



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

October 6, 2021

Limited Environmental Review and Finding of No Significant Impact

**City of Columbus – Franklin County
JPWWTP Cogeneration Facility
Loan number: CS390274-0370**

The attached Limited Environmental Review (LER) is for a wastewater treatment facility improvement 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,

Kathleen Courtright, for

Jonathan Bernstein, Assistant Chief
Division of Environmental and Financial Assistance

Attachment

LIMITED ENVIRONMENTAL REVIEW

Project Identification

Project: JPWWTP Cogeneration Facility

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

Loan Number: CS390274-0370

Project Summary

The City of Columbus in Franklin County has requested \$26,897,731 from the Ohio Water Pollution Control Loan Fund (WPCLF) for the purchase and installation of a cogeneration facility within the Jackson Pike Wastewater Treatment Plant (JPWWTP). This project will allow the beneficial reuse of JPWWTP's biogas as heat to aid in anaerobic digestion and facility temperature control during the winter months.

History and Existing Conditions

Jackson Pike Wastewater Treatment Plant (JPWWTP) is one of two wastewater treatment plants operated by the City of Columbus to serve Columbus and 25 contracting suburban communities. The JPWWTP operates an anaerobic digestion system. As organic solids are broken down in the digestion process, a methane rich biogas is produced. This biogas is currently used to fuel boilers for building and process heat. However, biogas production at the plant is more than can be used onsite, so a significant amount of biogas is typically flared as excess. Columbus is interested in expanding the beneficial use of biogas through cogeneration, or combined heat and power (CHP), which would involve burning the biogas in a reciprocating engine that turns an electric generator.

Project Description

This project will beneficially reuse biogas by adding a cogeneration process. Cogeneration involves burning the biogas in a reciprocating engine that turns an electric generator. Two engine generators will be installed that will provide a combined three megawatts of electrical generation, which amounts to over half of the electricity used at the facility. The produced electricity will be used to meet the internal electrical needs of the wastewater treatment plant. The new cogeneration combined heat and power (CHP) system will be integrated into the existing heating systems at the JPWWTP so that waste heat can be beneficially utilized to the greatest extent possible. Heat is needed year-round for the anaerobic digestion process and is needed seasonally for buildings. The waste heat from these engines will also be recovered to meet all digester heating demands and the majority of building heating demands, while simultaneously providing an upgrade to existing, aging boiler infrastructure at JPWWTP. Upon implementation, the biogas supply will be fully utilized and flaring of excess gas will be minimized.

The major components of the JPWWTP Cogeneration Project include:

- Digester gas conditioning system
- Cogeneration engine generators

- Heat recovery steam generators (HRSGs)
- Steam and hot water interconnections with existing heating systems
- Replacement waste gas burners
- New construction management trailer (CMT) facilities

The construction footprint for this project will remain within the confines of the existing wastewater treatment plant and will be installed within existing buildings, thereby minimizing effects on environmental resources. The contractor is responsible for best management practices to control erosion and sedimentation, minimize the creation of dust, and maintain local traffic during construction.

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

Implementation

Project Costs

Columbus plans to borrow \$26,897,731 from the WPCLF. During the 20-year loan period, Columbus will save approximately \$3,692,148 by using WPCLF dollars at the standard rate of 0.48%, compared to the market rate of 1.73%.

Local Economy

The current Columbus residential sewer bill is approximately \$605/year. Projected residential sewer bills with the implementation of this and other associated wastewater projects are expected to increase to approximately \$753/year, or 1.5% of median household income (MHI) of Columbus, which is \$51,612.

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

Project Schedule

The anticipated loan award will occur in October 2021. Construction is expected to commence shortly after the funds have been awarded and completion of the project is expected by July 2023.

Public Participation

Public notices for all city wastewater construction projects are posted on the City of Columbus' Public Utilities webpage. 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 - 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 a minor upgrade 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 WWTP, 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 creating a system of beneficial reuse for the WWTP's existing biogas as opposed to burning it off as waste. Utilizing this existing asset will save the facility money that would otherwise be spent on fossil fuels to provide heat to buildings and functional components of the wastewater treatment process. 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 construction of new stationary equipment within the footprint of the existing treatment plant. The project will not increase wastewater discharges, nor serve a greater population. There will be no change in pollutant loading.

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 energy use within the wastewater treatment plant to maintain efficient and effective wastewater treatment for the City of Columbus.

Contact

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Exhibit 1: Project location map

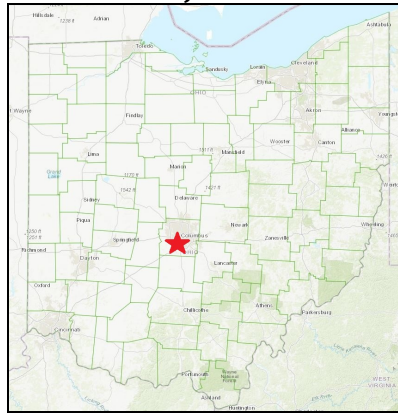


Exhibit 2: Project location map

