



## Legislation Text

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File #: 2023-124, Version: 1

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### Contract No. 2101680

### Lake Huron Water Treatment Plant Progressive Design Build Instrumentation Controls Improvements

CIP #111006 / BCE Score: 61.00

Agenda of: April 26, 2023

Item No.: **2023-124**

Amount: \$5,125,915.00

**TO:** The Honorable  
Board of Directors  
Great Lakes Water Authority

**FROM:** Suzanne R. Coffey, P.E.  
Chief Executive Officer  
Great Lakes Water Authority

**DATE:** March 31, 2023

**RE:** **Contract No. 2101680**  
**Lake Huron Water Treatment Plant Progressive Design Build**  
**Instrumentation Controls Improvements**  
**Vendor: Brown and Caldwell Constructors**

### 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. 2101680, "Lake Huron Water Treatment Plant Progressive Design Build Instrumentation Controls Improvements" with Brown and Caldwell Constructors, at a cost not to exceed \$5,125,915.00 for a duration of 2,000 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) was originally constructed in 1974 with a maximum treatment capacity of 210 million gallons per day (MGD). During the 1990s, the plant was expanded to 400 MGD. As part of the 2015 Water Master Plan Update, LHWTP's capacity will be aligned with

the decreasing trend in water demands. The overall firm capacity of LHWTP's high lift pumping capacity will be modified to 380 MGD. The plant's firm treatment capacity is being aligned to 320 MGD. The majority of LHWTP's flow is between 100 and 200 MGD.

Contract No. 2101680 is a progressive design build contract to affect the rehabilitation of the instrumentation and controls at the Lake Huron Water Treatment Plant. In general, this project addresses end-of-life and failing instrumentation and controls at the plant, a rebuilding of the control room, and controls improvements for the filtration system.

### **JUSTIFICATION**

Most of the existing control software, control, instrumentation, network, and related process equipment was installed as part of the upgrade during the 1990s, with a few version updates, and needs replacement. Filter and operation controls are in need of upgrade. The system includes a myriad of systems that are controlled by approximately ten different models of programmable logic controllers (PLCs), of which many are obsolete.

This progressive design build contract may be amended upon review and acceptance of lump sum Phase 2 proposal for construction phase services. The proposal will be prepared upon completion of the Design. GLWA may accept or reject the proposal. Upon acceptance by GLWA of the proposal, the lump sum will be set forth in a future amendment.

### **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 (5519-882111.000-616900-111006)

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

Fiscal Year

FY 2023 Planned Spend	\$ 163,000.00
FY 2024 Planned Spend	979,000.00
FY 2025 Planned Spend	976,000.00
FY 2026 Planned Spend	8,730,000.00
FY 2027 Planned Spend	9,108,000.00
FY 2028 Planned Spend	9,133,000.00

FY 2029 Planned Spend	<u>8,036,000.00</u>
Financial Plan Estimate	\$37,125,000.00
Proposed Contract Award	<u>5,125,915.00</u>
Estimating Variance	\$31,999,085.00
FY 2023 Plan Spend per CIP	\$ 163,000.00
FY 2023 Plan Spend adjusted for award value	\$ 55,000.00
FY 2023 Estimating Variance	\$ 108,000.00

A budget amendment will be made to return the estimating variance for FY23 of \$108,000.00 back to Capital Reserves. The 2024-2028 CIP Draft 2 Plan document has \$37,125,000.00 allocated for the proposed contract's construction phase. The balance of the estimating variance will be adjusted for in the future CIP Plan documents.

### **COMMITTEE REVIEW**

This item was presented to the Operations and Resources Committee at its meeting on April 12, 2023. 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.