Ohio Environmental Protection Agency

Mike DeWine, Governor
Jon Husted, Lt. Governor
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April 1, 2021

Limited Environmental Review and Finding of No Significant Impact

City of Columbus – Franklin County
Center Large Diameter Rehabilitation
Loan number: CS390274-0380

The attached Limited Environmental Review (LER) is for a sanitary sewer rehabilitation project in Columbus 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

Name: Columbus – Center Large Diameter Rehabilitation

Applicant: City of Columbus
910 Dublin Road
Columbus, OH 43215

Loan number: CS390274-0380

Project Summary

The City of Columbus in Franklin County has requested $11,150,000 from the Water Pollution Control Loan Fund (WPCLF) for rehabilitation of the city's large diameter sewers in poor condition within the downtown Columbus area. The rehabilitation is necessary to restore hydraulic capacity of the existing infrastructure and extend its useful life. Construction for this project will remain within the confines of city rights-of-way and the existing sanitary sewer system.

History and Existing Conditions

Columbus inspected approximately 48,800 linear feet of large diameter sewers and 271 manholes in the downtown area using closed-circuit televising, televising coupled with sonar, and inspection with Go-Pro cameras to assess their condition. This inspection project included all sewers (storm, sanitary, and combined) with a diameter ranging from 36 to 180 inches in the downtown area and all combined sewers south of Interstate 70 that have not been televised in recent years.

Despite their age, the majority of the pipes and manholes inspected were in sound or moderate condition. Further risk evaluation based on surrounding environment, public health impact, structural analysis, and cost upon failure determined a number of pipes in critical condition which require rehabilitation. Additional segments in older sewers were identified with severe defects such as suspected collapse, pipe penetration, deformed pipes, or excessive sediment and debris accumulation. These defects impose an imminent risk of both structural or hydraulic failure and will require emergency point repairs.

Project Description

This project will rehabilitate the city's manholes and sewers that are in poor condition within the downtown area with 36-inch diameter pipes. The rehabilitation is necessary to restore hydraulic capacity of existing infrastructure to extend its useful life another 50 years.

Approximately 4,000 linear feet of pipes and 32 manholes were identified for rehabilitation in addition to 12 pipe segments with a need for emergency point repairs due to collapse, excessive debris build-up, or penetration of other utilities.

In addition to operations and maintenance such as the cleanup of deposits and debris, the rehabilitation of sewer lines may contain any number of the following types of structural improvements:

- Sewer replacement – Total replacement of the sewer with a pipe of the same size or different size based upon modeling of the upstream flows
- Point repair – A short open-cut point repair replacement by a PVC pipe of the same diameter
- Spot repair – Internal robotic or improvements to fix a variety of significant problems such as a slightly broken pipe section, multiple severe fractures, fixing a defective lateral, or filling in a hole
- Cured-in-place pipe (CIPP) manhole to manhole – A structurally sound rehabilitation of the sanitary sewer with a closed-fit polyester resin and felt system that should have at least a 50-year lifespan
- Centrifugally cast high-strength cementitious pipe liner (CCCPL) – This technology consists of applying enhanced cementitious or geopolymers products to the host pipe
- Chemical or cement grouting of the lateral connection – This technology is utilized to either stabilize a defective break in tap or reduce infiltration in structurally sound sewers at the connection
- CIPP of the lateral – A structurally sound rehabilitation of the sanitary sewer lateral with a closed-fit polyester resin and felt system that should have at least a 50-year lifespan
- Lateral replacement – Open-cut replacement of a lateral to the right-of-way with new PVC pipe that is typically done after a CIPP liner is installed
- Manhole lining rehabilitation – Re-lining of the sewer manholes with an impermeable layer of cementitious, epoxy, or polyester material that provides infiltration control and improved structural strength
- Replacement of the manhole with a new precast manhole or building a new manhole, as can be necessary when the manhole is severely deteriorated or structurally deficient
- Infiltration control – Chemical grouting, joint seals, or cement fill materials to stop infiltration in the sewer

The construction footprint for this project will remain within the urban downtown area in the confines of the existing sanitary sewer system and city rights-of-way, thereby minimizing effects on environmental resources. The contractor is responsible for best management practices to control erosion and sedimentation and minimize the creation of dust during construction.

Maps of the project location are provided in the exhibits below.

Implementation

Project Costs
Columbus plans to borrow $11,150,000 from the WPCLF. During the 20-year loan period, Columbus will save approximately $1,541,499 by using WPCLF dollars at the standard rate of 0.60%, compared to the market rate of 1.85%.

Local Economy
The current Columbus residential sewer bill is approximately $565/year. Projected residential sewer bills with the implementation of this and other associated wastewater projects are expected to increase to approximately $737/year, or 1.5% of the median household income (MHI) of Columbus, which is $49,478.

By using WPCLF financing for this project, Columbus has minimized the economic impact on customers.

Project Schedule
The anticipated loan award will occur in April 2021. Construction will start following loan award and is expected to be completed by the first quarter of 2022.

Public Participation

A public notice was posted on the City of Columbus' Public Utilities webpage detailing the proposed construction project. Contact information was provided for any public questions or concerns. Each impacted resident will receive written notification from the city's contractor prior to the rehabilitation work. The notifications will give information on timing of the work and contact information. Ohio EPA does not oppose the project.

Ohio EPA will make a copy of this document available to the public on its web page: http://epa.ohio.gov/defa/ofa.aspx (Under the "What's New" tab, scroll to: "Documents Available for Review and Comment – WPCLF Documents for Review and Comment") and will provide it upon request to interested parties. Information supporting this Limited Environmental Review (LER) is available from the project contact named below.

Conclusion

The proposed project meets the project type criteria for an LER; namely, it is an action for the replacement of existing treatment works. Furthermore, the project meets the other qualifying criteria for an LER; specifically, the proposed project:

- *Has no significant environmental effect, no effect on high value environmental resources, and does not require extensive specific impact mitigation.*
  Construction for the project is limited to the previously disturbed footprint of the existing sanitary sewer system within roadways and public rights-of-way, which lack important environmental features. Standard construction best management practices during construction will be required to control dust, sediment runoff, noise, and maintain safety.

- *Is cost-effective and not controversial.*
  The proposed project is cost-effective as it involves seeking rehabilitation to the existing sanitary sewer system to improve the overall wastewater treatment system process and eliminate future costly maintenance, breaks, or failures in deficient sewers. Ohio EPA is unaware of any specific opposition to or controversy about this project.

- *Does not create a new, or relocate an existing, discharge to surface or ground waters; will not result in substantial increases in the volume of discharge or the loading of pollutants from an existing source or from new facilities to receiving waters; and will not provide capacity to serve a population substantially greater than the existing population.*
  This project involves the rehabilitation of existing sewer lines within the wastewater collection system. The project will not increase wastewater discharges, nor provide capacity to serve a greater population. There will be no change in pollutant loading. Rather, the project will improve the condition of sewer lines to insure sufficient wastewater treatment system capacity.

Based upon the available planning information for this project and the materials presented within this LER, Ohio EPA concludes that the proposed project will not result in any significant adverse impacts to any environmental features. 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 such as surface waters, coastal zones, riparian areas, floodplains, wetlands, state-designated scenic or recreational rivers, prime or unique agricultural lands, aquifer recharge zones, archaeologically or historically significant sites, or threatened or endangered species.

This project will provide improvements to the city's sanitary sewer system to improve efficiency of wastewater collection, treatment and,improve public health.

Contact

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Exhibit 1: Project Location Map

Exhibit 2: Project Location Map