AGENDA MEMORANDUM
Future Item for the City Council Meeting of December 11, 2018
Action Item for the City Council Meeting of January 8, 2019

DATE: November 15, 2018

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Professional Services Contract
ONSWTP On-Site Hypochlorite Generation
(Capital Improvement Program)

CAPTION:

Motion to authorize execution of Amendment No. 1 to a professional services contract with Hazen and Sawyer in the amount of $914,100 for a total restated fee of $963,600 for O.N. Stevens Water Treatment Plant (ONSWTP) On-Site Hypochlorite Generation.

PURPOSE:

This contract provides for preliminary design services to convert primary water disinfectant from chlorine gas to sodium hypochlorite.

BACKGROUND AND FINDINGS:

ONSWTP currently uses a chlorine gas system for disinfection with plans to convert to an on-site sodium hypochlorite generation (OSG) and feed system. The existing chlorine gas system requires two (2) 90-ton liquid chlorine railcars, chlorine gas measurement building, five (5) 1-ton liquid chlorine cylinders, and chlorine gas injection equipment. The chlorine gas system also creates a serious challenge to safely manage up to 180 tons of liquid chlorine. Per EPA requirements, the ONSWTP maintains and regularly updates a Risk Management plan. Many of the major components of the existing chlorine gas disinfection system are now approaching the end of their useful service life.

To meet future demands for water supply and treatment and to address safety concerns, the City considered three disinfection alternatives under a separate, independent project. The findings and final recommendation were presented to City Council in Executive Session on March 20, 2018. The City Council directed Utilities to proceed with the proposed conversion to sodium hypochlorite.

This project will convert existing chlorine gas system to OSG system. The new OSG will be state of the art technology to increase system reliability while reducing operational cost and potential safety concerns. The OSG produces sodium hypochlorite (common household bleach) by passing electric current through a brine solution made of salt and water. This contract provides for preliminary design phase services for a new OSG system at the ONSWTP. Engineer will perform the following tasks:

- Perform site survey and subsurface utility investigation
- Prepare scope and requirements for geotechnical investigation
- Conduct numerous site visits, perform field investigations, and meet with Plant staff to assess impact on existing facility process areas
- Develop preliminary process schematics, site and facility layout plans with general architecture features, preliminary instrumentation schematics and control strategies
- Perform calculations to determine unit quantities, sizing, and additional design criteria
- Identify construction sequencing and disinfection system transition sequencing
- Conduct monthly project status and coordination meetings, risk management workshops, and coordinate with TCEQ
- Develop hypochlorite generation system vendor selection criteria, prepare qualification documents, and conduct site visits to enable integration of OSG system design with specific hypochlorite generators.

A subsequent professional services contract amendment for the complete design and engineering for the preparation of construction documents will be presented to City Council for approval after completion of preliminary phase in approximately 10 months.

Hazen and Sawyer was selected for this project under the RFQ 2016-06.

ALTERNATIVES:

1. Authorize execution of Amendment No. 1. (Recommended)
2. Do not authorize execution of Amendment No. 1. (Not Recommended)

OTHER CONSIDERATIONS:

CONFORMITY TO CITY POLICY:

Complies with statutory requirements for professional services contracts. Conforms to FY 2019 Capital Improvement Planning (CIP) Budget.

EMERGENCY / NON-EMERGENCY:

Non-Emergency

DEPARTMENTAL CLEARANCES:

Water Utilities

FINANCIAL IMPACT:

□ Operating □ Revenue **X Capital** □ Not applicable

Fiscal Year 2018-2019	Project to Date Expenditures (CIP only)	Current Year	Future Years	TOTALS
Budget	106,300	2,500,000	30,000,000	32,606,300
Encumbered / Expended Amount	106,300			106,300
This item		**914,100**	**0**	**914,100**
Future Anticipated Expenditures This Project		1,585,900	28,575	1,614,475
BALANCE	0	0	29,971,425	29,971,425

Fund(s): CIP Funds

RECOMMENDATION:

City staff recommends approval of Amendment No. 1 with Hazen and Sawyer.

LIST OF SUPPORTING DOCUMENTS:

Project Budget
Location Map
Presentation
Amendment No. 1