



AGENDA MEMORANDUM

Action Item for the City Council Meeting September 24, 2019

DATE: September 9, 2019

TO: Peter Zaroni, City Manager

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Construction Contract
ONSWTP Dredging of Lagoons 5 and 6

CAPTION:

Motion awarding a construction contract to Terrapure Environmental (Environmental Solutions) of Tonawanda, New York for dredging, dewatering, and disposal of residuals from O.N. Stevens Water Treatment Plant (ONSWTP) Lagoons 5 and 6, in City Council District 1, in the amount of \$1,799,550, effective upon issuance of notice to proceed, with funding approved and available in Water Operating Budget.

SUMMARY:

This construction project provides for dredging, dewatering, hauling and disposal of approximately 9,500 dry tons (DT) of water treatment plant residuals (sludge) from existing Lagoons 5 & 6. The sludge will be hauled to the Cefé Valenzuela Landfill for beneficial reuse as alternative daily cover material.

BACKGROUND AND FINDINGS:

The water treatment process removes suspended solids from raw water by introduction of a coagulant, known as alum, to accelerate the precipitation and removal of suspended solids by settlement. The suspended particles settle to the bottom of the water plant's sedimentation basins. The sedimentation basins are equipped with systems that move the solids to a common sump where

they are then pumped to Lagoons 5, 6 and 7 for onsite storage. Once in the lagoons, there is further settlement of solids and the resulting water is re-circulated back to the pre-sedimentation basin where it re-enters the treatment process. Currently, the on-site lagoons at the ONSWTP do not have an effective means to drain or remove solids. The solids must be removed by periodic dredging. The Capital Improvement Plan does include a long-term project for new Solids Handling and Disposal Facilities at ONSWTP. The Water Utilities Department has received an Engineering Letter Report regarding the long-term project. Funding for design and construction is currently programmed in Fiscal Years 2022-2023 and 2023-2024. Other Capital Improvement Plan projects are prioritized to occur prior to the new Solids Handling and Disposal Facilities at ONSWTP. Accumulated solids will need to be periodically dredged and hauled offsite until the long-term project is completed.

In 2004, Lagoons 5 and 6 were dredged for the first time since original construction in 1988. The level of sludge accumulation in Lagoons 5 and 6 are nearing the point where it can interfere with treatment plant operations. City Council approved a contract to dredge Lagoon 7 in 2017. The dredging of Lagoon 7 in 2017 was conducted by American Process Group, Inc. Tacoma, Washington at a cost of approximately \$200 per dry ton. The current cost by Terrapure Environmental (Environmental Solutions) Tonawanda, New York for dredging of Lagoons 5 and 6 is approximately \$190 per dry ton.

Additionally, the Texas Commission on Environmental Quality conducted a Comprehensive Compliance Investigation of the ONSWTP in July 2019 and found that Lagoons 5 and 6 were filled with excess vegetation. TCEQ states that overgrowth in sludge lagoons can deplete the area to which sludge can settle and due to agitation from the vegetation, prevent an effective settling process sending an undecanted mix back to the plant.

This provides the removal of sludge accumulation from Lagoons 5 and 6 at the O.N. Stevens Water Treatment Plant and includes:

- Dredging and dewatering
- Hauling and disposal of 9,500 dry tons to the Cefé Valenzuela Landfill

On August 16, 2019 the City received proposals from five (5) bidders. A summary of the bids is provided below:

BID SUMMARY	
CONTRACTOR	BID AMOUNT – BASE BID
Terrapure Environmental (Environmental Solutions) Tonawanda, New York	\$1,799,550
American Process Group, Inc. Tacoma, Washington	\$1,845,523
Dredgit Environmental Corporation Houston, Texas	\$2,306,500
Renda Environmental Fort Worth, Texas	\$3,297,000
Syngaro of Texas-CDR Inc. Baltimore, Maryland	\$3,771,726
<i>Engineer’s Opinion of Probable Cost</i>	<i>\$2,000,000</i>

The City and LNV, Inc., analyzed the bids in accordance with the contract documents and determined that Terrapure Environmental (Environmental Solutions) is the lowest responsive and responsible bidder.

ALTERNATIVES:

Not accepting the low bid from Terrapure Environmental (Environmental Solutions) will delay the project and allow continued accumulation of sludge. Sludge accumulation can negatively affect the quality of water produced and will ultimately interfere with water treatment processes.

FISCAL IMPACT:

This contract award in the amount of \$1,799,550 to Terrapure Environmental (Environmental Solutions) of Tonawanda, New York for dredging, dewatering, and disposal of residuals from ONSWTP Lagoons 5 and 6 conforms to the FY 2019 Capital Improvement Planning (CIP) Budget with funds for this project available from Water Operational Funds in the Stevens Filter Plant budget. This project must be approved and encumbered this fiscal year.

FUNDING DETAIL:

Fund: Water Fund (Fund 4010)
Org: Stevens Filter Plant (Org 31010)
Mission Element: Produce Treated Water (ME 062)
Project: O.N. Stevens Water Treatment Plant (ONSWTP) Lagoons 5 and 6 (Project 19052A)
Account: Maintenance & Repairs – Contracted (Act 530215)
Amount: \$1,799,550

RECOMMENDATION:

City Staff and LNV, Inc. recommends the construction contract be awarded to Terrapure Environmental (Environmental Solutions) in the amount of \$1,799,550 for O.N. Stevens Water Treatment Dredging Lagoons 5 and 6. The dredging is planned to begin in October 2019 and completed by March 2020.

LIST OF SUPPORTING DOCUMENTS:

Location Map
Presentation
Bid Tab