



Legislation Text

File #: 2018-692, Version: 1

GLWA-CS-277

Fourteen Mile Road PCCP Water Main Condition Assessment and Pilot Study Evaluation

Agenda of: April 25, 2018
Item No.: **2018-692**
Amount: \$2,277,315.00

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

DATE: April 4, 2018

RE: Contract No. GLWA-CS-277

Fourteen Mile Road PCCP Water Main Condition Assessment and Pilot Study Evaluation

Vendor: Pure Technologies U.S., Inc.

MOTION

Upon recommendation of Cheryl Porter, Chief Operating Officer - Water and Field Services, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), authorizes the Chief Executive Officer (CEO) to **enter into Contract No. GLWA-CS-277 "Fourteen Mile Road PCCP Water Main Condition Assessment and Pilot Study Evaluation" with Pure Technologies U.S., Inc., at a cost not to exceed \$2,277,315.00 for a duration of eighteen (18) months;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The GLWA has over 430 miles of prestressed concrete cylinder pipe (PCCP) installed throughout the system. Recent catastrophic failures have occurred over the last two years and include: (1) an 84-inch diameter transmission main near North Service Center, (2) a 48-inch diameter transmission main in Farmington Hills, and (3) a 48-inch diameter main in

Livonia. The need to conduct evaluations of high consequence mains is clear. This innovative proposal will pilot the condition assessment, evaluation, and long-term monitoring of an 8-mile length of the 14 Mile Road transmission main between the Franklin and Haggerty Booster Pump Stations. This single main has no redundant looping, and the proposed Haggerty Loop to connect the Eight Mile Road transmission main and the Haggerty Booster Pump Station is in the design phase with a multi-year construction period.

JUSTIFICATION

The purpose of this pilot study will be to develop an overall program to determine the best approach in evaluating the condition of PCCP mains within the system. The unique features of this program that limit it to a single source are:

- 1) SmartBall - leak and air pocket detection tool
- 2) PipeDiver - electromagnetic inspection tool to detect broken prestressed wires within the PCCP mains. These broken wires are predecessors to the catastrophic nature of the PCCP main failure.
- 3) Soundprint -an acoustic fiber optic monitoring system to monitor for broken prestress wires after the PipeDiver evaluation.

All of these technologies will be deployed in the transmission main under service. GLWA is unaware of any other technologies or vendors that can complete the objectives of the study while maintaining the transmission main in service.

The cost of repair after the 14 Mile Road break was approximately one million dollars. This direct cost does not include the indirect costs for the loss of water service during the emergency break and subsequent boil water advisories.

GLWA staff and leadership have reviewed this proposal and recommend that the Board approve this single source procurement due to the risk to the GLWA system posed by the unknown condition of the installed PCCP piping and the unique capabilities that this vendor can provide.

Financial Plan Impact

Summary: This project encompasses both Operations & Maintenance expense as well as capitalizable costs. Sufficient funds are provided in the Operations & Maintenance (O&M) financial plan for this project. Sufficient funds are available in the Improvement & Extension (I&E) Fund but will require a plan amendment for this project.

Funding Source: Operations & Maintenance (O&M) Budget and Improvement & Extension (I&E) Budget

Cost Center: Field Service Operations (Centralized Service Cost Center 882431)

Expense Type: Contractual Operating Services (5910-882431.000-617900-WS6930) and Capital Outlay over \$5k (I&E-Capitalized) (5506-882431.000-901100-CENT01)

Estimated Cost by Year and Related Estimating Variance: See table below

Fiscal Year	O&M Amount	I&E Amount	Total
FY 2018 Budget	\$200,000.00	\$0.00	\$200,000.00
FY 2019 Plan	\$785,175.00	\$0.00	\$785,175.00
FY 2019 Financial Plan Amendment	\$0.00	\$1,149,140.00	\$1,149,140.00
FY 2020 Plan	\$143,000.00	\$0.00	\$143,000.00
Financial Plan Estimate	\$1,128,175.00	\$1,149,140.00	\$2,277,315.00
Maximum Contract	\$1,128,175.00	\$1,149,140.00	\$2,277,315.00
Estimating Variance	\$0.00	\$0.00	\$0.00

Savings, Cost Optimization, and Revenue Enhancement Impact

By implementing this program GLWA operations will be more cost effective because the focus is on prevention and reducing emergency repairs.

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on April 11, 2018. The Operations and Resources Committee unanimously recommended that the GLWA Board adopt the resolution as presented.

SHARED SERVICES IMPACT

This item does not impact the shared services agreement between GLWA and DWSD.