



Department Source: City Utilities - Sewer/Stormwater

To: City Council

From: City Manager & Staff

Council Meeting Date: May 21, 2018

Re: Professional Engineering Services Agreement with Black & Veatch Corporation for WWTP Phase 2 Improvements – Digester Complex

## Executive Summary

Staff has prepared for Council consideration an ordinance authorizing the City Manager to execute an agreement with Black & Veatch Corporation for a not to exceed amount of \$752,839 to provide professional engineering services related to Wastewater Treatment Plant Phase 2 Improvements – Digester Complex. Black & Veatch Corporation was selected for this project in accordance with the City's professional consultant procurement guidelines.

## Discussion

In 2007, the City retained Black & Veatch to provide the Conceptual Design Report for the Columbia Regional Wastewater Treatment Plant (CRWWTP) Improvements. In that report, it was recognized that upgrades and rehabilitation to the Digester Complex would be necessary and should be considered separately from the Phase 1 improvements. Phase 1 improvements were completed in 2014 using Sewer Bonds approved by voters in 2008 and included two new process trains and upgrades to most of the existing plant except the Digester Complex. The Digester Complex rehabilitation project was included as a project to be partially funded by bonds approved by voters in 2013.

The digester complex was originally constructed in 1983. The purpose of a digester is to perform anaerobic reduction of organic solids in the wastewater process. The process produces a stable biosolid that is land applied to agricultural property as a fertilizer. Digestion of the solids also produces methane gas, this gas is used to provide heat to maintain the operating temperature of the digesters and to provide heat for some of the buildings on site. Roofs on two of the four digesters are original and the other two were replaced in the 1990s, all are in need of rehabilitation or replacement. The mixing system for the digesters is outdated and inefficient and needs to be replaced. Black & Veatch will perform a detailed assessment of the existing digester facilities that are in need of rehabilitation and upgrades. After the assessment, Black & Veatch will provide preliminary and final designs and construction plans for improvements to the digester complex. A complete copy of the scope of basic services is attached.

The not to exceed design fees for this project are \$752,839 which is less than 11% of the anticipated construction cost. This amount is within the usual and customary guidelines for this type of project.



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Once construction is ready to proceed, it will be necessary to amend this contract to include Construction Phase engineering services. This will be an additional approximately \$626,000 cost or 9% of anticipated construction costs.

## Fiscal Impact

Short-Term Impact: The engineering contract is for a not to exceed amount of \$752,839 and will be paid from the Sanitary Sewer Funds budgeted for this project.

Long-Term Impact: The construction and engineering costs for this project are estimated to be approximately \$7,000,000. The engineering design will provide a more accurate estimate of total costs depending on the total rehabilitation needs of the facility and will be available at the time of the Interested Parties meeting and Public Hearing.

## Strategic & Comprehensive Plan Impact

### Strategic Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Operational Excellence, Tertiary Impact: Tertiary

### Comprehensive Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Environmental Management, Tertiary Impact: Tertiary

## Legislative History

Date	Action
04/03/2017	(Ord23139) Authorizing the issuance of Sewerage System Revenue Bonds, Series 2017 in an amount on not to exceed \$16,405.00.
03/20/2017	(R37-17) Authorizing the public sale of Sewerage System Revenue Bonds, Series 2017 in an amount on not to exceed \$16,405.00.
04/16/2015	(Ord22383) Authorizing the issuance of Sewerage System Revenue Bonds, Series 2015, in the aggregate principal amount on not to exceed \$20,500.00
03/03/2015	(R11-15A) Authorizing the offering for sale of not to exceed \$20,500.00 principal amount of Sewage System Revenue Bonds, Series 2015, of the City of Columbia, Missouri.
07/22/2014	(R125-14) Transferring funds to offset expenditures relating to the November 2013 Special Bond Election for sanitary sewer improvements.



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01/02/2014	(Ord21742) Declaring the results of the Special Election held in the City of Columbia, Missouri on November 5, 2013.
08/05/2013	(Ord 21760) Calling a special election on whether to issue the Sewer System Revenue Bonds in the amount of \$32,340,000 for constructing, improving, repairing, rehabilitating, replacing, equipping, expanding, and extending the city-owned sewerage system.
07/01/2013	Pre-Council Meeting – General Obligation Bond Projects – Infrastructure Ballot Presentation
05/20/2013	Pre-Council Meeting – November Storm Water / Sewer Ballot Issue – Sewer Utility Presentation – Storm Sales Tax Presentation

## Suggested Council Action

Authorize the City Manager to execute and agreement with Black & Veatch Corporation to provide professional engineering services for WWTP Phase 2 Improvements – Digester Complex.