

State Water Infrastructure Authority
Meeting Date: December 12, 2023
Agenda Item F – Additional Funding Request for the Town of Wilkesboro WWTP Expansion and Upgrade

Division of Water Infrastructure Staff Report

Background

The Town of Wilkesboro owns and operates the Cub Creek Wastewater Treatment Plant (WWTP), located on Snyder Street in Wilkesboro, North Carolina at the confluence of Cub Creek and the Yadkin River. The WWTP operates an activated sludge process and has a permitted capacity of 4.9 million gallons per day (MGD). The Division of Water Infrastructure (Division) funded the proposed project, which will expand the existing WWTP to 8 MGD. The new facilities for the WWTP expansion will consist of an upgraded influent pump station, new headworks, an Aerobic Granular Sludge sequencing batch reactor (SBR) system, repurposing two secondary clarifiers, a new UV disinfection system, new effluent monitoring, and a new solids dewatering unit. The expanded WWTP will have new nutrient limits as part of High Rock nutrient management strategy and is designed to meet these new limits. Most of the new facilities will be located out of the 500-year floodplain (the existing system is mostly within the 100-year floodplain). There is also an associated stream restoration project (under separate application) that will take place in conjunction with the construction of the new WWTP.

The Town of Wilkesboro first applied for funding during the Fall 2021 round, and the Authority awarded \$33 million, including a \$3 million State Reserve Program (SRP) grant and a \$30 million Clean Water State Revolving Fund (CWSRF) loan at zero percent (includes \$500,000 in principal forgiveness). The Town reapplied in the Spring 2022 round for additional funding, and the Authority awarded \$27 million, including a \$15 million SRP grant and a \$12 million CWSRF loan at zero percent (includes \$500,000 in principal forgiveness). The project cost estimate at the time of application was \$60 million, but the latest estimate is \$75 million. The Authority has awarded \$60M for this project till date.

The Town has been actively making progress in the design of the WWTP upgrade and expansion, working with both HDR Engineering, Inc. of the Carolinas (HDR) and Ulliman Schutte (Construction Manager at Risk). As design has progressed and construction considerations have been evaluated, the estimated budget has also been refined. The Capital cost estimate at sixty percent design is approximately \$75 million, which is considerably higher than the original budget of \$60 million. Table 1 compares the project budget with available funding for the project.

The Town needs an additional \$15.11 million in SRF loan funding to fully fund the project. The Authority has an existing expectation that the Division will bring all funding increase requests in excess of \$5,000,000 to the Authority for approval. Considering the long funding history and that the project is under contract (CMAR), this project is an excellent project to receive additional funds.

Table 1: Project Budget			
Wilkesboro WWTP Expansion & Upgrade	2023 Estimate of Need	Funding Secured	Difference
Indicate construction costs by line item (e.g., linear feet of different-sized lines)			
<u>Construction Costs</u>			
Civil	\$4,000,000		
Influent Pump Station	\$1,337,959		
Headworks	\$2,718,835		
Influent Buffer Tank & AGS Influent Pump Station	\$6,562,200		
Nereda Process	\$17,180,000		
Control Building	\$382,200		
Solids Handling	\$1,755,662		
UV System	\$1,613,685		
Effluent Flow Monitoring	\$433,675		
Electrical (including New Electrical Buildings 1 & 2)	\$5,055,320		
Instrumentation	\$1,200,000		
Total Direct Costs	\$42,239,536		
Subcontractor's Overhead, Bonds, Insurance (19.9%)	\$8,405,668		
Sales Tax (7%) - Material Non-Incorporated	\$211,654		
Subtotal	\$50,856,857		
CMAR General Conditions (9%)	\$4,577,117		
CMAR Bonds and Insurance (2.5%)	\$1,271,421		
Subtotal	\$56,705,396		
CMAR's Fee (8.5%)	\$4,819,959		
CMAR's Contingency (5%)	\$2,835,270		
Owner's Contingency	\$2,000,000		
Escalation to Midpoint of Construction (5%)	\$2,835,270		
Construction Subtotal:	\$69,200,000		
<u>Engineering Costs</u>			
Engineering Design & Construction Admin Services	\$5,410,000		
Subtotal	\$74,610,000		
<u>Administration Costs</u>			
CMAR Preconstruction Fee	\$500,000		
Administration Subtotal:	\$75,110,000		
TOTAL PROJECT COST:	\$75,110,000	\$60,000,000	\$15,110,000

Staff Recommendation

Staff recommends that the Authority approve an additional \$15,110,000 of CWSRF repayable loan funding for the Town of Wilkesboro's Wastewater Treatment Plant (WWTP) Expansion project (DWI Project# CWSRF-370829-02/SRP-W-0208) to fully fund the project.

The additional funding does not reduce the amount of CWSRF funds to be made available for the Fall 2023 Funding Round (i.e. available funds meet or exceed funding levels modeled and advertised for the round).

Attachment: Request from Town of Wilkesboro



TOWN OF WILKESBORO

"Where the Mountains Begin"

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November 27, 2023

Ms. Kavitha Ambikadevi, P.E.,
Water Infrastructure Fund Section Chief
Division of Water Infrastructure,
North Carolina Department of Environmental Quality
1633 Mail Service Center
Raleigh, NC 27699-1633

Subject: Wilkesboro WWTP Expansion and Upgrade
Project No. CS370829-02/SRP-W-0208

Dear Ms. Ambikadevi,

The Town of Wilkesboro received a total funding package of \$60 million that includes a combination of grants and loans from the Division of Water Infrastructure and the State Water Infrastructure Authority. The Town has been actively making progress in the design of the WWTP upgrade and expansion, working with both HDR Engineering, Inc. of the Carolinas (HDR) and Ulliman Schutte (Construction Manager at Risk). As design has progressed and construction considerations have been evaluated, the estimated budget has also been refined.

Ulliman Schutte provided a 60%-design construction cost estimate of approximately \$78 million (not including engineering allowances), which is considerably higher than the original budget of \$60 million. In reaction to this estimate, the Town, HDR, and Ulliman Schutte have evaluated cost reduction alternatives. In the value engineering process, approximately \$7 million in savings have been identified. The following are some examples of the changes to reduce the cost of the project – estimated savings in parenthesis.

- The influent force main (between the influent pump station and headworks) will not be replaced. This pipeline has only been in service since 2010, and it was determined that it has useful life remaining and is sufficiently sized. (\$1 million)
- Various pipes changed from DIP to either HDPE or PVC. (\$1 million)
- A new flow metering facility for Tyson Foods will not be constructed. The Town will continue to utilize the existing flow meter. (\$345,000)
- Design changes were made to the operations building. Additionally, a separate bid package will be issued for the operations building that will allow competitive bids from commercial contractors normally engaged in this type of construction. (\$1.1 million)
- Electrical duct bank/conduit routing changes. (\$500,000)
- Changes to headworks equipment specifications (i.e., changed from 316 to 304 stainless steel). (\$500,000)

MIKE INSCORE
Mayor

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Council Members

RUSSELL F. FERREE
Mayor Pro Tem

- Changes to dewatering equipment specifications (i.e., changed from 316 to 304 stainless steel). (\$718,000)

These cost saving changes have not changed the core aspects of the project. However, even though these changes resulted in significant savings to reduce cost below the 60% estimate, the reduced cost estimate is still higher than the original budget of \$60 million. For this reason, the Town requests a loan increase of \$15 million.

Thank you for considering this request. This project is critical to the Town and a loan increase will assist the Town in completing the project while dealing with the substantially rising cost of infrastructure. Please feel free to contact us if you have any questions or concerns.

Sincerely,



Ken Noland
Town Manager