



Legislation Text

File #: 2018-1036, Version: 1

GLWA-CS-102

Professional Engineering Services for Rehabilitation of Pump Station No. 1 Improvements

Agenda of: December 12, 2018

Item No.: **2018-1036**

Amount: \$4,986,249

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: December 4, 2018

**RE: GLWA-CS-102
Professional Engineering Services for Rehabilitation of Pump Station No. 1
Improvements**

MOTION

Upon recommendation of Navid Mehram, Chief Operating Officer- Wastewater Operating 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-102, "Professional Engineering Services for Rehabilitation of Pump Station No. 1 Improvements" with Wade Trim Associates, at a cost not to exceed \$4,986,249.00 for a duration of Sixty (60) months;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

GLWA operates two raw sewage pumping stations: Influent Pumping Station No. 1 (PS-1) and Influent Pumping Station No. 2 (PS-2), at the Water Resource Recovery Facility. Raw wastewater (influent) from the collection system flows to PS-1 through the Detroit River Interceptor (DRI) and the Oakwood Interceptor and is pumped to an elevation that allows the wastewater to flow through primary treatment by gravity.

PS-1 was constructed in the late 1930s and has eight constant speed pumps of various capacities and has a firm capacity (defined as a single largest pump out of service) of 1,025 million gallons per day (MGD). This is the majority of the 1,700 (MGD) conveyance capacity required by the Water Resource Recovery Facility (WRRF) as required by its National Pollutant Discharge Elimination System (NPDES) permit. The pumps at PS-1 were last rehabilitated in 2004 and 2005. Flow measurement from PS-1 is currently estimated using pump curves or using 1960s technology.

JUSTIFICATION

This project is necessary because PS-1 provides the majority of the NPDES required pumping capacity for the WRRF, and the eight pumping units are in need of rehabilitation due to normal operational wear and tear over the past 14 years. Further reduction of the already reduced pumping capacities of these pumps may result in violation of the NPDES permit requirements for pumping capacity. In addition, there are reliability issues with the electrical components necessary to start the pumps. Also, since large amounts of grit enter PS-1, the flooded section where the pumps draw their water from will be studied to optimize grit distribution through all eight pumps. Flow measurement opportunities will be studied and improved if economically feasible. Finally, the mechanical, architectural, structural and electrical systems of the facility all have components that are past their useful life and therefore require repair or replacement.

FINANCIAL PLAN IMPACT

Summary: Sufficient funds are provided in the financial plan for this project.

Funding Source: Wastewater Construction Bond

Cost Center: Wastewater Engineering

Expense Type: Construction (5421-892211.000-617950-211006)

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

Fiscal Year

FY 2019 Budget	\$442,000.00
FY 2020 Budget	1,593,000.00
FY 2021 Budget	178,000.00
FY 2022 Budget	310,000.00
FY 2023 Budget	178,000.00
FY 2024 Budget	<u>36,000.00</u>
Financial Plan Estimate	\$ 2,737,000.00
Proposed Contract Award	<u>4,986,249.00</u>

Negative Estimating Variance \$2,249,249.00

SAVINGS, COST OPTIMIZATION, AND REVENUE ENHANCEMENT IMPACT

Cost savings are not determinable at the time of this award.

The award of this contract to the vendor creates a negative estimating variance of \$1,899,249.00. This variance will be funded from capital reserves.

Project estimate	\$ 2,737,000.00
Proposed award	<u>4,986,249.00</u>
Capital reserve adjustment	\$ (2,249,249.00)

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on December 12, 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.