Ohio Environmental Protection Agency

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

June 30, 2021

Limited Environmental Review and Finding of No Significant Impact

City of Columbus – Franklin County
Hap Cremean Water Plant Basin Concrete Rehabilitation Part 2
Loan number: FS390274-0387

The attached Limited Environmental Review (LER) is for the structural rehabilitation of a water treatment facility in Columbus which the Ohio Environmental Protection Agency intends to finance through its Water Supply Revolving Loan Account (WSRLA) 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 WSRLA 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: Hap Cremean Water Plant Basin Concrete Rehabilitation Part 2

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

Loan Number: FS390274-0387

Project Summary

The City of Columbus in Franklin County has requested $32,432,000 from the Water Supply Revolving Loan Account (WSRLA) for rehabilitation of deteriorated concrete structures within and adjacent to the existing settling/flocculation area at the Hap Cremean Water Plant. The project is intended to ensure a continuous supply of potable water to central Ohio customers.

History and Existing Conditions

Columbus operates three large interconnected municipal water plants: Hap Cremean Water Plant (HCWP), Dublin Road Water Plant (DRWP), and Parsons Avenue Water Plant (PAWP). These plants collectively supply potable water to Columbus and the central Ohio metropolitan areas. HCWP is the largest of the three plants. It is a surface water treatment plant that draws raw water from Big Walnut Creek downstream of the Hoover Reservoir. It has a capacity of 125 million gallons per day (MGD) and an annual average daily flow of approximately 70 MGD.

The HCWP provides water to approximately 500,000 customers across a service area generally consisting of the northern half of Franklin County and a portion of southern Delaware County. Data shows there was a steady increase in water demand during the 1980s, 1990s, and early 2000s, but demand has been flat to slightly decreasing over the past eight years. However, population projections from Mid-Ohio Regional Planning Commission (MORPC) indicate that the central Ohio area is expected to see significant population growth over the next 50 years; thus, water demands are anticipated to increase.

The HCWP was originally constructed in 1954 and was expanded in 1967 to double its size. Recent improvements including ozone-biologically active filtration have improved the plant's ability to handle taste and odor events and increase organics removal.

Concrete rehabilitation in the settling/flocculation basin area of the water treatment plant last occurred in 1984. The current concrete conditions range from severe deterioration/potentially dangerous to minor distress/deterioration. Recent field observations have found shallow to full depth deterioration, cracking, leaking expansion joints and isolate gates, along with exposed concrete reinforcement steel. A significant portion of the concrete deterioration is a result of the seasonal freeze/thaw cycles of entrapped moisture in the concrete aggregate. Taking no action and allowing continued exposure to moisture will further deteriorate the concrete basin walls, eventually reducing the structural capacity

and, if not addressed in a timely manner, could eventually impact functionality of the basins and disrupt the ability of the plant to meet water supply needs. Since replacement of the structures is impractical, cost prohibitive, and not warranted given the current condition of the structures, rehabilitation is the selected alternative to extend the life of the structures and maintain treatment performance.

Project Description

The Hap Cremean Water Plant Basin Concrete Rehabilitation project is part of the city's ongoing capital improvement program to upgrade and maintain its treatment facilities to sustain a continuous supply of potable water to approximately one million central Ohio customers. The purpose of this project is to rehabilitate deteriorated concrete structures within and adjacent to the existing settling/flocculation basin area. Structures also include channels leading to/from the basin area, exterior areas adjacent to the basin area including retaining walls, and other similar features. Also included in the project is the rehabilitation or replacement of components embedded in the concrete including joints sealers, grating, frames, hatch covers, handrails, guardrails, light poles, valves, and gates.

The construction footprint for this project will remain within the confines of the existing water treatment plant, 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.

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

Implementation

Project Costs
Columbus plans to borrow $32,432,000 from the WSRLA. During the 20-year loan period, Columbus will save approximately $4,467,795 by using WSRLA dollars at the standard rate of 0.54%, compared to the market rate of 1.79%.

Local Economy
The current Columbus residential water bill is approximately $534/year. Projected residential water bills with the implementation of this project are expected to increase to approximately $541/year, or approximately 1% of median household income (MHI) of Columbus, which is $51,612.

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

Project Schedule
The anticipated loan award will occur in July 2021. Construction is expected to commence shortly after the funds have been awarded. Completion of the project is expected by November 2025.

Public Participation

A public notice was posted on the City of Columbus' Public Utilities webpage detailing the proposed concrete rehabilitation to the Hap Cremean Water Plant and contact information is provided for any public questions or concerns.

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 – WSRLA 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 rehabilitation 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 water treatment plant, which lacks important environmental features. Standard construction best management practices 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 improvements to existing infrastructure as opposed to complete replacement or no action, which will cause greater damage to the plant's structural capabilities and potentially disrupt its functional ability to meet water supply needs. With this rehabilitation, the treatment plant's reliability and life of the facility will be extended. Ohio EPA is unaware of any specific opposition to or controversy about this project that will maintain a treatment facility to ensure a continuous supply of potable drinking water to customers.

- *Does not create a new, or relocate an existing, discharge to surface or ground waters; will not create a new source of water withdrawals from either surface or ground waters; will not significantly increase the amount of water withdrawn from an existing water source; 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 replacement of structural components within the footprint of the existing treatment plant. The project will not increase water withdrawals, nor serve a greater population.

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 improve the water treatment plant's ability to meet water supply needs and ensure a continuous supply of potable water to customers.

Contact

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Exhibit 1: Project location map

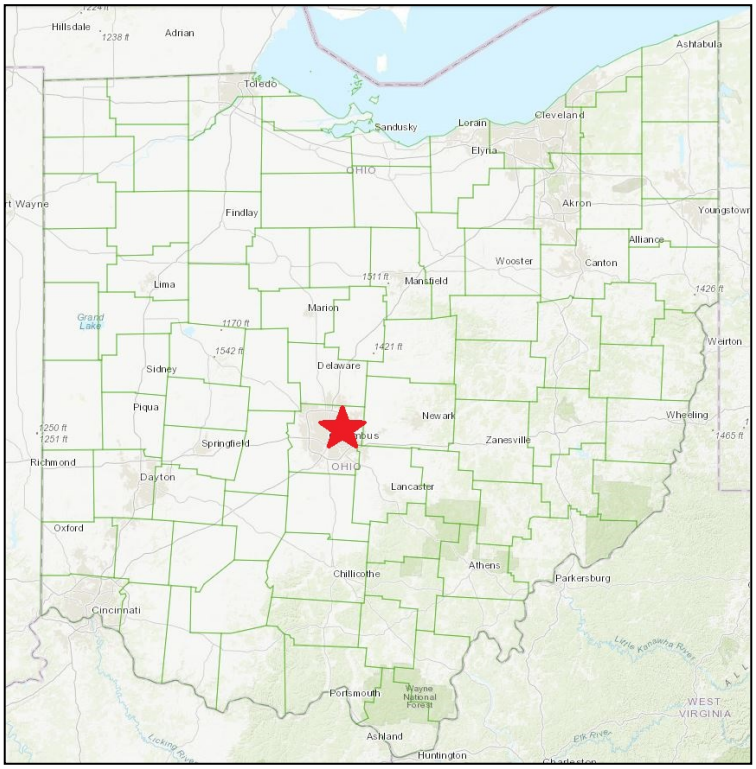

Exhibit 2: Project location map

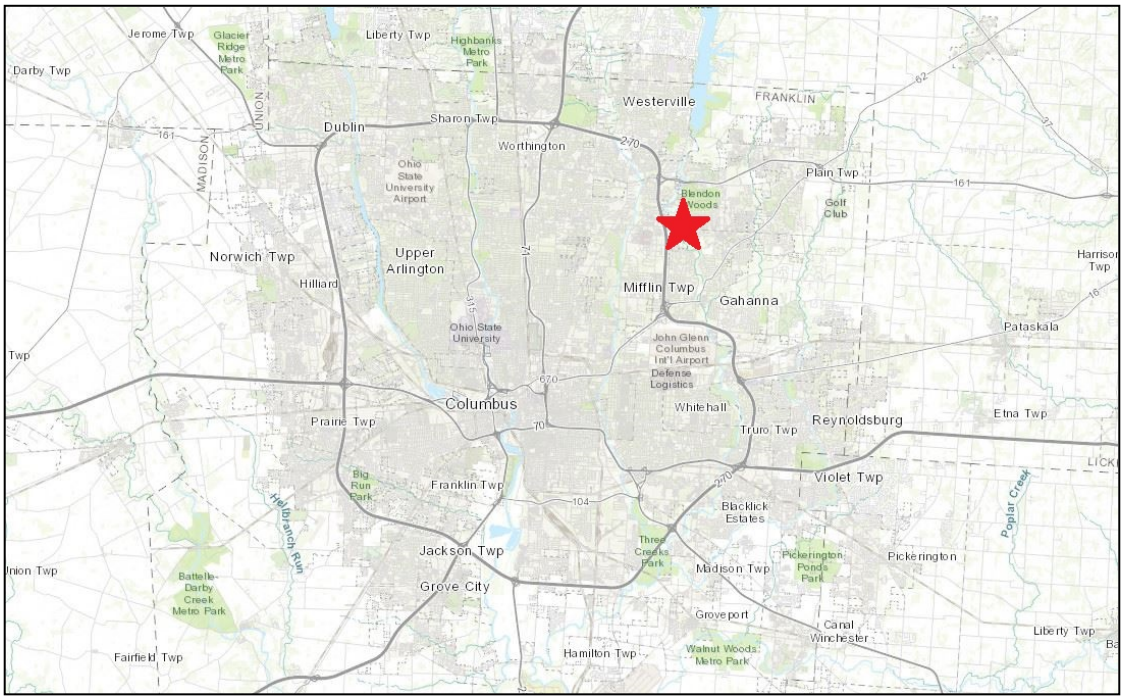

Exhibit 3: Project location