



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

May 2, 2022

Limited Environmental Review and Finding of No Significant Impact

**City of Circleville – Pickaway County
WWTP Improvements
Loan number: CS390256-0006**

The attached Limited Environmental Review (LER) is for a wastewater treatment project in Circleville 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

Kathleen Courtright, Assistant Chief
Division of Environmental and Financial Assistance

Attachment

LIMITED ENVIRONMENTAL REVIEW

Project Identification

Project: Wastewater Treatment Plant (WWTP) Improvements

Applicant: City of Circleville
104 E. Franklin Street
Circleville, OH 43113

Loan Number: CS390256-0006

Project Summary

The City of Circleville has requested \$41.6 million in financial assistance from Ohio EPA's Water Pollution Control Loan Fund (WPCLF) to make improvements to its WWTP located west of the city. This proposed WWTP project is required to address the compliance schedule in the city's National Pollutant Discharge Elimination System (NPDES) permit for this facility. All of the proposed construction will occur in two locations within a prior-disturbed area. The first location is at the city's WWTP shown in Figure 1. The second location corresponds to the alignment chosen for an 8-inch diameter replacement water main as shown in Figure 2. These proposed upgrades are expected to improve and maintain the operation of the city's WWTP and related wastewater infrastructure.

A typical residential customer served by Circleville's WWTP using 6,250 cubic feet per month currently pays \$40.75 per month for wastewater service and can expect this monthly fee to increase by 3% each year through 2025 to \$52.29.

The city expects that its annual loan payment costs will be reduced by qualifying for several WPCLF interest rate discounts. Most notably, Circleville can expect to receive a 0% interest rate on a large portion of its project costs (\$19.5 million) associated with nutrient (phosphorus) removal. Other interest rate discounts will apply to this project and the actual dollar amounts will be determined at the time of loan award to Circleville.

History & Existing Conditions

The City of Circleville owns and operates a major WWTP that treats over 1.0 million gallons per day (mgd). The wastewater collection system tributary to this WWTP consists of approximately 70 miles of separate sanitary sewers ranging in size from four inches to forty-eight inches in diameter. The sanitary sewers are predominately constructed of clay pipe and most of the 2,516 manholes in the system are constructed of brick and mortar. The city's wastewater collection system serves all of Circleville plus Ohio Christian University on the northeast side of the city.

This separate collection system has experienced problems associated with wet weather infiltration and wet weather inflow for many years such that both forms of infiltration/inflow (I/I)¹ have been

¹ I/I is defined as extraneous, clear water that enters a sanitary sewer system through surface or subsurface locations. Infiltration usually occurs when clear water enters the system below ground through cracked or broken pipes and manholes, poorly sealed or misaligned pipe joints, damaged or poorly connected sewer

determined to be excessive. As such, these extraneous flows are largely responsible for the hydraulic overloading at Circleville's WWTP. The city estimates that as much as 0.5 mgd of flow processed at its WWTP built in 1974 consists of I/I and has contributed to sanitary sewer overflows (SSOs). Currently, the city's WWTP handles about 2.0 mgd during dry weather or well within its rated capacity of 4.0 mgd. In wet weather, these flows increase significantly. Circleville's WWTP discharges to the Scioto River at River Mile 99.2 and serves a population of about 13,000 people. The Scioto River at Circleville is designated as warmwater habitat, a superior high quality water resource, and a primary contact recreational use stream. Of these three uses, only the river's recreational use is impaired.

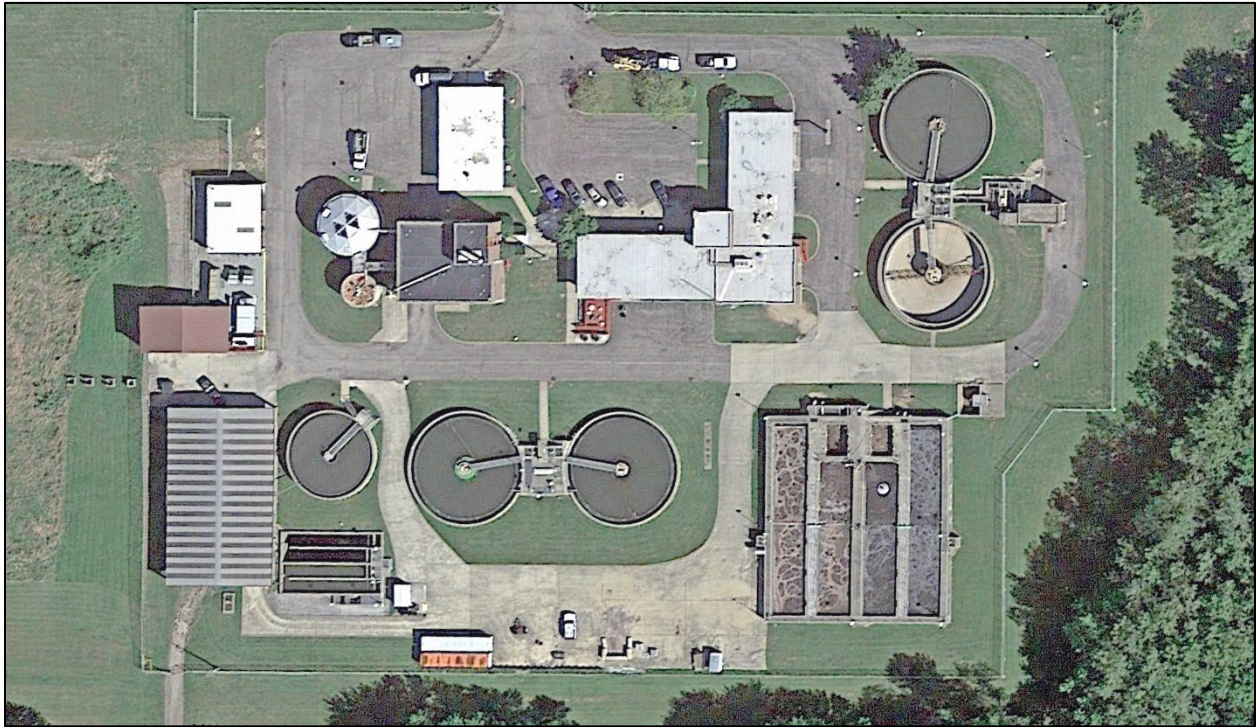


Figure 1. Circleville WWTP site

Currently, the Circleville WWTP is under a compliance schedule issued by Ohio EPA to correct the problems associated with wet weather. Under this compliance schedule, the city needs to complete a construction project focusing on the solutions identified in the city's engineering studies since 2015. These studies have focused on the WWTP components at the end of their useful service life and that need replacement. The wet stream processes at this WWTP include screening, influent pumping, grit removal, scum removal, primary settling, activated sludge, secondary clarification, and disinfection of effluent. Sludge treatment processes typically consist of sludge thickening and landfilling. Figure 2 below shows the city's proposed water main improvements.

laterals, etc. Inflow may include clear water entering the system through manhole covers, roof or foundation drains, direct storm sewer connections, etc.

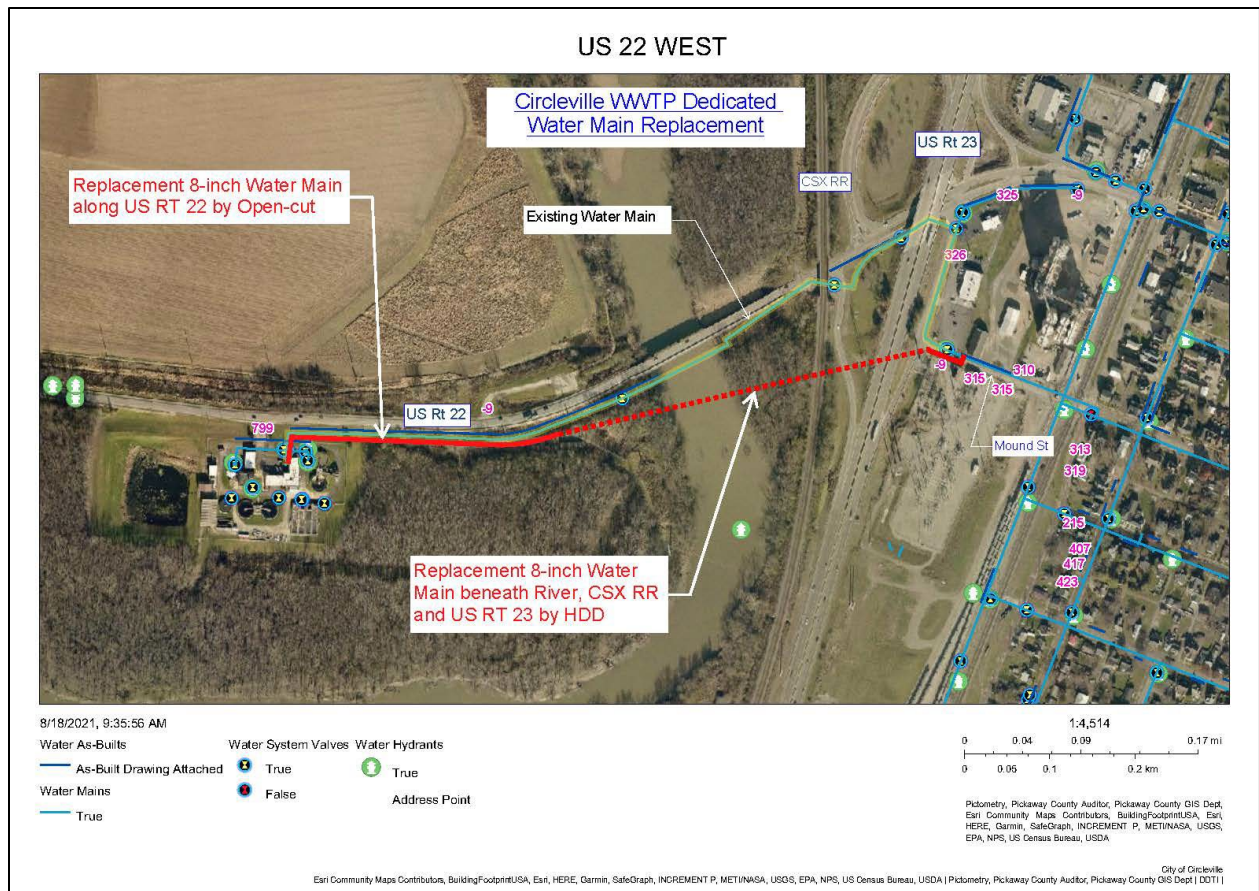


Figure 2. Proposed replacement water main alignment

Project Description

During the planning for this proposed project culminating in the city’s April 2020 basis of design report and related specific studies, Circleville considered a “no-action” option to compare to its “action” options. The latter consisted of making major improvements to its WWTP. After noting that no-action was not a feasible alternative, the city prepared a basis of design cost estimate for the entire project.

Upon completing an alternatives analysis, the city decided to make the proposed improvements to its WWTP shown in Figure 3 below. All of the proposed above-ground construction will occur in previously disturbed locations and outside of the Scioto River’s regulatory floodway as documented in a Letter of Map Revision issued by the Federal Emergency Management Agency (FEMA) in June 2019.

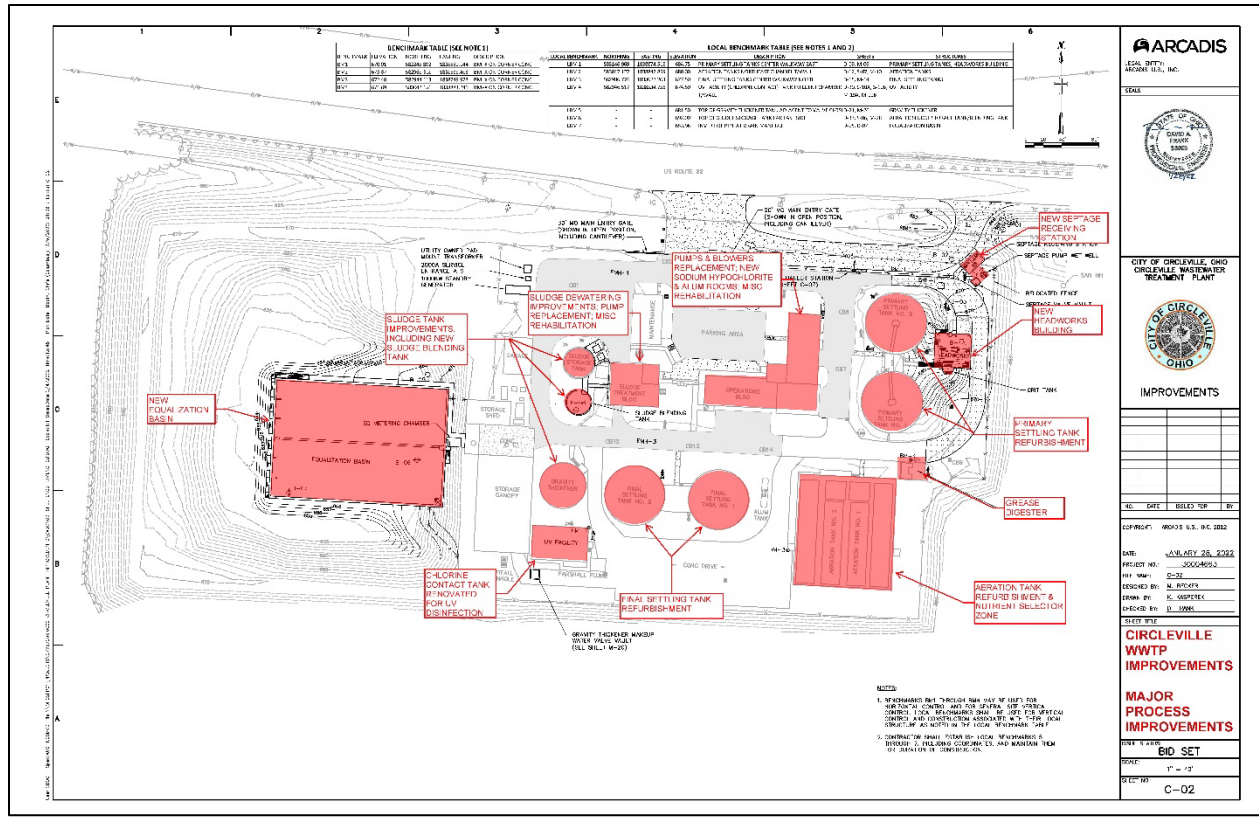


Figure 3. Proposed Circleville WWTP improvements

The proposed project will have no major effect on the rated design capacity of the Circleville WWTP given the emphasis on wet weather controls and nutrient reduction forming the primary basis for the proposed project. As part of the planning for the city's proposed project, wastewater flows are expected to increase from the current 2.0 mgd to 3.4 mgd in 2040. This increase is consistent with the current capacity 4.0 mgd rating of the Circleville WWTP, expected population growth of 9.8%, and additional flows and loading from such sources as Ohio Christian University, nearby county WWTPs, filter backwash water from the City of Circleville Water Treatment Plant (WTP), new industrial customers, packing plants, and private development in the service area shown in Figure 4.

The proposed project includes the following improvements: refurbishing of the existing influent pumping equipment; constructing a new wet weather three-million-gallon equalization basin; installing a new septicage receiving station; constructing a new headworks building; refurbishing the existing primary settling tanks, aeration tanks, final settling tanks, gravity thickener tank, and an aerated sludge storage tank; and converting the existing chlorine contact tank to ultraviolet disinfection. Other sludge handling improvements include a new sludge blending tank, sludge dewatering equipment, and reuse of a waste holding tank as a grease digester. Finally, a new non-potable water system and a new WWTP-wide supervisory control and data acquisition (SCADA) system will be installed as part of this proposed project. Related work will include site grading, paving, fencing, and installing electrical, HVAC, and instrumentation systems. A major improvement will be installation of a new chemical feed system to remove phosphorus from the WWTP's effluent. Overall, these improvements will be completed at or adjacent to the existing components which occupy about 12.5 acres of land at the city's 81 acre WWTP site.

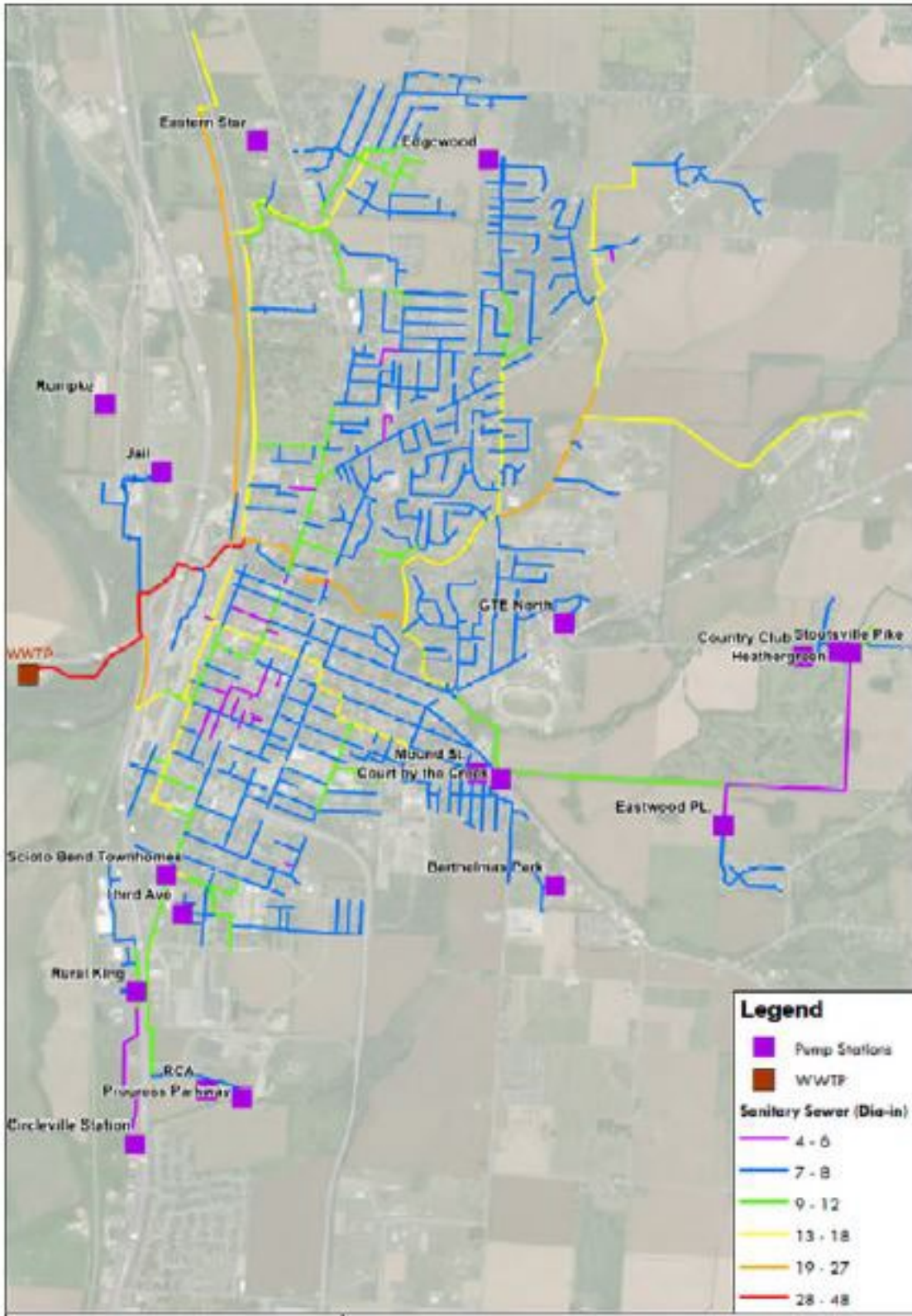


Figure 4. Circleville WWTP service area

This project is meant to provide a minimum 20-year solution to the city's WWTP needs. Restoring the project area to its existing (or better) condition is an additional component of the proposed project.

In addition to this proposed WWTP work, the city is proposing to install a new potable water line from West Mound Street in Circleville to the WWTP site. This proposed water line will serve only the city's WWTP and will entail a crossing of the Scioto River using a horizontal directional drilling technique as shown in Figure 2. Minimal surface disturbance is expected to be associated with the water line's installation.

Implementation

The current estimated cost of the city's proposed project is \$41.6 million, of which approximately \$37.8 million is for construction. The remaining amount of \$3.8 million is for engineering services during planning, design, and construction.

Circleville intends to finance the improvements to its WWTP through a 30-year low-interest loan from Ohio EPA's WPCLF. Currently, the pre-discount WPCLF standard interest rate is 1.28%. This fixed interest rate is adjusted monthly to reflect changing market conditions.

The city expects that the actual interest rate on its WPCLF loan will be reduced by qualifying for several interest rate discounts (nutrient reduction, septage, back-up generator, and water resource restoration sponsor program). Of these discounts, nutrient reduction offers the most savings. Notably, Circleville can expect to receive a 0% interest rate on about \$19.5 million associated with phosphorus removal. The actual amounts eligible for each discount will be determined at the time of loan award to Circleville.

Under the wastewater rates effective in April 2022, a typical City of Circleville residential customer using on average 6,260 cubic feet per month currently pays a fee of \$40.75, or about \$489 a year. Based on the latest information, city residents can expect to see fees reach \$52.29 per month (\$627.48 per year) in 2025. When expressed as a percentage of the city's most recent median household income (MHI) figure of \$42,103, this annual post-project fee is about 1.49% of the city's MHI.

By proposing to fund its project through the WPCLF, Ohio EPA anticipates that Circleville should be able to generate enough revenue under its current and proposed wastewater rate structure to continue to own, operate, and maintain its wastewater collection and treatment systems well into the future.

Under the city's proposed project schedule, WPCLF funds are expected to be awarded in May 2022, so that construction can commence soon thereafter. The city estimates that construction on this project can be completed in about 30 months.

Public Participation

According to the city, the public was provided with opportunities to learn more about this compliance-driven wastewater improvements project, the city's wastewater rates, and the overall condition of its collection system and WWTP. These included activities such as city council meetings in October 2018 and again in February 2022, as well as concurrent newspaper articles summarizing the city's project. On this basis, and the limited scope of the project covered by this document, Ohio

EPA has determined that no additional public review and comment on the proposed project is necessary. All potentially interested parties appear to have been given adequate opportunity to review and comment on this project and its costs.

Ohio EPA will make a copy of this document available to the public on its web page (<https://epa.ohio.gov/divisions-and-offices/environmental-financial-assistance/announcements>) and will provide it upon request. A copy may also be posted at the city's main office, other city buildings, and on its web site (if available).

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 mechanical equipment and construction of new ancillary facilities adjacent or appurtenant to existing facilities. Furthermore, the project meets the other qualifying minimum criteria for an LER; specifically, the proposed project:

Has no potential for associated significant adverse environmental impacts and will have no effect on high-value environmental resources. Given the proposed project's limited scope and size, placement within previously disturbed locations in an urbanized area, and the absence of any highly significant above-ground natural features in the immediate project locations, the proposed wastewater improvements will not result in any significant adverse environmental impacts. This conclusion is validated by the reviews completed by Ohio EPA.

Ohio EPA consulted with Ohio Department of Natural Resources during the project review and determined that the proposed project will have no adverse effect on important natural resources, such as floodplains or other natural features, as documented by the city in its coordination with FEMA. Other than the proposed water line's crossing underneath the Scioto River, and the surrounding wooded area, there are no known high value environmental resources. By horizontal directional drilling beneath these two resources and requiring a drilling mud contingency plan be in place before the drilling begins, no significant adverse environmental impacts are anticipated. Finally, the only vegetation in the construction areas where open cut excavations are necessary appears to be grass.

Will not require extensive impact mitigation unique to the assistance proposal. The proposed work to complete this project is generally straight-forward and does not require any extensive mitigation of environmental impacts, as most of the wastewater improvements will be made within previously disturbed areas. In that regard, focused earth-moving activity is associated with the construction activities at the WWTP site, so that only routine environmental impact mitigation in the form of standard soil erosion and sedimentation controls, spill control, dust control, vehicle emission and truck traffic controls, and adherence to prohibited construction activities is necessary. For example, the city's project is required to control fugitive dust from any construction work as a condition of the permit-to-install issued for these proposed improvements, and so help assure that all of Pickaway County stays in full attainment for all of the six priority air pollutants regulated under the Clean Air Act. Storm water pollution plan (SWP3) permit requirements are also required to be met on this proposed project.

Is cost effective and not the subject of significant public interest. In comparison to a no-action alternative considered during project planning, the chosen improvements were selected by the city as more cost effective on the basis of costs and non-monetary factors. Moreover, the proposed

improvements constituting this project are non-controversial because they will not adversely impact the environment, or the residential rates paid for wastewater.

Will not create a new, or relocate an existing, discharge to surface or ground waters, or cause pollution of surface or ground waters. The proposed project will not result in either new, relocated, or additional discharges of wastewater to either surface or ground water on a permanent basis. Rather, the purpose of this project is to help ensure that wastewater flows and solids which currently are being released to the environment without treatment via sanitary sewer overflows during wet weather can begin to be properly handled. Part of the reason for this finding is that the proposed project will improve the operation of nearly all solids handling and wet stream components within the city's WWTP and enable it to achieve compliance with its permit to discharge treated wastewater to the Scioto River. Significantly, no changes in the city's existing National Pollutant Discharge Elimination System (NPDES) permit covering its WWTP, to its WWTP's effluent outfall location, or a discharge of additional pollutants to local surface water resources through population growth are expected in response to this project. Rather, any changes at the WWTP site are intended to better convey wet weather flows.

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. As noted above, the proposed improvements to the Circleville WWTP are generally not designed to facilitate more than 10% future population growth in or around the WWTP's service area, but rather to address the city's regulatory responsibilities under the Clean Water Act. On this basis, the proposed project will not result in any net increase in the volume of discharge or the loading of pollutants from the city's WWTP and its collection system or permitted to be discharged under the city's NPDES permit. Rather, flows which currently do not receive complete treatment will be properly handled and discharged once the proposed project is constructed.

Will not provide capacity to serve a population substantially greater than the existing population. Based on information provided by the city during planning, the city and its surroundings can expect about 10% population growth during the next two decades. As this expected population growth is less than 30%, this criterion is met. Furthermore, the flows currently being processed at the city's WWTP during dry weather are indicative of no to slow growth when compared to the original design capacity. In addition, the primary purpose of this project is to replace the existing wet stream and solids handling components which have come to the end of their useful life and to address peak wet weather flow conditions, not future growth and development. On this basis, the proposed project and the population it is expected to support should have no effect on environmental attributes that are typically affected by growing populations and any related extensions of new collection sewer systems. Overall, the city's proposed project is consistent with the current NPDES permit's capacity rating.

The proposed project is sufficiently limited in scope and meets all applicable criteria to warrant an LER. The planning activities for the proposed project identified no potentially significant, direct, indirect, or cumulative adverse impacts. The proposed project is expected to have no short- or long-term adverse impacts on the quality of the human environment or on sensitive resources such as air quality, floodplains, wetlands, prime or unique agricultural lands, aquifer recharge zones, archaeologically or historically significant sites, or threatened or endangered species. Circleville's proposed wastewater improvements project will enable it to address its regulatory responsibilities under the Clean Water Act -- especially those related to its WWTP's operation that prompted the city to initiate the proposed project. Public health risks associated with potential exposure to untreated sewage in the project area will also be reduced.

Contact information:

Kevin Hinkle

Ohio EPA, Division of Environmental and Financial Assistance

Office of Financial Assistance, Technical Review Section, Environmental Planning Unit

P.O. Box 1049

Columbus, Ohio 43216-1049

E-mail: kevin.hinkle@epa.ohio.gov