



## Financial Services Audit Committee Communication

**Date:** May 21, 2021

**To:** Great Lakes Water Authority Audit Committee

**From:** Kim Garland, CPA, Reporting & Compliance Manager

**Re:** Resolution to Adopt the Connors Creek Sewer System Rehabilitation Project FY 2022  
Clean Water Revolving Fund Project Plan

**Background:** The Great Lakes Water Authority (the “GLWA”) has identified the Connors Creek Sewer System (CCSS) Rehabilitation Project for submittal to the Michigan Department of Environment, Great Lakes and Energy (EGLE) for the Clean Water State Revolving Fund (CWSRF) financing program for funding in the state’s 2022 fiscal year. The deadline for submitting all CWSRF project plans to EGLE is June 1, 2021. Prior to submitting the project plan, GLWA will hold the required public hearing for the Connors Creek Sewer System (CCSS) Rehabilitation Project plan on May 26, 2021 at 2:00 pm.

The CCSS was originally constructed in the 1920s. Recent inspections revealed moderate to very severe defects needing to be repaired. This project is comprised of the rehabilitation of the CCSS, which is one of the primary combined sewers in Detroit metropolitan area. The CCSS was originally constructed in the 1920s. Recent inspections revealed moderate to very severe defects needing to be repaired. Construction will include in-place rehabilitation of sewers and adding new access manhole structures. Right-of-way restoration will be performed on any disrupted areas. The impact of the project will improve customer satisfaction and safe reliable service delivery of sewage sewer conveyance to the Water Resource Recovery Facility. The total cost of this project is currently estimated at \$36,809,760.

**Justification:** The project will improve customer satisfaction and safe reliable service delivery of sewage sewer conveyance to the Water Resource Recovery Facility. GLWA is seeking low interest loan assistance through the CWSRF program for this project. Although the Michigan Department of Environment, Great Lakes, and Energy (EGLE) interest rate for FY 2022 will not be determined until October 2021, the current year’s interest rate of 1.875% is less than the present conventional revenue bond interest rates. Based on the estimated project amount of \$36.8 million, GLWA could save an estimated \$16.2 million in interest costs and avoided issuance costs, based on a similar open market revenue bond with

a 30-year term and 3.50% interest rate, over the life of the 30-year bond issue. This will afford savings to both GLWA and its member partners.

**Budget Impact:** Debt service for both projects is anticipated to begin in FY 2023 and will be included as part of the FY 2023 financial plan.

**Proposed Action:** Audit Committee recommends that the Great Lakes Water Authority Board of Director approve the attached Resolution to Adopt the Connors Creek Sewer System (CCSS) Rehabilitation Project – FY 2022 Clean Water State Revolving Fund (CWSRF) Project Plan at its regularly scheduled meeting on May 26, 2021.

**..Title**

**Resolution to Adopt the Connors Creek Sewer System (CCSS) Rehabilitation Project FY 2022 Clean Water Revolving Fund Project Plan**

**..Body**

Agenda of: May 26, 2021  
Item No.: **2021-**  
Amount: N/A

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

**FROM:** Sue F. McCormick  
Chief Executive Officer

**DATE:** May 26, 2021

**RE: Resolution to Adopt the Connors Creek Sewer System (CCSS) Rehabilitation Project FY 2022 Clean Water Revolving Fund Project Plan**

**MOTION**

Upon recommendation of Nicolette Bateson, Chief Financial Officer/Treasurer, and Navid Mehram, Chief Operating Officer-Wastewater, the Board of Directors of the Great Lakes Water Authority, **approves the attached Resolution to Adopt the Connors Creek Sewer System (CCSS) Rehabilitation Project – FY 2022 Clean Water State Revolving Fund (CWSRF) Project Plan;** and authorizes the CEO to take such action as may be necessary to accomplish the intent of this vote.

**BACKGROUND**

The CCSS was originally constructed in the 1920s. Recent inspections revealed moderate to very severe defects needing to be repaired. This project is comprised of the rehabilitation of the CCSS, which is one of the primary combined sewers in Detroit metropolitan area. The CCSS was originally constructed in the 1920s. Recent inspections revealed moderate to very severe defects needing to be repaired. Construction will include in-place rehabilitation of sewers and adding new access manhole structures. Right-of-way restoration will be performed on any disrupted areas. The impact of the project will improve customer satisfaction and safe reliable service delivery of sewage sewer conveyance to the Water Resource Recovery Facility. The total cost of this project is currently estimated at \$36,809,760.

GLWA wishes to utilize loans available under the State of Michigan Clean Water State Revolving Fund (CWSRF) for this project and a public hearing on the project plan was scheduled for 2:00 p.m. on May 26, 2021. The attached Resolution approves the project, directs GLWA staff to address all public comments, prepare responsiveness summary, and publish the final Project Plan; and authorizes GLWA's CEO to transmit the final FY 2022 CWSRF Project Plan to the Michigan Department of Environment, Great Lakes, and Energy and to secure a CWSRF loan for the project.

### **JUSTIFICATION**

The project will improve customer satisfaction and safe reliable service delivery of sewage sewer conveyance to the Water Resource Recovery Facility. GLWA is seeking low interest loan assistance through the CWSRF program for this project. Although the Michigan Department of Environment, Great Lakes, and Energy (EGLE) interest rate for FY 2022 will not be determined until October 2021, the current year's interest rate of 1.875% is less than the present conventional revenue bond interest rates. Based on the estimated project amount of \$36.8 million, GLWA could save an estimated \$16.2 million in interest costs and avoided issuance costs, based on a similar open market revenue bond with a 30-year term and 3.50% interest rate, over the life of the 30-year bond issue. This will afford savings to both GLWA and its member partners.

### **BUDGET IMPACT**

Debt service is anticipated to begin in FY 2023 for this project and will be included as part of the FY 2023 financial plan.

### **COMMITTEE REVIEW**

This matter was presented to the GLWA Audit Committee at its May 21, 2021 meeting. The Audit Committee [insert action] that the Great Lakes Water Authority Board of Director approve the attached Resolution to Adopt the Connors Creek Sewer System (CCSS) Rehabilitation Project – FY 2022 Clean Water State Revolving Fund (CWSRF) Project Plan at its regularly scheduled meeting on May 26, 2021.

### **SHARED SERVICES IMPACT**

This item does not impact the shared services agreement between GLWA and DWSD.

**Great Lakes Water Authority**  
**Resolution 2021-**

**RE: Resolution for the Connors Creek Sewer System Rehabilitation**  
**FY 2022 Clean Water State Revolving Fund Project Plan**

By Board Member: \_\_\_\_\_

**Whereas:** The Connors Creek Sewer System Rehabilitation Project Plan for the FY 2022 Clean Water State Revolving Fund (CWSRF) has been prepared by GLWA;

**Whereas:** The Connors Creek Sewer System is one of the combined sewers in the Detroit metropolitan area;

**Whereas:** The proposed project will improve customer satisfaction and safe reliable service delivery of sewage sewer conveyance to the Water Resource Recovery Facility;

**Whereas:** This project will include in-place rehabilitation of sewers and adding new access manhole structures;

**Whereas:** The FY 2022 CWSRF Project Plan has been placed on public notice and a Public Hearing was held on May 26, 2021 at 2:00 p.m. where comments on the recommended project were solicited;

**Whereas:** It is the desire of the GLWA Board of Directors to secure low interest loan assistance through the CWSRF program; and

**Whereas:** Formal action by the GLWA Board of Directors is needed to adopt the recommended FY 2022 CWSRF Project Plan for the Connors Creek Sewer System Rehabilitation, as a requirement for participation in the State of Michigan's CWSRF program.

**Now Therefore Be It:**

**Resolved** That this Board hereby accepts the FY 2022 Connors Creek Sewer System Rehabilitation project, dated May 26, 2021, and as directs staff members of the GLWA to address all public comments, prepares the responsiveness summary, and publish the final Project Plan; **and Be It Further**

**Resolved** That the Chief Executive Officer (CEO) is authorized to transmit the final FY 2022 CWSRF Project Plan for the Connors Creek Sewer System Rehabilitation project to the Michigan Department of Environment, Great Lakes, and Energy on behalf of the GLWA Board of Directors and take all appropriate steps to secure approval of a low interest loan in accordance with the State of Michigan's CWSRF procedures so that the project can proceed expeditiously to construction.

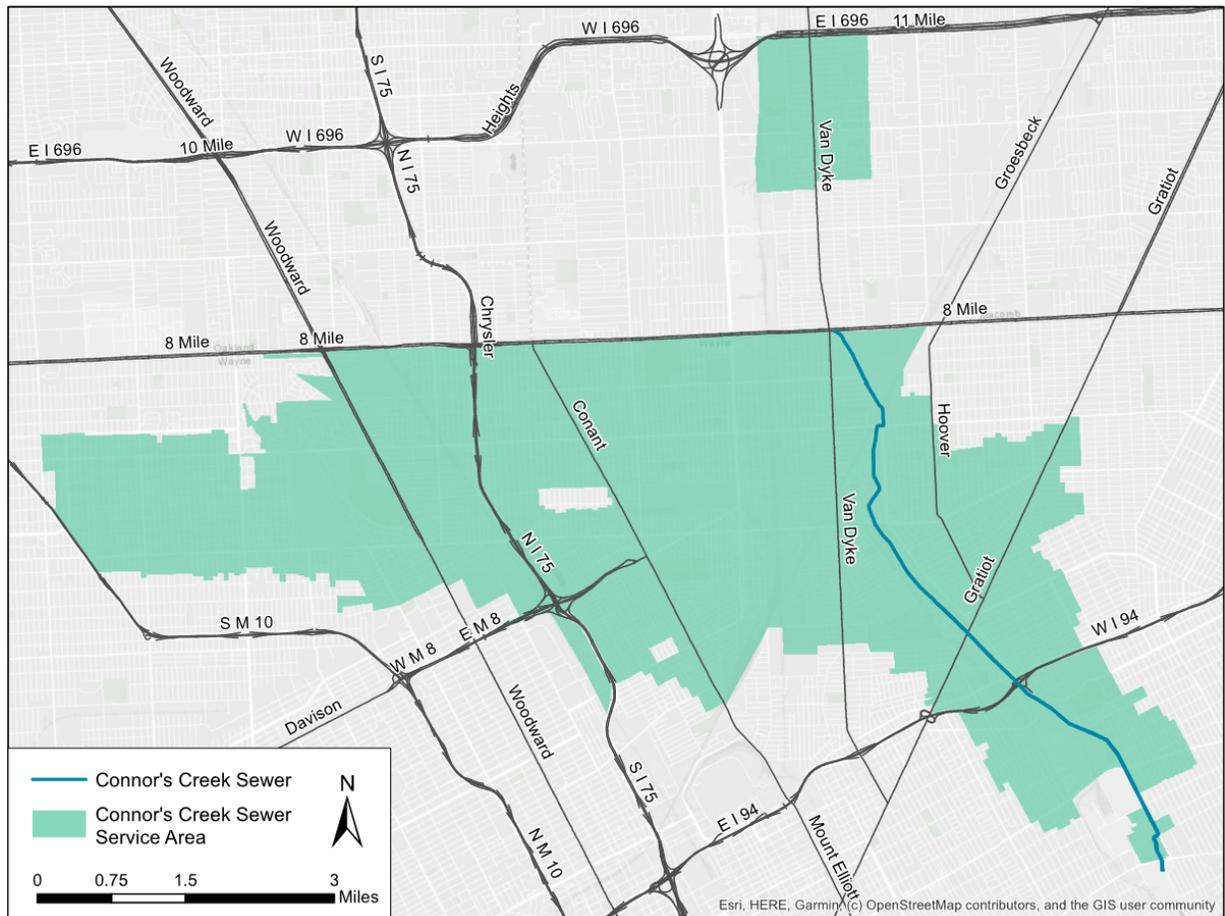
Adopted by the Great Lakes Water Authority Board on:

# GREAT LAKES WATER AUTHORITY

## Connors Creek Sewer System Rehabilitation Project

Project Plan  
May 26, 2021





## Proposed Improvements

Starting at 8 Mile Road east of Van Dyke Avenue and ending at a gate structure at the Connors Creek Pump Station, the Connors Creek Sewer System (CCSS) is a major sewer system in the City of Detroit, servicing a population of 120,000. The CCSS was inspected in 2018 and 2020. The inspections identified numerous defects throughout the system.

The primary defect within the CCSS is infiltration of varying severity. Based on this finding, most of the sewer segments will receive chemical grout as the baseline rehabilitation method. For smaller pipes in the system, Cured-in-Place Pipe (CIPP) lining and sliplining are considered as the preferred way to eliminate infiltration plus structurally rehabilitating the sewer to extend its useful life. In larger pipes with structural defects where CIPP is not viable and sliplining will not be cost effective,

either continuous or spot repairs using shotcrete is recommended. In addition, heavy cleaning of the debris will be performed in several segments of the CCSS.

## Summary of project needs

Most of the CCSS was constructed in the 1920s. The defects are expected to worsen if no action is taken, which will increase the risk of failure of this 100-year aged sewer system. There are several critical transportation infrastructures and hospitals in the study area of this project, including Interstate I-94, Coleman A. Young International Airport and Conner Creek Health Center. The Chrysler Jefferson North Assembly Plant, which is also located in this area, employs thousands of workers; and the Mt. Olivet Cemetery, which is located on top of a portion of the CCSS, is of great importance to local and regional residents. The direct consequences of sewer failure include the development of sinkholes and service

interruptions. During the service interruptions and emergency repairs, the transportation, medical, and working access of the residents may be limited. Depending on the time required to restore normal services, there may be increasing negative impacts to public health.

## Potential Alternatives

Three alternatives are analyzed in the project plan. The no-action alternative (Alternative 1) is required to be evaluated by the preparation guidance of this project plan. Alternative 2 is to repair the identified defects before they worsen and become more costly to fix. Alternative 3 is a full replacement of the CCSS.

As stated in the previous section, the CCSS was originally constructed about 100 years ago; and defects of varying severity have been identified in recent inspections. The CCSS services an area of approximately 25 square miles with approximately 120,000 residents; and the consequences of its failure are significant, including the development of sinkholes, service interruptions and negative impact to public health. Therefore, the alternative of no-action is not recommended. A full replacement is also not recommended, considering (1) significantly higher cost, (2) the large demand for, but very limited, space for construction, (3) unavoidable service interruptions to critical infrastructures, and (4) unavoidable relocation of scores of graves located over the existing CCSS in the Mt. Olivet Cemetery.

## Environmental Evaluation

Short-term impacts due to construction activities such as noise, dust and minor traffic disruption cannot be avoided. However, most of the work will be performed within the sewer underground and which will mitigate most short-term construction impacts to the community and business along the majority of the project corridor.

In areas where there will be construction activities above ground, efforts will be made to minimize the adverse impacts by use of thoroughly designed and well-planned construction sequencing. Noise from equipment cannot be avoided, but hours of work will be controlled. Dust and soil deposits on the streets will be controlled through watering and frequent street sweeping. Construction area footprints will be minimized, and traffic control measures will be necessary. Site restoration will minimize the adverse impacts of construction, and the implementation

of a Soil Erosion and Sedimentation Control program will minimize the impacts due to ground disturbance, when such disturbance is found to be necessary. Specific techniques will be specified in the construction contract documents.

## Estimated Project Cost

| Item                        | Estimated Cost (\$)  |
|-----------------------------|----------------------|
| Design                      | \$ 945,463           |
| Planning                    | \$ 471,656           |
| Construction Administration | \$ 1,014,914         |
| Construction (*)            | \$ 34,377,700        |
| <b>Total</b>                | <b>\$ 36,809,760</b> |

(\*) Note construction cost is a Class 3 cost estimate for budgetary purposes as defined by American Association of Cost Engineering International. The cost carries an expected accuracy range of (-) 20 to (+) 30 percent.

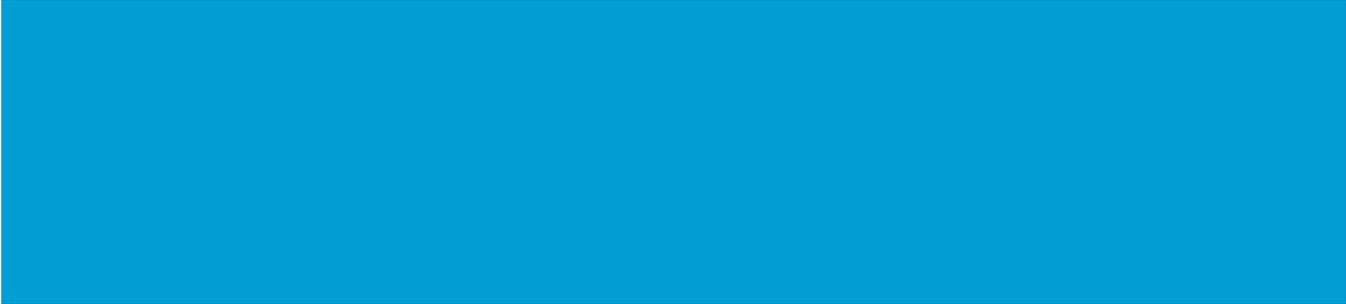
## Estimated User Cost Impact

Assuming a funding term of 20 years and a loan interest rate of 2 percent, the total project cost has an equivalent annual cost of \$2,251,164. According to the 2020 GLWA Wastewater Master Plan, there is approximately 2.8 million residents between 2018 and 2045 in the GLWA regional service area. The number of persons per household in Michigan was estimated by the U.S. Census Bureau as 2.47 in 2019. The estimated number of households that will be impacted by this project is estimated to be 1.13 million.

The per household user cost is \$1.99 per year.

## Proposed Implementation Schedule

| Item                                | Date       |
|-------------------------------------|------------|
| Design Notice to Proceed            | 06/10/2020 |
| 50% Design                          | 05/03/2021 |
| 90% Design                          | 08/02/2021 |
| 100% Design                         | 10/04/2021 |
| Bid Opening                         | 01/03/2022 |
| Construction Notice to Proceed      | 03/22/2022 |
| Construction Substantial Completion | 03/11/2024 |
| Construction Final Completion       | 04/05/2024 |



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