



AGENDA MEMORANDUM

Action Item for the City Council Meeting of August 29, 2023

DATE: August 29, 2023

TO: Peter Zaroni, City Manager

FROM: Wesley Nebgen, Director of Water System Infrastructure
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Vibration Analysis and Condition Monitoring for Blowers

CAPTION

Motion authorizing execution of a three-year service agreement, with two one-year options, with The Vibration Guys, LLC, of Pearland, Texas, in an amount not to exceed \$231,351.00, and a potential amount of \$385,585.00 if the options are exercised, for vibration analysis and condition monitoring of the blowers at the wastewater treatment plants, with FY 2023 funding of \$32,132.08 from the Wastewater Fund.

SUMMARY:

This agreement will provide real-time vibration analysis and monitoring services for the blowers at the wastewater treatment plants (WWTPs). Services will include vibration monitoring for predictive maintenance of wastewater blower motor assemblies and relevant staff training for future in-house monitoring.

BACKGROUND AND FINDINGS:

Blowers at wastewater treatment plants (WWTPs) are critical equipment that provide dissolved oxygen (DO) for the wastewater biological treatment process. Blower equipment failures can be catastrophic for WWTPs. Condition monitoring, including vibration analysis, will provide early indication of a failure before it becomes significant and causes damage to the equipment.

This contract provides real-time monitoring and analysis of the blowers at City's six WWTPs. The monitoring findings will be used to diagnose the potential problems for staff

to take preventative maintenance and keep the continuous operations of blowers.

The Vibration Guys have completed projects for many large local customers including Exxon, Oxy, Lyondell Bassell and Citgo. Staff reached out to Lyondell Bassell and Citgo and were provided positive references related to the contractor's performance on past projects.

PROCUREMENT DETAIL:

The Finance & Procurement Department conducted a competitive Request for Bids process to obtain bids. The City received two bids. One of the bids was non-responsive for failure to bid on all items. Staff is recommending an award to The Vibration Guys, LLC. In previous years, these services were obtained by processing quotes.

ALTERNATIVES:

Other means of condition monitoring exist, including thermal monitoring, power monitoring, and oil and lubrication analysis. These methods will be employed in addition to vibration analysis and the results will be analyzed by software and by a technician to provide feedback. The alternative to condition monitoring is 'run to failure' and time-based preventative maintenance.

FISCAL IMPACT:

The fiscal impact for FY 2023 is \$32,132.08.

FUNDING DETAIL:

Fund:	4200	Wastewater
Organization/Activity:	33110	Oso Wastewater Plant
Department:	46	Wastewater
Project # (CIP Only):		
Accounts:	530215	Maint. & repairs-contracted

RECOMMENDATION:

Staff recommends approval of this motion authorizing a three-year service agreement with two one-year options with The Vibration Guys, LLC as presented.

LIST OF SUPPORTING DOCUMENTS:

Service Agreement
Bid Tabulation