



Mike DeWine, Governor
Jon Husted, Lt. Governor
Laurie A. Stevenson, Director

November 5, 2020

Limited Environmental Review and Finding of No Significant Impact

**City of Steubenville – Jefferson County
Secondary Aeration
Loan number: CS390883-0024**

The attached Limited Environmental Review (LER) is for a wastewater treatment project in Jefferson 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: Secondary Aeration

Applicant: City of Steubenville
115 South Third Street
Steubenville, Ohio 43952

Loan Number: CS390883-0024

Project Summary

The City of Steubenville, located in Jefferson County, has applied for funding from Ohio EPA's Water Pollution Control Loan Fund (WPCLF) for the Secondary Aeration project. The project is intended to improve the functionality of Steubenville's wastewater treatment plant (WWTP) by repairing and replacing aged and outdated facilities and equipment to update the secondary aeration and disinfection systems. The total estimated loan for the project is \$3,611,740, with construction scheduled to begin in early 2021 and to be completed in seventeen months.

History & Existing Conditions

The Steubenville WWTP is located at 100 North Water Street and was originally constructed in 1956. The facility is an activated sludge plant with a design average daily flow of six million gallons per day (MGD). The actual average dry weather flow is four MGD. The treatment plant is capable of treating up to 43 MGD; with flow from 0-22 MGD receiving both primary and secondary treatment, and flows from 22-43 MGD receiving primary treatment only.

Wet stream processes are bar screens, grit removal, pre-aeration, primary settling, activated sludge aeration, secondary clarification, and disinfecting using peracetic acid. Solid stream processes include gravity sludge thickening, stabilization by aerobic digestion, and belt filter press dewatering. Sludge is taken to another WWTP for beneficial reuse or transported and disposed in a landfill. Treated effluent is discharged to the Ohio River.

The City of Steubenville has approximately 75 percent separate sewers and 25 percent combined sewers in the collection system. The WWTP receives wastewater with relatively low pollutant concentrations. Influent flows up to approximately six MGD are bypassed around the pre-aeration tanks and primary clarifiers and pumped directly to the aeration tanks to provide a sufficient food supply for the activated sludge process. At flows above six MGD, 100 percent of influent flow, up to a maximum of 43 MGD, is pumped to pre-aeration and primary clarification. However, up to 22 MGD of primary effluent is pumped to secondary treatment, disinfection, and discharged through Outfall 001. Primary effluent above 22 MGD is bypassed around secondary treatment and separately disinfected before being discharged to the Ohio River through permitted Outfall 002.

Steubenville entered into a Consent Order with Ohio EPA in 1998 which includes requirements for the city to address its sewer overflows. An Amended Consent Order was filed in 2004 after Ohio EPA alleged that violations of the 1998 Consent Order had taken place. The Amended Consent Order

contains a schedule of compliance which Steubenville is required to follow. Per these orders, Steubenville was required to develop an approvable Sewer System Overflow (SSO) Long-Term Control Plan (LTCP) and submit this to Ohio EPA by January 1, 2007. A combined sewer LTCP was received on July 1, 2009. The review, revision, and approval of the LTCP are the subject of ongoing negotiations between Steubenville and Ohio EPA.

The draft LTCP includes actions to address old and outdated equipment at the WWTP. The Secondary Aeration project is one of the projects planned by Steubenville to address these required actions. The failing secondary aeration equipment at the facility has reached or exceeded its useful life and needs replacement to continue reliable service. To ensure that the existing plant will operate consistently, efficiently, and without significant maintenance issues, new blowers and aeration diffusers need to be installed. The Secondary Aeration project will also replace the existing pilot-scale peracetic acid (PAA) disinfection system with a full-scale, permanent system.

Project Description

The proposed Secondary Aeration project (see figures 1 and 2) includes the following:

Secondary Aeration System

- Demolition and replacement of existing secondary aeration diffusers and blowers with new equipment
- Demolition and replacement of existing aeration piping and appurtenances from the blower building to the diffusers in the secondary aeration tanks
- Demolish existing chemical storage tanks and tank pad.
- Removal of all associated pumps, pipes, valves, and appurtenances associated with chemical storage
- Repair of tank expansion joints
- Isolate, drain and clean secondary aeration tanks prior to the installation of new diffuser equipment, aeration piping, and repair of tank expansion joints
- Replacement of HVAC system in blower building
- Installation of electrical systems related to secondary aeration systems
- Installation of instrumentation and control systems related to secondary aeration systems

PAA Disinfection System Replacement

- Demolition of temporary PAA primary and bypass disinfection systems
- Demolition of existing sampler shed and associated equipment and instrumentation
- Installation of new PAA primary disinfection system
- Construction of new PAA primary disinfection platform
- Construction of new access to PAA primary disinfection platform
- Replacement of existing PAA bypass disinfection system
- Installation of potable water piping, safety showers, and hot water heaters at PAA primary and bypass disinfection systems
- Installation of electrical systems related to PAA primary and bypass disinfection systems
- Installation of instrumentation and control systems related to PAA primary and bypass disinfection systems

Implementation

The estimated cost for the Secondary Aeration project is \$4,536,740. Steubenville expects to receive a \$925,000 grant from the United States Army Corp of Engineers (USACE) to help fund this project. Steubenville plans to fund the \$3,611,740 balance of the project through the WPCLF. Steubenville qualifies for the standard long-term WPCLF below-market interest rate on 30-year loans, which in October is 0.67 percent. The standard rate is changed monthly to reflect bond rates and may be slightly different in December 2020, the anticipated month of loan award. Borrowing at 0.67 percent, in conjunction with the USACE grant, will save Steubenville approximately \$2,037,000 over the life of the loan compared to the current market rate of 1.97 percent.

Debt for the project will be repaid through revenue generated by the Steubenville user charge system and monthly Sewer Infrastructure Improvement Fund (SIIF). The current user charge system and SIIF have been in effect since October 1, 2020. Based on the current user charge rates, the average residential customer, using an average of 4,000 gallons of water per month, would pay a monthly bill of \$52.64, or \$632 per year. The local median household income (MHI) is \$34,769. Thus, the average annual sewer expenditure for Steubenville residents represents 1.82 percent of the MHI. While this amount exceeds the state average of 1.3 percent of MHI, it is necessary to address the multiple drinking water and wastewater infrastructure projects required of Steubenville, to address its draft LTCP, and protect human and the environment.

Public Participation

Steubenville has conducted numerous public meetings pertaining to city wastewater issues and this project, and they have been well attended by residents. There have also been extensive newspaper articles and online reporting regarding city infrastructure issues, the proposed project and rate increases. Several residents have expressed concern over the rate increases. However, the proposed project is the most affordable option for the Steubenville to address its draft LTCP and an aged and deteriorated wastewater treatment system requiring significant improvements. The LER will be posted on Steubenville's and Ohio EPA's websites for review. Thus, there have been adequate opportunities for information dissemination and public participation.

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 collection and 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 and will require no specific impact mitigation, because construction will not adversely affect any special resource type, general construction environmental protections will be in place, noise will be controlled with silencers on mobile equipment, dust and odors will be controlled, and air quality will be protected with emissions controls on mobile equipment and with the use of street sweeping and dust suppressants, as applicable. The project will have the public health and environmental benefits related to improving efficiency and treatment at the WWTP, reducing risks related to potential human contact with untreated or partially treated wastewater, and will potentially reduce the discharge of nutrients to the Ohio River.

Will have no effect on high-value environmental resources, as construction will be limited to improvements to and of wastewater treatment equipment within an existing WWTP with prior and extensive disturbance. No significant ground disturbance will take place as part of this project, so there will be no effects to the following: floodplains, wetlands, surface water, endangered/threatened species or their habitat, state and federally designated wild and scenic rivers, recreational rivers, or wildlife areas, and archaeological, historic, or cultural resources.

Is cost-effective, because improvements to and replacement of existing equipment will improve the operation and treatment of wastewater, and the proposed project is less costly than extensive changes and reconfigurations of the facility's treatment system.

Is not a controversial action, as various meetings have taken place at city offices and alternative locations to improve dissemination of information, the project's funding and technical requirements has been shared in local newspapers and via television, and the community is aware of the need for the project. The cost of the project is not overly burdensome to ratepayers considering the extent of the improvements required by the draft LTCP to the city's infrastructure. The city will be receiving a \$925,000 USACE grant, with the balance of the project being financed through the WPCLF, together saving approximately \$2,037,000 in interest payments compared to conventional financing without grant receipt.

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 address an aged and outdated portion of an existing wastewater treatment facility. The project will allow the city to improve its treatment process and discharges, reducing risks related to potential human contact with untreated or partially treated wastewater and will potentially reduce the discharge of nutrients to the Ohio River. Also, by using WPCLF low-interest financing, Steubenville has minimized the project cost.

Contact information

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Figure 1: Project location (in red)

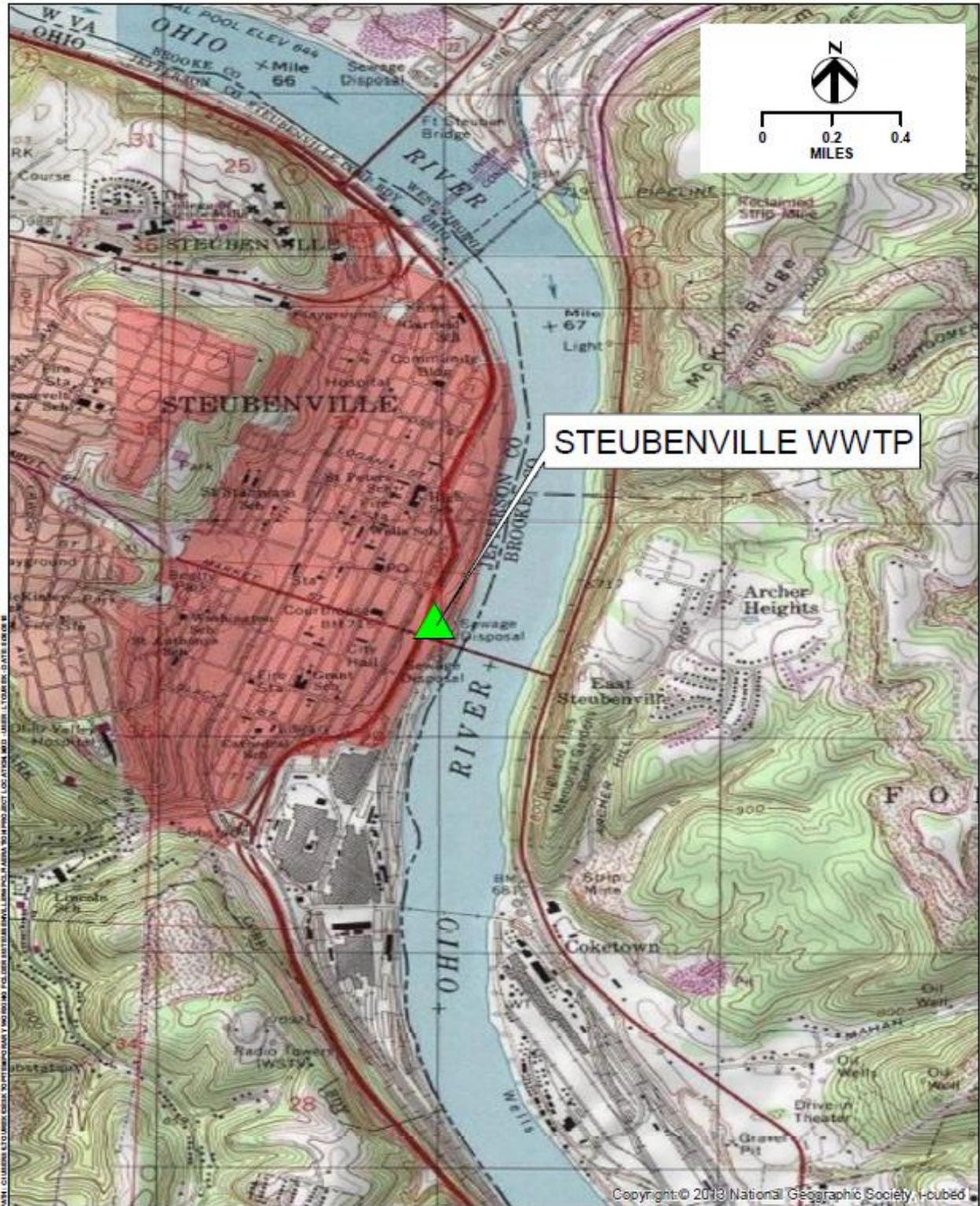


Figure 2: Steubenville Wastewater Treatment Plant