April 29, 2019
Preliminary Finding of No Significant Impact
Shiloh Sewer Treatment Plant Upgrade
Richland County
WPCLF # CS390852-0006

The attached Environmental Assessment (EA) is for a wastewater treatment project in your area 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 EA.

Any comments on our preliminary determination should be sent to me at the letterhead address. We will not act on this project for 30 calendar days from the date of this notice in order to receive and consider comments. In the absence of substantive comments during this period, our preliminary decision will become final. After that, the Village of Shiloh can then proceed with its application for the WPCLF loan.

Sincerely,

[Signature]
Jerry Rouch, Chief
Division of Environmental & Financial Assistance

JR/DH

attachment
ENVIRONMENTAL ASSESSMENT

Project Identification

Project: Shiloh Sewer Treatment Plant Upgrade

Applicant: The Honorable Marilyn Hall, Mayor
Village of Shiloh
13 W. Main Street
Shiloh, OH 44878

Loan Number: CS390852-0006

Project Summary

The Village of Shiloh, in Richland County, has requested approximately $4,000,000 from the Ohio Water Pollution Control Loan Fund (WPCLF) to supplement Community Development Block Grant (CDBG) program funding to replace its outdated wastewater treatment plant (WWTP) with a Sequencing Batch Reactor (SBR) technology WWTP. The project includes construction of flow equalization basins and associated piping.

History & Existing Conditions

Shiloh’s trickling filter WWTP, constructed in 1957 concurrently with the sanitary sewer system, is outdated and deteriorating and inconsistently meets its National Pollutant Discharge Elimination System permit limits. The village is under Ohio EPA administrative orders to eliminate routine WWTP bypasses of untreated sewage by improving the sewer system and treatment processes and achieving effluent limitations.

The village has separate sanitary and storm sewers, the latter draining through a series of agricultural ditches to the Huron River. The WWTP discharges to Hales Ditch, tributary to the West Branch of the Huron River in the Lake Erie basin. The southeast corner of the village limits is in the Mohican River/Ohio River watershed. The West Branch of the Huron River, designated Warmwater Habitat (WWH) in the Ohio Water Quality Standards, is a healthy stream in full attainment of the biological criteria for that designation.

One of two sanitary sewer pump stations in the village, the John Street Lift Station, is aged and deteriorated, and a nearby grinder pump station drains to a gravity sewer in poor condition.

Population and Flow Projections

The population of Shiloh has declined gradually since the 1980s, from 778 to 635. Significant growth is not expected and the proposed 120,000 gallon per day (gpd) WWTP capacity appears to be sufficient for the indefinite future.
**Feasible Alternatives**

With an outdated and unreliable WWTP and the threat of fines for continued violations of the discharge limits, doing nothing (the "No Action" alternative) is not feasible for Shiloh. The Village considered upgrading the existing WWTP to meet limits while taking advantage of the operator’s familiarity with the technology. However, ongoing laboratory analyses showing elevated levels of mercury in the treatment system and investigations concluding the mercury source is the existing clarifier suggest much of the WWTP piping is contaminated and cleaning for upgrading the facility would be difficult and not cost-effective. Based on this, Shiloh removed the renovation option from further consideration.

Shiloh evaluated two alternative treatment technologies, conventional extended aeration (planning cost estimate, $4,075,000) and sequencing batch reactor (SBR; planning cost estimate, $3,375,000), each approach based on pre-engineered, packaged processes. Elements common to both options are raw wastewater pumping, administration/laboratory, UV disinfection, and sludge drying beds. Both plants require minimal labor to operate and maintain. The extended aeration system includes tertiary sand filters; effluent quality from the SBR makes tertiary treatment unnecessary and the SBR can more readily handle higher peak flows than the typical extended aeration systems.

With some flow records exceeding the range of the recording equipment (400,000 gallons per day), flow equalization (temporary storage) capacity for a 24-hour period would be adequate to prevent overflows of untreated sewage. With the SBR capacity, a 300,000-gallon basin would suffice.

**Selected Alternative**

Shiloh has selected the SBR alternative with flow equalization and upgrades to the John Street Lift Station. The 120,000 gpd average daily flow (with 500,000 gpd peak flow) replacement WWTP will be constructed adjacent to the existing WWTP (Figure 1) and include new office / laboratory, headworks, fine screens and grit removal, two SBR reactors, and new ultraviolet light disinfection system. Discharge of treated effluent will be through the existing outfall to Hales Ditch.

The project also includes replacing the John Street Lift Station with a new precast pump station with duplex pumps at same location and eliminating a leaky gravity sewer that drains to the lift station by installing a grinder pump system with small diameter force main to serve several residences and carry that sewage to a discharge point near the lift station.

**Implementation**

To supplement $750,000 from the CDBG program for this project, Shiloh will borrow approximately $4,000,000 from the WPCLF at the Small Community interest rate with the Nutrient Reduction Discount (now 1.70%; the rate is set monthly and may change prior to loan award). During the 30-year loan period, Shiloh will save approximately $877,000 by using WPCLF dollars at this rate, compared to the market rate of 3.50%.

To ensure adequate revenue to repay this loan, Shiloh increased sewer rates 21.6% in 2018 and enacted quarterly $5.00 increases through 2021.
Public Participation

This project has been under development and discussed in Village Council meetings for several years. The required two public meetings for the CDBG funding occurred in April 2018. Ohio EPA is unaware of significant controversy about or opposition to 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 WPCLF Documents for Review and Comment) and will provide it on request to interested parties.
Environmental Impacts

This project could directly affect environmental features. Because the project is designed to replace existing aged and deteriorated wastewater infrastructure rather than provide additional capacity in the wastewater system for growth, the project is not expected to lead to new development or associated indirect or cumulative impacts.

This project to construct a new WWTP adjacent to the existing WWTP, replace a pump station and associated piping, and add a flow equalization basin will have no effect on major land forms (because no significant land alteration is required), floodplains (because no regulatory floodplains are in the project area), wetlands (because no wetlands are in the project disturbance area), surface water resources or aquatic habitats or ground water resources (because no significant surface water resources are in the project area and no ground water resources will be disturbed by the limited excavation), or agriculture or land use (because no agricultural land will be disturbed and the sole land use change will convert part of an abandoned football stadium to the equalization basin).

The project disturbance area includes no significant terrestrial habitats. Shiloh cleared vegetation from the force main right-of-way during cold weather ("seasonal clearing") to avoid potential impacts to the endangered Indiana bat and threatened northern long-eared bat.

Air quality will be unaffected by the proposed construction, most of which is distant from residences. Contractors are required to control fugitive dust and maintain their vehicles, which will limit potential air pollution. Operation of the new WWTP includes no new air pollution sources.

Audible construction noise from vehicles in the immediate construction vicinity will be limited by requirements to adequately maintain vehicles. Traffic disruption will be minimal because no work is in or on roads. Public safety will be protected by construction site fencing and closing or covering trenches at the end of each work day. Local aesthetics will vary little upon project completion compared to pre-construction conditions because the new WWTP will appear to be part of the existing WWTP, other infrastructure will be underground, and the new equalization basins will appear as 5-foot sodded earthen berms surrounded by a security fence and distant from residences.

Local and regional energy use will be unaffected by operation of the new WWTP that will have power requirements similar to that of the existing WWTP.

Based on available information and construction largely occurring on previously disturbed sites, Ohio EPA determined that the proposed construction will not cause a significant adverse effect to properties listed or eligible for listing in the National Register of Historic Places (cultural resources). The Ohio State Historic Preservation Office agreed with the Ohio EPA conclusion. In the event of archaeological finds during construction, Ohio Revised Code Section 149.53 requires contractors and subcontractors to notify the State Historic Preservation Office of any archaeological discoveries in the project area, and to cooperate with the Office in archaeological and historic surveys and salvage efforts when appropriate. Work will not resume until a survey of the find and a determination of its value and effect has been made, and Ohio EPA authorizes work to continue.
The typical annual residential sewer bill in Shiloh is $524, which is approximately 0.8% of local median household income (MHI; $57,813). This compares favorably to the Ohio average sewer bill, $677; sewer bills less than 1.8% of MHI are considered affordable. By using the WPCLF low-interest financing for this project, Shiloh has minimized the cost and impact on the local economy.

**Conclusion**

Based on its review of this project’s general plans and other information, Ohio EPA concludes that no significant short-term or long-term adverse direct environmental impacts will result from the project as related to the environmental features discussed in this Environmental Assessment. This is because these features do not exist in the project area, the features exist but will not be adversely affected, or the impacts of construction will be temporary and mitigated.

This project equally serves the entire Shiloh community and no particular segment of the community will be faced with additional adverse impacts or be deprived of environmental benefits, compared to any other segment.

For these reasons, this project, alone or in combination with other projects, is not expected to result in any significant indirect or cumulative short-term or long-term adverse environmental impacts.

Ohio EPA expects the economic impact of the project on the average user to be insignificant because Shiloh has proactively managed necessary sewer rate increases and developed a favorable financing package for the project.

The project will help protect human and aquatic health by eliminating overflows of raw sewage to area streams and ensuring wastewater is adequately treated.

**For more information, please contact:**

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