



## AGENDA MEMORANDUM

Action Item for the City Council Meeting of September 17, 2019

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**DATE:** September 5, 2019

**TO:** Peter Zaroni, City Manager

**FROM:** Kevin Norton, Director of Water Utilities  
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<p style="text-align: center;"><b>Amendment No. 3 to the Service Agreement for Preventative Maintenance of Breakpoint Chlorination System at Oso Water Plant</b></p>
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**CAPTION:**

Motion authorizing Amendment No. 3 to the current Service Agreement with Grace Water Services, LLC for preventative maintenance and upgrades to equipment which removes ammonia from the wastewater effluent discharge as required by the Texas Commission on Environmental Quality (TCEQ) compliance regulations at the Oso Wastewater Treatment Plant, for an amount not to exceed \$446,522.00, increasing the Service Agreement value to \$1,126,208.00, for an additional two-year term effective August 13, 2019, with funding available through the FY 2019-2020 Wastewater Fund.

**SUMMARY:**

This motion authorizes an Amendment to the current Service Agreement with Grace Water Services, LLC for preventative maintenance and equipment upgrades to the Oso Wastewater Treatment Plant for an amount not to exceed \$446,522.00 with funding available through the FY 2019-2020 Wastewater Fund. These services are necessary to remove ammonia from the wastewater effluent discharge as required by TCEQ.

**BACKGROUND AND FINDINGS:**

The TCEQ-issued discharge permit for Oso Wastewater Treatment Plant did not require ammonia be removed from the wastewater effluent before October 2013. A Breakpoint Chlorination (BPC) System was designed and constructed before then to maintain compliance with this ammonia limitation requirement. The system requires massive volumes of chlorine

and is the only BPC system at a wastewater treatment plant in Texas. Due to the complexity of the process control system, the reliance upon multiple analyzers, and the continuous maintenance necessary to maintain reliable operation, the City entered into a maintenance Service Agreement in 2015.

The City developed a long-term vision to upgrade the Plant with more cost-effective technology to remove ammonia from the wastewater through a biological nutrient removal process and, ultimately, with less chemical requirements. The engineering design for this upgrade is planned for FY19-20, with construction expected in FY22-23.

This motion authorizes an Amendment to exercise the additional two-year period of the Service Agreement for continuation of preventative maintenance, installation of a backup chemical storage tank for higher flow periods, controller equipment upgrades to improve the monitoring and functioning of the chemical feed system and prevent excess use of chemicals.

LNV, Inc. was contracted by the City in 2010 to develop and design a process, referred to as Breakpoint Chlorination (BPC), at the Oso Water Reclamation Plant to remove ammonia from the wastewater to meet stringent permit requirements for ammonia discharges that were implemented in October 2013 by the TCEQ. The removal of ammonia from wastewater effluent discharge was not required prior to 2013.

BPC is the process of feeding high dosages of sodium hypochlorite (i.e., concentrated bleach) to oxidize/remove the excess ammonia in the wastewater effluent prior to discharge. The system is very chemical-intensive and uses sodium hypochlorite to remove ammonia from the wastewater, and then the remaining chlorine residual in the effluent water must be removed with another chemical (sodium bisulfate) before it is discharged. The BPC system at Oso WRP is an interim solution to maintain compliance with the TCEQ ammonia limitation requirement. It is the only BPC system at a wastewater treatment plant in Texas and is probably the largest BPC system in the United States. To improve operations and reduce chemical requirements, a long-term biological nutrient removal process has been planned, with the engineering design start expected in FY20, and construction expected in FY22-23.

This Amendment is for the additional two-year option period of the Service Agreement for continuation of preventative maintenance, installation of a backup chemical storage tank for higher flow periods, and controller equipment upgrades to improve the monitoring and functioning of the chemical feed system and prevent excess use of chemicals.

### **ALTERNATIVES:**

An alternative to amending this service agreement would be to not extend the current agreement, and instead issue a new solicitation; however, a new process may require the system in place be replaced.

### **FISCAL IMPACT:**

Funds are available in the FY 2019-2020 Wastewater Fund for this Amendment to the current Service Agreement with Grace Water Services, LLC for preventative maintenance and equipment upgrades to the Breakpoint Chlorination System at Oso Wastewater Treatment Plant, which removes ammonia from the wastewater effluent discharge as required by the Texas Commission on Environmental Quality (TCEQ) compliance regulations, for an amount not to exceed \$446,522.00, increasing the Service Agreement value to \$1,126,208.00, for an additional two-year term effective August 13, 2019.

**Funding Detail:**

Fund: 4200 (Wastewater)  
Organization/Activity: 33110 (Oso Wastewater Plant)  
Mission Element: 064 (Treat Wastewater)  
Project # (CIP Only): N/A  
Account: 530215 (Maintenance & Repairs-Contracted)

**RECOMMENDATION:**

Staff recommends approval of this motion authorizing an Amendment for an additional two-year option period to the maintenance Service Agreement for the monitoring and functioning of the Breakpoint Chlorination System at the Oso Wastewater Treatment Plant.

**LIST OF SUPPORTING DOCUMENTS:**

Amendment No.3 – Preventative Maintenance of the Breakpoint Chlorination System Service Agreement