City has relied on Grace Water Services, LLC as its dedicated service provider for this system.

Below is a price comparison from 2021 to 2025, detailing costs for monthly preventative maintenance, as well as repairs and part replacements necessary to ensure the continued functionality of the chlorination system.

Description	2021	2025	Variance	Percentage of Increase
Preventative Maintenance & Repairs	$433,890.21	$564,744.00	$130,853.79	23%

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 for FY 2025 is $69,624.00. 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
Department:	46	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 Corpus Christi Water as presented.

LIST OF SUPPORTING DOCUMENTS:

Service Agreement
Resolution
Price Sheet