



July 28, 2023

**Preliminary Finding of No Significant Impact
To All Interested Citizens, Organizations, and Government Agencies**

**Village of Piketon – Pike County
Scioto Valley Regional Water Reclamation Facility
Loan Number: CS390753-0009**

The attached Environmental Assessment (EA) is for a wastewater project in Piketon 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 EA describes the project, its costs, and expected environmental benefits. We would appreciate receiving any comments you may have on the project. Making available this EA and seeking your comments 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. More information can be obtained by contacting the person named at the end of the attached EA.

Any comments on our preliminary determination should be sent to the email address of the contact named at the end of the EA. We will not act on this project for 30 calendar days from the date of this notice. In the absence of substantive comments during this period, our preliminary decision will become final. After that, the Village of Piketon can then proceed with its application for the WPCLF loan.

Sincerely,

Jonathan Bernstein for

Kathleen Courtright, Assistant Chief
Division of Environmental & Financial Assistance

Attachment

ENVIRONMENTAL ASSESSMENT

Project Identification

Project: Scioto Valley Regional Water Reclamation Facility

Applicant: Village of Piketon
411 West Street
Piketon, Ohio 45661

Loan Number: CS390753-0009



Figure 1. Pike County

Project Summary

The Village of Piketon, in Pike County (Figure 1), has requested \$11,734,000 from the Ohio Water Pollution Control Loan Fund (WPCLF) to finance the Scioto Valley Regional Water Reclamation Facility project. This project includes the construction of a new, upgraded wastewater treatment plant (WWTP) to serve the village. Completion of this project is intended to resolve ongoing issues and concerns with Piketon’s aging WWTP.

History & Existing Conditions

The Piketon WWTP, located at 626 Piketon Road, was constructed in 1954 and most recently upgraded during an expansion of the plant in 2009. Piketon WWTP serves the area within the village limits and provides regional service to customers northeast of Piketon including Zahn’s Corner Industrial Park, Rumpke Landfill, Rehm’s Addition, and Zahn’s Corner Middle School, as well as areas south of Piketon including Ohio Department of Transportation Pike County Garage and Pike County Career Technology Center. The average daily design flow is 0.45 million gallons per day (mgd). The WWTP treatment process consists of preliminary screening followed by primary and secondary treatment prior to final disinfection and discharge to the Scioto River.

The WWTP experiences high peaks in flow during wet weather events that are disproportionate to regular, steady sewer flows. These peaks suggest that there are sources of inflow and infiltration (I/I)¹ within Piketon’s sanitary sewer system. Piketon has incorporated consideration of additional flows from I/I in design of the new WWTP. Piketon has reported no known sanitary sewer overflow events despite the presence of I/I within their system.

Currently, much of the WWTP equipment is reaching or has exceeded its design life requiring increased intensity of maintenance to keep the plant operating at regulatory standards and making sourcing of replacement parts more challenging. Piketon intends to address concerns caused by the age and condition of their wastewater system through completion of this project.

¹ Inflow is surface runoff that enters sanitary sewers through directly connected downspouts, area drains, unsolicited connections, etc. Infiltration is the ground water that seeps into sanitary sewers through cracks, offset joints, and other flaws in the pipe.

See Figure 2 for locations of existing and planned Piketon wastewater and drinking water facilities and infrastructure.

Population and Flow Projections

The population of Piketon is an estimated 2,139 and has remained nearly the same over the previous decade, experiencing a minor decrease in recent years. Piketon expects minimal growth over the next 20-years when considering the recent decrease and taking into account the average growth rate for Pike County.

The average daily flow to the Piketon WWTP is 257,000 gallons, and the maximum daily flow is 717,000 gallons. The plant receives its highest flows during wet weather months when stormwater contributes to greater amounts of I/I, thereby increasing flows reaching the WWTP. As described previously, Piketon provides regional service to several nearby areas. Several additional locations have been identified potentially to be served by Piketon; this includes an area immediately south of the village (WAI, Glatfelter Merchandising Yard, OSU Endeavor Center, and residents on Schuster Road and Church Road), an area in northern Scioto Township (Pike County Manufacturing Center, Ohio Valley Electric Corporation, Carter Lumber, Dawson's Trailer Park, the U.S. Department of Energy Portsmouth Site, and nearby residents), and an area in eastern Newtown Township (Jasper Elementary School, Cole's Furniture, and nearby residents). Piketon has identified the area in Newtown Township as the most probable to provide service to.

Alternatives

1. *No-Action*: The No-Action alternative would allow conditions to remain as they are and do nothing to address the issues related to the age of the existing WWTP equipment, the need for additional capacity to handle an increase in wastewater flows from service area growth, or the ability to feasibly meet potential future discharge limits. Piketon has determined that immediate action is needed to prevent further decline of performance and increase in maintenance efforts; therefore, this alternative was removed from consideration.
2. *Rehabilitation of the Existing WWTP*: This alternative would involve extensive repair, and in many cases complete replacement, of equipment across effectively the entirety of the WWTP. Repair and replacement would involve but not be limited to the following treatment components: screen and influent structure, headworks facility, office building, influent pump station, primary settling tanks, trickling filters, recirculation pumps, secondary settling tanks, peracetic (PAA) disinfection system, sludge digester and sludge drying beds, and backup generator. This alternative would maintain the existing treatment system in use, restricting Piketon's ability to utilize the latest treatment technologies available, and not improve the quality of final effluent. The estimated cost of this alternative compares similarly to those for the construction of a new WWTP. Piketon has determined this alternative to be less cost effective than construction of a new WWTP since it does not make financial sense to spend a comparable amount rehabilitating an old WWTP that restricts the village's ability to explore other treatment technologies and improve final effluent quality.
3. *Construction of a New WWTP*: This alternative would allow Piketon to explore and take advantage of the latest treatment technologies available and likely improve the quality of final effluent. A new WWTP is strongly supported compared to Alternative 2 given the extent of rehabilitation that would be required, as previously described. Piketon considered three treatment alternatives for a new WWTP; however, regardless of the treatment alternative selected, a new WWTP would

include the following items: a headworks facility with a rotary drum screen and new influent pumping station, a PAA disinfection system, and mechanical dewatering of sludge by a sludge press and disposal of sludge to a landfill. The three treatment alternatives considered are described below.

- 3.1. *Oxidation Ditch*: An oxidation ditch WWTP would include an influent structure with rotary drum screens, a two-channel oxidation ditch, two final clarifiers, two splitter boxes, a recirculation pump station, a disinfection building for PAA disinfection, sludge pumping, sludge aerobic digester, and a sludge dewatering facility.
- 3.2. *Aero-Mod Sequox*: The Aero-Mod Sequox technology is a proprietary treatment process that is similar to an activated sludge system. This system involves a single tank that utilizes plug flow through a sequence of channels to achieve treatment.
- 3.3. *Sanitaire ICEAS SBR*: A sequencing batch reactor (SBR) is an activated sludge type wastewater treatment system that performs various treatment processes within a single tank. These systems are most often operated sequentially using two or more batch reactors to optimize performance. An Intermittent Cycle Extended Aeration System (ICEAS) is a modified version of an SBR. An ICEAS utilizes a single tank, such as a traditional SBR, but allows influent wastewater flows into the reactor on a continual basis rather than at designated times during the treatment process.

Selected Alternative

After considering monetary and nonmonetary factors, Piketon has determined it most cost effective to move forward with the construction of a new WWTP using ICEAS SBR treatment technology as described in Alternative 3.3. This alternative is the most desirable based on analysis of the construction cost, operation and maintenance, and present worth. Wastewater treatment using ICEAS SBR has the additional advantages of requiring a smaller site footprint, being relatively easy to expand the capacity of through the addition of more tanks, does not require a separate clarifier, cycle times and operation strategies are easily adjustable, are more resistant to hydraulic shock, can perform consistent nitrification and denitrification and phosphorous removal, and allow for the adjustment of aerobic, anaerobic, and anoxic conditions as needed for biological nutrient removal.

Piketon intends to construct a new ICEAS SBR WWTP on village-owned property on Piketon Road, northeast of the existing WWTP site. Piketon's WWTP will have an average daily design flow of 0.5 mgd. The moderate increase in treatment capacity accounts for effective treatment of peak flows during wet weather events and will allow for some growth in the service area. The WWTP site plan also includes additional land adjacent to the new plant for future expansion if needed. The plant will discharge treated effluent to the Scioto River via the existing WWTP outfall.

Implementation

Piketon proposes to borrow \$11,734,000 from the Ohio WPCLF at the regionalization discount rate of zero percent to cover the costs associated with the project. Piketon is also eligible to receive up to an estimated \$4,000,000 in regionalization principal forgiveness towards the project. Assuming a 30-year loan term and full award of the mentioned principal forgiveness funding, borrowing this amount in WPCLF monies could save Piketon roughly \$12,840,000 over the life of the loan compared to the current market rate of 4.13 percent. Piketon also expects to receive \$2,062,500 from the Ohio

Department of Development and \$2,000,000 from the U.S. Department of Housing and Urban Development towards the project.

Piketon has reduced their debt service for this necessary project by pursuing a below-market interest rate loan through the Ohio WPCLF and have further reduced debt by qualifying for the maximum amount of WPCLF principal forgiveness and securing \$4,062,500 in other federal and state grant funds. Through thoughtful design and funding, Piketon has greatly reduced the cost to residents for this critical project. The debt associated with this project will be recovered from monthly sewer charges. Water and sewer charges were last increased in 2020 and set to increase annually by 3 percent to cover operational expenses. Piketon anticipates increasing the monthly sewer rates by an additional 5 percent annually for five years to cover the debt repayment for this project. Piketon also collects a monthly sewer maintenance fee of \$7, which Piketon does not anticipate increasing. Piketon reports that the average monthly residential water usage is 5,000 gallons. Based on this usage, the annual residential sewer bill for customers served by Piketon will be \$400 upon project completion, assuming the project is completed in 2026. This represents 1.04 percent of the median household income for Piketon (MHI; \$38,512) and compares favorably to the Ohio average annual sewer bill of \$749.

Construction is expected to begin following loan award and take two years to complete.

Public Participation

Piketon holds public village council meetings every first and third Monday (Tuesday if Monday is a holiday) of each month and provides information on the time, location, and agenda for the meetings on the village website, as well as records of meeting minutes. Piketon has discussed the WWTP project and associated items at these meetings over the past several years and will continue to do so as they progress. Also provided on Piketon's website is a list of all village ongoing and planned projects. Local news articles have covered these projects as well.

Piketon has scheduled an upcoming public meeting for Monday, August 7, 6-6:45 p.m. in the council chambers, 411 West Street. Piketon personnel will be present to discuss the project, answer questions, and collect public comments.

Ohio EPA is unaware of controversy about or opposition to the project. Ohio EPA will make a copy of this document available to the public on the following webpage and will provide it upon request: <https://epa.ohio.gov/divisions-and-offices/environmental-financial-assistance/announcements>.

Environmental Impacts

The project has the potential to affect the following features, but the effects will be reduced or mitigated to acceptable levels as explained below.

Air Quality

Short-term increases in exhaust from construction equipment will be temporary and limited to the duration of construction. Exhaust from construction equipment will be an insignificant source of local air pollution and is expected to have no significant short-term or long-term impact on local air quality.

The WWTP site is near Piketon High School and grounds. Piketon has discussed the proposed WWTP with Piketon High School and has considered concern regarding potential odors in design of the plant.

In order to control odors, sludge created during the treatment process will be dewatered and then stored inside a designated sludge storage room within the WWTP building.

Archaeological and Historical Resources

The *Phase I Archaeology Survey of Approximately 7 Acres (2.6 ha) for the Proposed Piketon Water and Wastewater Treatment Plant in Pike County, Ohio* conducted for the proposed WWTP site resulted in the discovery of a single previously unidentified archaeological site. This site represents the remnants of demolished agricultural outbuildings dating to the first half of the twentieth century. Several concrete foundations and scattered debris are all that remains of these outbuildings, and there are otherwise no other known archaeological sites or structures present. The site was considered ineligible for listing in the National Register of Historic Places (NRHP) due to the lack of research potential and physical integrity of the site, and no further investigations are recommended.

For these reasons, Ohio EPA has determined that the project is unlikely to impact important historical or archaeological resources.

Review of the project was coordinated with the Ohio State Historic Preservation Office (SHPO) for consideration of potential effects to archaeological and historical resources. The Ohio SHPO concurred that the project will have no effect on properties listed or eligible for listing in the NRHP.

In the event that archaeological discoveries are made during construction, contractors and subcontractors are required under Ohio Revised Code Section 149.53 to notify the Ohio SHPO of any archaeological discoveries in the project area and to cooperate in archaeological and historic survey and salvage work when appropriate.

Farmland Protection

The WWTP site contains an estimated 4.6 acres of Elkinsville silt loam and Fox loam, soil types considered prime and unique farmland, that will be converted because of the project. This represents 0.006 percent of the farmland in Pike County. Based on careful consideration of available farmland within Pike County and Ohio, Ohio EPA has determined that the conversion of farmland associated with the project will have a negligible impact due to the wealth of available farmland across Ohio.

Terrestrial Habitat, Endangered Species, and Fish and Wildlife

The WWTP will be constructed on a vacant, Piketon-owned lot on Piketon Road, northeast of the existing WWTP. This roughly seven-acre lot was previously home to several agricultural outbuildings and the land used for various agricultural activities. The land was cleared in the past and now contains varying levels of vegetative regrowth. It is unlikely that any state or federally listed threatened or endangered plant species is present on the property due to previous clearing and land-use practices. Furthermore, the site contains no critical or significant terrestrial habitat.

The entire state of Ohio is within the range of several state and federally listed endangered and threatened bat species (Indiana bat, northern long-eared bat, little brown bat, and tricolored bat). During summer months these species roost in trees with loose and exfoliating bark, crevices and cavities, and within leaf clusters. Piketon will restrict tree clearing to between October 1 and March 31, as recommended by the Ohio Department of Natural Resources and U.S. Fish and Wildlife Service, to avoid potential impacts to these species.

For these reasons, Ohio EPA has determined that the project is unlikely to adversely impact significant terrestrial habitat and state and federally listed threatened and endangered species, either because significant terrestrial habitat and suitable habitat for threatened and endangered species is

not present within the project area or because adequate protection measures will be implemented during construction.

Floodplains

A portion of the proposed WWTP site falls within the designated zone of the 100-year floodplain. Piketon has coordinated review of the project with the local floodplain administrator to ensure compliance with all local floodplain regulations. There are no short-term or long-term significant adverse impacts to the floodplain anticipated as a result of the proposed project.

Noise, Traffic, Safety, and Aesthetics

It will be the contractor's responsibility to implement all applicable best management practices (e.g., erosion and sediment control, traffic maintenance, safety protocols, noise and dust minimization, etc.) during construction to minimize potential nuisances and disturbances. Restoration work is included and will succeed construction.

Surface Water Resources

The WWTP will discharge treated effluent to the Scioto River through Piketon's existing WWTP outfall. Effluent discharge will be regulated by a National Pollutant Discharge Elimination System (NPDES) permit issued from Ohio EPA. Piketon's existing NPDES permit will be modified to reflect the new plant's permitted discharge limits. Piketon intends for the new plant to operate under lower concentration and loading limits than outlined in their existing permit, resulting in a higher quality effluent. Stormwater management was considered during design of the site. Stormwater will be collected in a detention basin and conveyed through the WWTP's outfall to the Scioto River.

Unaffected Resources

The following resources are not present and therefore will not be impacted by these projects: Coastal Zones, Wild and Scenic Rivers, Ground Water Resources including Sole Source Aquifers and Source Water Assessment and Protection Areas, Wetlands, and Aquatic Habitat. Additionally, there will be no impact Safe Drinking Water or on Land Use as it pertains to public space.

Conclusion

Based upon Ohio EPA's review of the planning information and the materials presented in this Environmental Assessment, we have concluded that there will be no significant adverse impacts from the proposed project as it relates to the environmental features discussed previously. This is because these features do not exist in the project area, the features exist but will not be adversely affected, or the impacts will be temporary and mitigated. Completion of the project will have long-term benefits associated with the provision of safe and adequate wastewater treatment and capacity to support the needs of residential customers and businesses throughout the service area, regarding both the present demand and considering potential growth.

Contact Information

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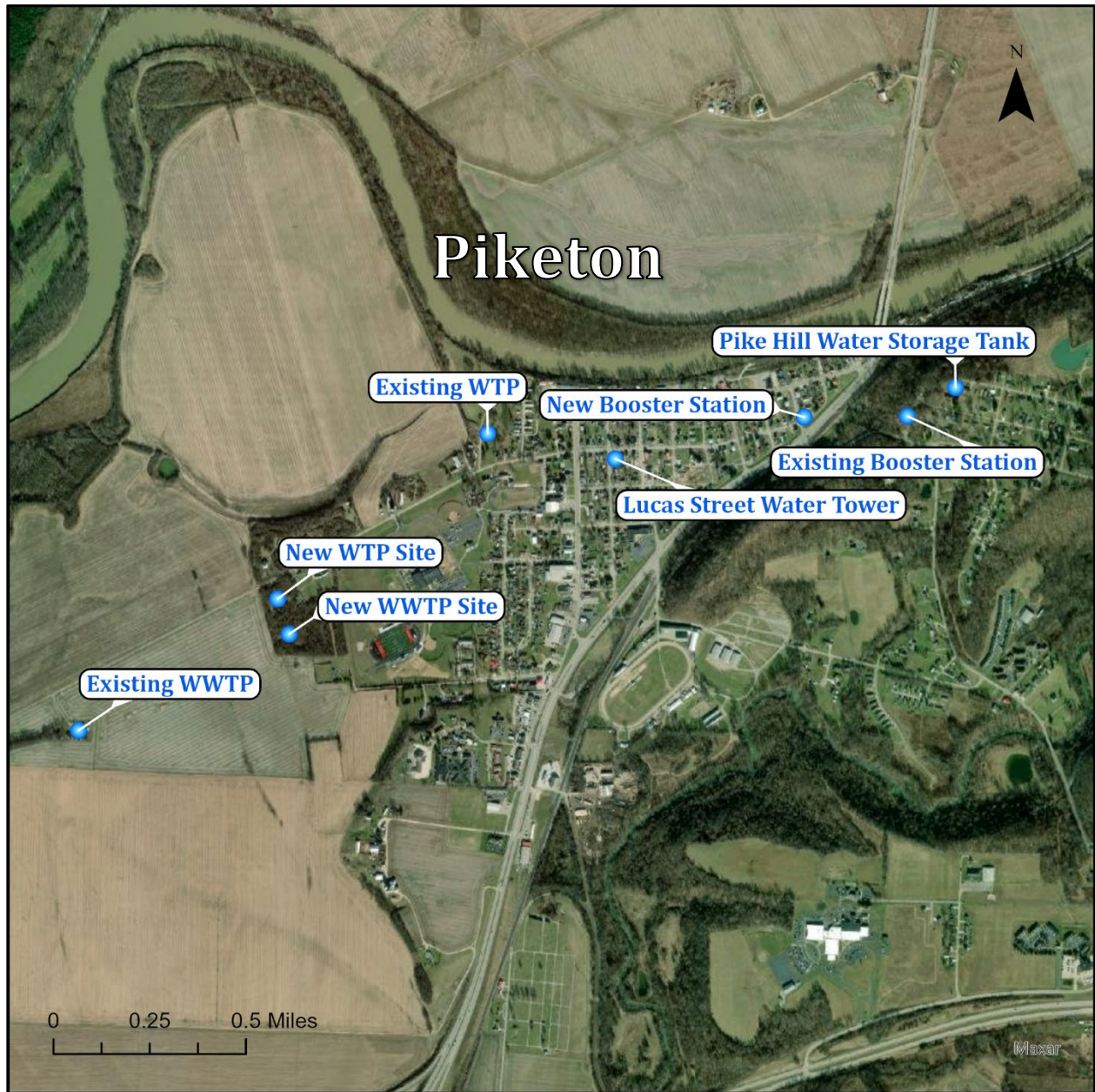


Figure 2. Existing and planned Piketon drinking water and wastewater facilities and infrastructure