



## Legislation Text

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File #: 2021-426, Version: 1

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**Contract No. 1904231**

**Northeast Water Treatment Plant Flocculator Replacement**

**CIP# 112006 / BCE Score: 67.40**

Agenda of: November 18, 2021

Item No.: **2021-426**

Amount: \$12,699,000.00

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

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

**DATE:** November 3, 2021

**RE: Contract No. 1904231  
Northeast Water Treatment Plant Flocculator Replacement  
Vendor: Commercial Contracting Corporation**

### 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 Interim Chief Executive Officer (ICEO) to **enter into Contract No. 1904231 “Northeast Water Treatment Plant Flocculator Replacement” with Commercial Contracting Corporation, at a cost not to exceed \$12,699,000.00 for a duration of 1,879 days;** and authorizes the ICEO to take such other action as may be necessary to accomplish the intent of this vote.

### BACKGROUND

Contract No. 1904231 is a construction contract that involves the replacement of the flocculation system at the Northeast Water Treatment Plant (Northeast WTP). The Northeast WTP was constructed in 1956 and has a state-rated capacity of 190 million gallons per day (mgd). The existing flocculators are original to the plant, are no longer functional, and are beyond repair. Flocculation is an integral part of the major pretreatment processes, including coagulation, flocculation and

sedimentation. The flocculation process allows the coagulated suspended solids to agglomerate into larger, settable particle masses that can then be effectively removed in the sedimentation basins. Without adequate flocculation, like at the Northeast WTP, a substantial amount of suspended solids and colloids will not settle and instead are loaded onto the downstream filters, which reduces filter runtime, efficiency and effectiveness. More important, the chances are greater that colloids (i.e., microscopic particles) will break through the filters when flocculation is inadequate. This is a concern because colloidal matter can harbor pathogens by physical attachment, and some pathogens (e.g., *Cryptosporidium parvum*) are resistant to chlorine disinfection and therefore their removal through the flocculation, sedimentation and filtration processes is important to safeguard water quality. Complete treatment as defined in Rule 103(j) of the Michigan Safe Drinking Water Act, Public Act 399, as amended (Act 399), is a series of treatment processes that include coagulation, flocculation, sedimentation, filtration, and disinfection. Therefore, the Northeast WTP is not equipped to provide complete treatment as defined in Michigan's Act 399 due to the inoperability of flocculation at the plant. The Michigan Department of Environment, Great Lakes, and Energy (EGLE) noted in its 2021 sanitary survey of the Northeast WTP that the lack of flocculation at the plant represents a non-compliance with Act 399 requirements. EGLE stated in the 2021 sanitary survey for the Northeast WTP that it will consider this non-compliance outstanding until new flocculators are installed and placed into service.

### **JUSTIFICATION**

Construction of the new flocculation system at the Northeast WTP under this proposed Contract No. 1904231 is essential to provide drinking water of unquestionable quality. Flocculation is a major unit operation in the conventional water treatment process to assure that harmful microorganisms are satisfactorily removed from drinking water. Moreover, the State of Michigan's regulatory agency (EGLE) that has primacy for drinking water regulations in the State of Michigan has indicated that the condition of the flocculation system at Northeast WTP is not compliant with Act 399 Safe Drinking Water requirements. Therefore, implementation of this project will reduce risks associated with waterborne disease outbreaks, correct a regulatory non-compliance, and adhere to the values of GLWA.

### **FINANCIAL PLAN IMPACT**

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

**Funding Source:** Water Construction Fund

**Cost Center:** Water Engineering

**Expense Type:** Construction (5519-882111.000-616900-112006)

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

Fiscal Year

|                              |                      |
|------------------------------|----------------------|
| FY 2022 Planned Spend        | \$2,500,000.00       |
| FY 2023 Planned Spend        | 3,000,000.00         |
| FY 2024 Planned Spend        | 3,000,000.00         |
| FY 2025 Planned Spend        | <u>2,500,000.00</u>  |
| Financial Plan Estimate      | \$11,000,000.00      |
| Proposed Contract Award      | <u>12,699,000.00</u> |
| Negative Estimating Variance | (\$1,699,000.00)     |

This negative estimating variance will be funded from Capital Reserves.

### **COMMITTEE REVIEW**

This item was presented to the Operations and Resources Committee at its meeting on November 10, 2021. 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.