

Meeting Date (?) 05/10/2016

Subject Matter * (?) Approval of a contract with CDM Smith Inc. for design services
This must match rolling agenda entry

Department of Origin * WATER SERVICES

Submitted By * Mark Jurica

Type of Meeting * BCD Special Regular

Classification * Public Hearing Consent Statutory Regular

Ordinance * None First Read Second Read First & Only Read

Strategic Initiative * Public Safety Service
 Economic Development Infrastructure
 Quality of Life

Agenda Item Description * Consider approval of a professional services contract with CDM Smith Inc. to provide for engineering services for equipment improvements to be made to the Burton Creek Wastewater Treatment Plant (WWTP) in an amount not to exceed \$126,055.

Summary Statement *

Staff is requesting Council consider approving a professional services contract with CDM Smith Inc. (CDM Smith) for engineering services for equipment improvements at the Burton Creek WWTP. Services performed under this contract will be billed in a not to exceed amount of \$126,055. Services will be broken into three phases: (1) Design [\$75,431], (2) Bidding [\$13,076], and (3) Construction [\$37,548]. The Construction phase portion of the contract is an allowance not to exceed amount. The actual expense will not be known until the contractor is working. The design for this contract is heavily weighted toward instrumentation and controls, electrical, and structural design.

A description of improvements associated with this contract are listed below:

Bar Screen

The bar screen at Burton Creek was installed in 1999/2000. The bar screen has reached the end of its operational life. The design of the current installation is not the best fit for the plant's application. The bar channel at Burton Creek is 19 feet deep. During rain events, water levels within the bar channel rise due to rain-influenced flow and debris accumulates on the screen. The design of Burton Creek's bar screen does not accurately account for the depth of the channel. In instances of peak flow, the screen's motor housing becomes submerged under water as the rake completes each screening cycle. Water damage to the motor has been experienced and continues to present an operational threat. Furthermore, many of the bar screen's components are worn to a point where complete assembly replacement is needed to regain operational integrity.

Professional services performed under this contract will allow for design of a new bar screen capable of operation without submergence of the system's motor or electrical components. An engineering estimate of \$236,935 for purchase and installation of a new bar screen was provided by CDM Smith. This estimate is reflective of equipment pricing, installation, and contractor profit. A decision package for purchase and installation of a new bar screen is part of Water Services' Fiscal Year 2017 budget preparation.

Dumpster-Veyor

Sludge processing occurs daily at Burton Creek. Time for processing ranges from 4 to 6 hours per day depending on conditions within the plant. The Dumpster-Veyor is a rail-based container positioning system. A Dumpster-Veyor is currently installed at the Thompsons Creek WWTP. Staff is familiar with operation and maintenance of the Dumpster-Veyor system. The Dumpster-Veyor's autofill capability utilizes programmed logic, fill sensors, and interlocks to allow automation of the belt press, polymer blender, and booster pump during the dewatering process. This approach coincides with Water Services' minimalist approach for operation of its wastewater treatment plants. System automation allows plant operators to redirect focus to other needs within the plant while sludge dewatering is completed through instrumentation and programmed logic. An engineering estimate of \$221,827 for purchase and installation of a Dumpster-Veyor was provided by CDM Smith. This estimate is reflective of equipment pricing, installation, and contractor profit. A decision package for purchase and installation of a Dumpster-Veyor is part of Water Services' Fiscal Year 2017 budget preparation.

Funding for design, purchase, and installation of a Dumpster-Veyor is an approved decision package for the current budget year (Fiscal Year 2016: \$215,325). These funds will be used to pay for the design services in this request. All remaining money (\$89,270) in the decision package will be returned back to the fund balance. Staff postponed purchase of the Dumpster-Veyor this fiscal year after looking closer into the operational integrity of the bar screen. It is anticipated that bidding both projects together will yield better pricing within the construction market because both projects are located at the same facility.

Staff Analysis & Recommendation *

Water Services respectfully requests City Council approve the professional services contract with CDM to allow design of a new bar screen and Dumpster-Veyor system at the Burton Creek WWTP. Completed services under this contract will support plant operations and function.

Options *

(In Suggested Order of Staff Preference)

1. Approve proposed contract
2. Do not approve proposed contract and provide alternative direction

Funding Source *

Wastewater Fund (see Summary Statement for more details)

Attachments

CONTRACT-ENGINEERING SERVICES (Mayor-over \$50k) FINAL.doc

1.13MB

Please detail attachments and note attachments available for viewing in City Secretary's Office:
1. Professional Services Contract with CDM Smith Inc.

Dept. Head Signature

JAYSON E. BALFNECHT 05/01/16

**Deputy City Manager
Signature**

Hugh R. Walker

City Manager Signature



City Attorney Signature

Janis K. Hampton