



Legislation Text

File #: 2020-305, Version: 1

Contract No. 1904449

Lake Huron Water Treatment Plant Pilot Plant Design Build Services

CIP# 111011 / BCE Score: N/A

Agenda of: September 23, 2020

Item No.: **2020-305**

Amount: \$3,157,387.00

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: August 31, 2020

RE: **Contract No. 1904449**
Lake Huron Water Treatment Plant Pilot Plant Design Build Services
Vendor: Brown and Caldwell, LLC

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. 1904449 “Lake Huron Water Treatment Plant Pilot Plant Design Build Services” with Brown and Caldwell, LLC, at a cost not to exceed \$3,157,387.00 for a duration of 730 days;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The Lake Huron Water Treatment Plant (LHWTP) is the only plant in the GLWA system that draws its raw water from Lake Huron. As such, LHWTP is unique in the GLWA system. The new pilot plant will be a small-scale replica of the existing plant intended to safely test modifications to the coagulation, filtration, and disinfection processes that satisfy and exceed water treatment requirements.

The pilot plant will be able to mimic both conventional and direct filtration treatment parameters and compare resulting finished water quality against existing full-scale treatment. Once operational, the pilot plant's first runs will investigate the impact of modifying operating parameters, including chemical coagulation and flocculation, on Lake Huron water. It will be the first step in assessing our ability to switch from conventional treatment to direct filtration treatment. Subsequent projects at the pilot plant will include training for GLWA team members, research driven projects, and tests of innovative products.

This project was brought forward in the CIP plan due to some recent developments in conversation with the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Specifically:

1. One primary driver was deficiency in the flocculators identified during the sanitary survey process with EGLE. EGLE is advocating that we push up the timing on the flocculation rehabilitation project. We desire to incorporate time to research the different technologies to find and advance operational improvements and not just replace the current outdated and inefficient technology.
2. Finally, the master plan includes conversion of the LHWTP from conventional treatment to direct filtration treatment. We desire to understand how to make the transformation for the greatest operational benefit.

JUSTIFICATION

The LHWTP Pilot Plant project implementation will provide the selected Design Build team to not only plan, design and construct the pilot plant, but also assist GLWA in its master planning efforts for operation and utilization of the pilot plant following construction. This opportunity to learn and experiment with water treatment in a controlled environment will provide a unique opportunity for education and innovation.

FINANCIAL PLAN IMPACT

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

Funding Source: Water Construction Bond

Cost Center: Water Engineering

Expense Type: Construction (5519-882111.000-616900-111011)

Estimated Cost by Year and Related Estimating Variance: As noted above, this project was originally planned to begin in FY 2026 with a total cost of \$1,712,000.00. The financial plan is able to accommodate: a) the advanced timing, and b) the estimating variance in the current financial plan capital reserves due to the availability of funding from prior years.

SAVINGS, COST OPTIMIZATION, AND REVENUE ENHANCEMENT IMPACT

This project is a pilot plant for conventional and direct filtration. Cost savings are not determinable at

the time of this award.

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on September 9, 2020. 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.