



## Legislation Details (With Text)

**File #:** 2020-349      **Version:** 1      **Name:**  
**Type:** Resolution      **Status:** Passed  
**File created:** 10/7/2020      **In control:** Board of Directors  
**On agenda:** 10/28/2020      **Final action:** 10/28/2020  
**Title:** Proposed Amendment No. 2  
Contract No. GLWA-CS-120  
Freud and Conner Creek Pump Station Improvements Study and Design  
CIP# 232002 / BCE Score: 79.6  
**Sponsors:** Cheryl Porter, Todd King  
**Indexes:** Water Operations  
**Code sections:**  
**Attachments:**

Date	Ver.	Action By	Action	Result
10/28/2020	1	Board of Directors	Approved	Pass
10/15/2020	1	Operations and Resources Committee	Recommended for Approval	Pass

### Proposed Amendment No. 2

### Contract No. GLWA-CS-120

### Freud and Conner Creek Pump Station Improvements Study and Design

### CIP# 232002 / BCE Score: 79.6

Agenda of: October 28, 2020

Item No.: **2020-349**

Amount:	Original Contract Amount	\$ 4,416,547.48
	Amendment No. 1	0.00
	Proposed Amendment No. 2	19,994,400.00
	Total Contract Amount	\$24,410,947.48

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

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

**DATE:** October 7, 2020

**RE: Proposed Amendment No. 2**  
**Contract No. GLWA-CS-120**  
**Freud and Conner Creek Pump Station Improvements Study and Design**  
**Vendor: Arcadis of Michigan, 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. GLWA-CS-120 Proposed Amendment No. 2 “Freud and Conner Creek Pump Station Improvements Study and Design” with Arcadis of Michigan, LLC, at an increased cost of \$19,994,400.00 for a total cost not to exceed \$24,410,947.48, and an increased duration of 69 months for a total duration of 133 months;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

### **BACKGROUND**

The Freud and Conner Creek pump stations are the two largest pumping facilities in the GLWA system. They each have a 2 billion gallon per day capacity to discharge combined storm and sanitary water to treatment at the Conner Creek CSO control facility prior to discharge to the Detroit River during wet weather events. During dry weather, each station pumps sanitary sewage to the Detroit River Interceptor (DRI) which directs flow to the WRRF for treatment.

The Conner Creek pump station was originally constructed in 1928 as a storm water pumping station. A sanitary pump station was added in 1958. The Freud pump station was built in 1956 as a storm water pump station. Sanitary flows were directed to the DRI using Freud pumps originally designed for dewatering the station. The service area for both stations encompasses the northeastern portion of Detroit, and portions of adjacent suburbs. All of the Jefferson-Chalmers neighborhood is served by these stations.

In 2005, the Conner Creek CSO facility was constructed and made changes to the Conner Creek pump station discharge that resulted in failure of the pump station to be able to prime and put the pumps in service. The original Capital Improvement Plan (CIP) business case evaluation (BCE) prepared in 2016 estimated the project at approximately \$22.5 million for design and construction over a period of five years. The design phase of the project was initiated and a design contract with Arcadis was initiated in 2017 with a fee of \$4.4 million. Upon completion of the condition assessment at each facility, it became clear that the overall scope of the recommended improvements would result in a need to increase the budget by an order of magnitude. This drastic increase in budget triggered a request by member partners to initiate a value engineering (VE) study to review proposed alternatives and ensure GLWA was proceeding on the most cost-effective path moving forward with respect to upgrading the largest two pump stations within the GLWA system.

GLWA secured a VE team that was comprised of two independent consultants and two member partners and convened a series of meetings to review the Arcadis developed alternatives. The VE team quickly developed a consensus opinion that selected upgrade recommendations for the Conner Creek sanitary pump station, the Freud sanitary pump station, and the Freud storm pump station were appropriate and did not require further study by the VE team.

The rest of the VE efforts were focused on defining five alternatives and selecting the most viable alternative to address the 92-year-old Conner Creek storm water pumping station. The alternatives developed had estimated capital costs that ranged from \$120 million to \$220 million. After detailed analysis and discussion with the VE team, presentations to the Board (Capital Planning Committee-October 15, 2019; O&R Committee-November 13, 2019) and presentations to Member Partners at the Wastewater Analytical Task Force (October 4, 2019, and May 7, 2020), GLWA has determined

that Alternative 2 - construction of a new 2.2 billion gallon per day facility - represents the best alternative on a net present value basis, over a 40-year planning horizon.

### **JUSTIFICATION**

The purpose of this Amendment No. 2 is to allow the Freud and Conner Creek pump station projects to proceed without additional delays to complete the design and allow for public competitive solicitation as a traditional design, bid, build project delivery method. The pump stations each have operational issues that, if un-addressed, could negatively impact the communities served, particularly in the Jefferson-Chalmers area.

Amendment No. 2 for the Arcadis contract is to provide design and services through the completion of construction for two construction bid packages, one for Freud and one for Conner Creek. This extensive amendment is justified based on the tremendous increase in scope from when the project was originally bid.

This provides for a new total design and services during construction budget to complete both stations for a total cost of \$24.4 million as compared to the original budget of \$4.4 million.

The amendment requests that time is extended for 2,093 days (approximately 69 months) for a revised completion date of June 30, 2028. The current CIP is carrying \$220 million for the capital cost for both stations. The design and services during construction, as a fraction of the total cost, is approximately 11%. This is in line with typical industry metrics.

### **PROJECT MANAGEMENT STATUS**

Original Contract Time	64 months
Amendment No. 1	0 months
Proposed Amendment No. 2	69 months
New Contract Time	133 months

### **PROJECT ESTIMATE**

Original Contract Price	\$ 4,416,547.48
Amendment No. 1	0.00
Proposed Amendment No. 2	19,994,400.00
New Contract Total	\$24,410,947.48

### **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 (5421-892211.000-617950-232002)

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

Original Contract Price	\$4,416,547.48	
Amendment No. 1		0.00
Proposed Amendment No. 2	<u>19,994,400.00</u>	

New Contract Total	24,410,947.48
Amended Financial Plan Estimate	<u>24,410,947.48</u>
Estimating Variance	\$0.00

#### **COMMITTEE REVIEW**

This item was presented to the Operations and Resources Committee at its meeting on October 15, 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.