

State Water Infrastructure Authority
Meeting Date: May 16, 2025
Agenda Item B – Additional Funding Request for the Town of Wilkesboro
WWTP Expansion and Upgrade

Division of Water Infrastructure Staff Report

Background

The Town of Wilkesboro (Town) 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, has a permitted capacity of 4.9 million gallons per day (MGD), and has many components that are at the end of their useful service life (dating to the 1970's – 1990's). Most of the current WWTP is located in the 100-year floodplain and has experienced multiple flooding events in the last 15 years, including Hurricane Helene. The Town has also been on a sewer line moratorium due to a lack of capacity and received notices of violation due to facility issues.

The proposed project will expand the existing WWTP to 8 MGD and address many of the current issues related to the existing WWTP, replacing aging infrastructure with new more efficient processes; moving facilities out of the floodplain; expanding capacity to allow more sewer service connections (more revenue); and meeting new regulatory requirements for nutrients. The new facilities for the WWTP expansion will consist of an upgraded influent pump station, new headworks equipment (within existing structure), an Aerobic Granular Sludge sequencing batch reactor (SBR) biological process, repurposing two secondary clarifiers, a new UV disinfection system, new effluent monitoring, and two new solids dewatering units. The expanded WWTP will have new nutrient limits as part of the High Rock Lake 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 Town is using a Construction Manager at Risk (CMAR) procurement process. Ulliman Schutte Construction is the CMAR.

The Town 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 [PF]). 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 PF). The project cost estimate at the time of application was \$60 million.

As design progressed and construction considerations were evaluated collaboratively among the Town, HDR Engineering, Inc. of the Carolinas (HDR), and Ulliman Schutte, the estimated budget was also refined. Based on a revised estimate of approximately \$75 million, the Authority awarded an additional \$15 million loan increase at its December 2023 meeting.

The Town now has a Guaranteed Maximum Price (GMP) from Ulliman Schutte based on bids received from contractors under the CMAR process. As a result of these bids, the new and final

cost is \$87,642,103, which includes the engineering fee for design and construction phase services. This final cost reflects significant value engineering efforts through the collaborative CMAR process during the design development phase. The following changes were made to reduce the overall cost of the project:

1. A new headworks structure will not be constructed as originally planned. Instead, new equipment will be installed within the existing headworks structure.
2. The existing grit removal unit will remain in service.
3. New concrete sludge buffer tanks and pumping facilities normally provided with the Aerobic Granular Sludge process were eliminated. Existing Clarifier No. 3 will be repurposed to serve as a sludge buffer tank.
4. An enclosed piping gallery for the Aerobic Granular Sludge process was eliminated. Instead, much of the piping will be buried and small piping enclosures will be constructed for weather protection of exposed valves, short piping segments, and process instrumentation.
5. Existing Clarifier No. 4 will be repurposed as an influent buffer tank for the Aerobic Granular Sludge process.
6. The existing return activated sludge pump station is being repurposed to a waste activated sludge pump station.
7. The depth of the proposed UV disinfection structure was reduced.
8. The influent force main will not be replaced based on additional infrastructure assessment.
9. Pipe materials have been changed to reflect lower-cost materials.
10. New flow metering facilities will not be constructed for influent flow from the Tyson Foods pretreatment facility. The existing flow metering facilities will remain in service.
11. The operations building was bid as a separate work package for more competitive bids.
12. Coordinated with Duke Energy for changes to electrical duct work/conduit routing, which resulted in reduced cost for electrical improvements.
13. The sludge dewatering equipment specifications were changed to facilitate more competitive pricing.
14. The draining and cleaning of the existing wastewater aeration basin was removed from the contract documents. This work will be performed by the Town.

Rebidding the project will likely result in higher overall costs. Bid packages received were competitive (e.g., low bid for electrical package was \$5 million less than the second-lowest bid). There is also the risk of rebidding in the current tariff environment. The Town is requesting approval of the additional \$12,642,103 in SRF loan funding to fully fund the project. In addition, the Town is requesting a revision of the loan repayment terms from 20 years to 30 years, which is based upon a recommendation from the Local Government Commission staff.

Staff Recommendation

Staff recommend that the Authority approve an additional \$12,642,103 of CWSRF repayable loan funding for the Town of Wilkesboro's Wastewater Treatment Plant Expansion project (DWI Project# CWSRF-370829-02/SRP-W-0208) to fully fund the project, which addresses aging infrastructure, resiliency, capacity, operational efficiency, and new nutrient limits. Staff also recommend changing the loan repayment terms from 20 years to 30 years based on the useful life of project components.

The additional funding does not reduce the amount of CWSRF funds to be made available for the Spring 2025 Funding Round (i.e. available funds meet or exceed funding levels modeled and advertised for the Spring 2025 round).

Attachment: Request from Town of Wilkesboro