



AGENDA MEMORANDUM

Action Item for the City Council Meeting of June 18, 2019

DATE: June 18, 2019

TO: Peter Zaroni, City Manager

FROM: Kevin Norton, Director of Water Utilities
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<p>Purchase of Polyaluminum Chloride and Aluminum Chlorohydrate chemicals from multiple suppliers</p>
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CAPTION:

Resolution authorizing the purchase of a thirty-day supply of three coagulant chemicals for a pilot program (with Texas Commission on Environmental Quality concurrence) aimed at reducing the overall cost of water treatment; with Brenntag Southwest, Inc. of Houston, Texas for \$72,161.28; with Chemtrade Chemicals US, LLC of Parsippany, New Jersey for \$69,662.00; and with Geo Specialty Chemicals for \$49,999.00 for a total of \$191,822.28 funded through the Water Fund.

PURPOSE:

The purpose of this item is to purchase an alternative coagulant chemical for the water supply under a pilot program to determine if the City can reduce the cost of chemicals needed to treat water.

BACKGROUND AND FINDINGS:

The City currently uses a chemical known as liquid aluminum sulfate (alum) as a coagulant to treat water. This coagulant is used as one of the first steps in water treatment to get the water as clear and particle-free as possible. Raw water often holds tiny suspended particles that are difficult for the filters to catch. The alum causes these particles to clump together so they can settle out of the water or be trapped by the filters.

Staff at the O.N. Stevens Water Treatment Plant are looking for ways to reduce the chemical costs of treating the water. Polyaluminum chloride (PACL) and Aluminum

Chlorohydrate (ACH) are alternative coagulants that are being tested to replace the alum currently being used. PACL and ACH are believed to produce less sludge and not decrease the pH of the water as much as alum, which then results in a smaller requirement for another chemical known as caustic soda. Although the cost of the PACL is higher than alum, the corresponding reduction in the use of caustic soda should save overall costs to the City. The cost savings and water quality will be evaluated along with the new chemical results before a decision is reached on its use. The O.N. Stevens Water Treatment Plant staff have conducted jar tests of these chemicals and have worked with Texas Commission on Environmental Quality (TCEQ) to gain approval for a full-scale thirty-day test of the three company's chemicals to determine whether each of the chemicals will perform appropriately and provide an adequate replacement for the alum.

Once the tests are concluded and results presented to TCEQ for final approval, the City will conduct a Request for Bid/Proposal for the solicitation of a supply agreement for the use of this chemical. If the test results do not prove out, the City will continue using the current coagulant chemical, alum, to treat the water.

The Contracts and Procurement Department has worked with the Utilities Department to approve the purchase of these chemicals for this test as an exception to the procurement policies as we need to test all three available products before a larger open purchase can be conducted. Also, only products approved by TCEQ may be included in the testing and subsequent purchases.

ALTERNATIVES:

Not applicable

OTHER CONSIDERATIONS:

San Patricio Municipal Water District, which treats essentially the same blend of Raw Water as us, converted to and has been using PACI for approximately two years. Overall, they have experienced a reduction in treatment costs.

CONFORMITY TO CITY POLICY:

This purchase conforms to the City's purchasing policies and procedures and State statutes regulating procurement.

EMERGENCY / NON-EMERGENCY:

Non-emergency

DEPARTMENTAL CLEARANCES:

Utilities

FINANCIAL IMPACT:

X Operating ☐ Revenue ☐ Capital ☐ Not applicable

Fiscal Year: 2018-2019	Current Year	Future Years	TOTALS
Line Item Budget	\$8,384,942.41	0	\$8,384,942.41
Encumbered / Expended Amount	\$4,430,603.01	0	\$4,430,603.01
This item	\$191,822.28	0	\$191,822.28
BALANCE	\$3,762,517.12	0	\$3,762,517.12

Funding Detail:

Fund: 4010 Water Fund
Organization/Activity: 31010 Stevens Filter Plant
Mission Element: 062 Treat water
Project # **(CIP Only)**: n/a
Expenditure Account: 520010 Purification chemicals
Revenue Account: n/a

RECOMMENDATION:

Staff recommends approval of the action as presented

LIST OF SUPPORTING DOCUMENTS:

Resolution