Ohio Environmental Protection Agency

Mike DeWine, Governor
Jon Husted, Lt. Governor
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June 14, 2021

Limited Environmental Review and Finding of No Significant Impact

City of Newark – Licking County
WWTP UV Disinfection Upgrade and SCADA Master Plan
Loan number: CS390654-0021

The attached Limited Environmental Review (LER) is for a wastewater treatment project in Licking County which the Ohio Environmental Protection Agency intends to finance through its Water Pollution Control Loan Fund (WPCLF) below-market interest rate revolving loan program. The LER describes the project, its costs, and expected environmental benefits. Making available this LER fulfills Ohio EPA's environmental review and public notice requirements for this loan program.

Ohio EPA analyzes environmental effects of proposed projects as part of its WPCLF program review and approval process. We have concluded that the proposed project should not result in significant adverse environmental impacts. This project's relatively narrow scope and lack of environmental impacts qualifies it for the LER rather than a more comprehensive Environmental Assessment. More information can be obtained by calling or writing the person named at the end of the attached LER.

Upon issuance of this Finding of No Significant Impact (FNSI) determination, award of funds may proceed without further environmental review or public comment unless new information shows that environmental conditions of the proposed project have changed significantly.

Sincerely,

Jonathan Bernstein

Jonathan Bernstein, Assistant Chief
Division of Environmental and Financial Assistance

Attachment

LIMITED ENVIRONMENTAL REVIEW

Project Identification

Project: WWTP UV Disinfection Upgrade and SCADA Master Plan

Applicant: City of Newark
34 South Fifth Street
Newark, Ohio 43055

Loan Number: CS390654-0021

Project Summary

The City of Newark has requested financial assistance from the Ohio Water Pollution Control Loan Fund (WPCLF) for the WWTP UV Disinfection Upgrade and SCADA Master Plan project. Work for this facilities improvement project will replaced aged and dated ultraviolet (UV) disinfection equipment and controls, improving wastewater disinfection, and reducing energy consumption. The estimated loan amount is $4,445,498. Debt for the project will be repaid from monthly user charges. The project is scheduled to begin in autumn 2021 and be completed in 21 months.

History & Existing Conditions

Located within Licking County, Newark's wastewater collection system service area encompasses roughly 9,000 acres and is primarily within the municipal city limits. Newark's collection system consists of approximately 200 miles of combined and sanitary sewers and 16 sanitary lift stations. The Newark Wastewater Treatment Plant (WWTP) is located at 1003 East Main Street, adjacent to the Licking River. The collection system and treatment facility serve approximately 47,000 residential customers, as well as numerous commercial and industrial customers.

Combined sewers make up approximately 18% of Newark's collection system. Roughly 1,183 acres contribute surface runoff to the existing combined sewer system and subsequently to the combined sewer overflow (CSO) diversion structures. Four percent of Newark's sewers will be approaching the end of their useful life within the next 20 years. Recently Newark has adopted an integrated approach to address their aging combined sewers as part of their asset renewal program, in conjunction with providing CSO control. With the WPCLF-funded *City of Newark Downtown Sewer Separation Project* and other downtown sewer projects nearing completion, Newark is replacing their aging combined sewers in the downtown area with new sanitary and separate storm sewers through storm sewer separation. In addition, Newark is constructing green infrastructure in the project area to provide additional water quality benefits to the receiving stream, the Licking River.

There are currently 27 CSO diversion structures with 22 outfalls that discharge combined overflow to Raccoon Creek, South Fork Licking River, and North Fork Licking River, as authorized by Ohio EPA. All but one of these CSOs are active in a typical year.

Newark's WWTP (see Figure 1) is designed to treat an average flow of eight million gallons per day (MGD) of wastewater, and the current treatment capacity is 26 MGD. Newark currently limits the flow at the influent of the WWTP to 20 MGD, diverting any additional combined flow to the High-Rate

Treatment (HRT) facility that is located adjacent to the WWTP. Combined flow at the HRT receives screening and grit removal before being conveyed by gravity to an equalization (EQ) basin. The EQ basin has a capacity of one million gallons and has a junction chamber with an effluent isolation gate. The isolation gate modulates based on the influent flow to the WWTP, allowing flow from the EQ basin to drain back to the WWTP through the plant's main drain. If the EQ basin fills, an isolation gate at the HRT closes and the remaining combined flow downstream of the grit tanks receives full treatment through the HRT and subsequently discharges to the Licking River.

The existing mainstream UV equipment was installed in the late 1990s and is similar to, though an older version of, the UV equipment present in the HRT facility. The mainstream UV equipment has high operation and maintenance (O&M) costs due to the relative inefficiency of the medium pressure UV lamp technology and equipment age. The current power system is more than ample to service the proposed UV system due to improved efficiency of the updated equipment.

Project Description

The UV upgrade project (see Figure 2) is being undertaken to update the aged UV and controls system. Construction will include the supply and installation of an open-channel, gravity flow, low-pressure, high-intensity, vertical or inclined-vertical lamp, and an automatically controlled and automatically cleaned UV disinfection system with all associated and ancillary equipment. Specifically, the proposed project will supply and install the following:

- UV lamp modules and support frames
- UV lamps with quartz sleeves
- Electronic ballasts/drives and ballast/driver enclosures
- Power distribution equipment and enclosures
- Control equipment and enclosures
- UV intensity and lamp monitoring systems
- Online UV transmittance monitor
- Automatic lamp sleeve cleaning system
- Field testing of equipment and instruction to WWTP personnel

Implementation

Newark proposes to borrow the eligible cost for the project from Ohio's WPCLF. Newark will recover debt associated with the project from monthly sewer rates, and Newark has nominal rate increases scheduled through 2031 to pay for numerous wastewater projects and improvements both completed and planned. The 2021 monthly residential sewer rate in Newark is $30.31 ($363.72 annually), based on average monthly water usage. This is 0.86 percent of the median household income of $42,116.

The total loan amount is $4,445,498. This project qualifies for the standard WPCLF below-market interest rate on 20-year construction loans, which for June 2021 is 0.66 percent (WPCLF loan interest rates are set monthly, and the rate may change for a later loan award). Borrowing at 0.66 percent will save Newark approximately $617,000 over the life of the loan compared to the current market rate of 1.91 percent.

Public Participation

Newark has worked closely with the general public and local public officials on earlier projects located in their community that were funded through the WPCLF. The WWTP UV Disinfection Upgrade and SCADA Master Plan project has been discussed at multiple Newark City Council meetings and has been detailed on Newark's website. Newark is not aware of controversy surrounding this project.

Conclusion

The proposed project meets the project type criteria for a Limited Environmental Review (LER); namely, it is an action within an existing public wastewater treatment system, which involves the functional replacement of and improvements to existing equipment. Furthermore, the project meets the other qualifying criteria for an LER; specifically, the proposed project:

Will have no adverse environmental effect, will require no specific impact mitigation, and will have no effect on high-value environmental resources, as construction will take place within an existing wastewater treatment facility where extensive excavation has previously taken place and where no high-value resources are present. There will be no significant adverse effects as a result of project implementation, or the need for any additional mitigation measures beyond typical erosion control and construction best management practices.

Is cost-effective, as the proposed action satisfies technical goals of the project and was deemed the most cost-effective compared to other evaluated alternatives.

Is not a controversial action, as there is no known opposition to the proposed project, the cost of the project is not overly burdensome to ratepayers, and will be financed through the WPCLF, saving approximately $617,000 in interest payments compared to conventional financing.

Does not create a new, or relocate an existing, discharge to surface or ground waters, and will not result in substantial increases in the volume of discharge or loading of pollutants from an existing source or from new facilities to receiving waters, since the project involves the functional replacement of and improvements to existing equipment, and not increases to pollutant discharges.

Will not provide capacity to serve a population substantially greater than the existing population, since the project is not related to serving new growth or increasing capacity at the wastewater treatment facility.

In summary, the planning activities for the project have identified no potentially significant adverse impacts. The project is expected to have no significant short-term or long-term adverse impacts on the quality of the human environment, or on sensitive resources (surface water, ground water, air quality, floodplains, wetlands, riparian areas, prime or unique agricultural lands, aquifer recharge zones, archaeologically or historically significant sites, federal or state-designated wild, scenic, or recreational rivers, federal or state-designated wildlife areas, or threatened or endangered species). Typical construction impacts, such as noise, dust, and exhaust fumes, will be short-term and addressed by standard construction best management practices.

The proposed project is a cost-effective way to make improvements to the aged UV disinfection equipment. Once implemented, the project will update aged infrastructure, helping Newark ensure safe and effective operation of the facilities. Also, by using WPCLF low-interest financing, Newark has minimized the project cost.

Contact information

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Figure 1. General project area (in red)

Figure 2. WWTP UV Disinfection Upgrade and SCADA Master Plan project location (in red)