

September 8, 2025

Limited Environmental Review and Finding of No Significant Impact

**City of Willoughby – Lake County
Lakeshore East Equalization Basin Phase 1 and Phase 2
Loan numbers: CS390999-0030, CS390999-0035**

The attached Limited Environmental Review (LER) is for a sanitary sewer project in Willoughby which the Ohio Environmental Protection Agency (Ohio EPA) intends to finance through its Water Pollution Control Loan Fund (WPCLF) below-market interest rate revolving loan program. The LER describes the project, costs, and expected environmental benefits. Making available this LER fulfills the 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 program review and approval process. We have concluded that the proposed project should not result in significant adverse environmental impacts. In accordance with Ohio Administrative Code 3745-150-05, this project meets the criteria for an LER rather than the more comprehensive Environmental Assessment. More information can be obtained by contacting the person named at the end of the attached LER.

Upon issuance of this Final 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, Assistant Chief
Division of Environmental and Financial Assistance

LIMITED ENVIRONMENTAL REVIEW

Project Identification

Project: Lakeshore East Equalization Basin Phase 1 and Phase 2

Applicant: City of Willoughby
One Public Square
Willoughby, Ohio 44094

Loan Numbers: CS390999-0030, CS390999-0035



Figure 1. Lake County

Project Summary

The City of Willoughby, located in Lake County (see Figure 1), requested financial assistance from the Ohio Water Pollution Control Loan Fund (WPCLF) for the Lakeshore East Equalization Basin project (phases 1 and 2). The purpose of the project is to eliminate the East Island sanitary sewer overflow (SSO) by constructing an equalization basin to retain excess flows caused by inflow and infiltration.

Due to volatile steel and concrete climates, the original project has been split into two phases. Phase 1 work will include realignment of sanitary sewer and construction of a force main and a regulator structure on Lakeshore Boulevard. Phase 2 work will include construction of the equalization basin on Forest Drive.

Willoughby is requesting a loan of \$1,565,972 for Phase 1 and \$6,500,000 for Phase 2.

History & Existing Conditions

Willoughby and Eastlake operate a common facility, the Water Pollution Control Center (WPCC), that provides wastewater treatment through primary treatment and anaerobic sludge digestion, for their two respective communities. The WPCC was constructed and began operating in August 1961 with a design flow of 3.9 million gallons per day (MGD). In 1968 the plant was upgraded to provide secondary biological treatment, phosphorus removal, sludge dewatering, and incineration. Plant upgrades were completed in 1974 with an increased capacity to treat an average flow of 7.9 MGD, and a peak flow of 19.4 MGD.

Another plant expansion occurred in 1985 improving treatment to meet requirements of the facility's National Pollutant Discharge Elimination System (NPDES) limits. At this time, the plant capacity was expanded to treat an average flow of 9.5 MGD with a peak flow of 20 MGD. Additional upgrades at this time included primary and final settling tanks, aeration tanks, a chlorine contact tank, plant water systems, chemical feed systems, and conversion of anaerobic digesters to sludge mixing and holding tanks. The latest round of upgrades completed in 2021 were to control bypasses at the plant by modifying the infrastructure to provide additional capacity and bypass flow storage. The 2021 upgrades increased the plant's treatment capacity to 24 MGD with 1.2 million gallons (MG) of storage.

The overall sanitary sewer collection system for the WPCC consists of 25 lift stations and five equalization basins.

The WPCC serves Willoughby, Eastlake, the Village of Timberlake, Lakeline, and a portion of Willoughby Hills, Mentor, Willowick, and Kirtland. The population served by the WPCC is approximately 50,000.

Due to the East Island SSO, which discharges to the Chagrin River, a Sanitary Sewer Evaluation Study (SSES) was required under Willoughby's NPDES permit. The 2011 SSES revealed significant inflow and infiltration, caused by leaking pipes. A suggested solution was to construct additional storage for temporary storage of excess flows during wet-weather events until the WWTP has enough capacity to treat the flows.

Three scenarios were considered for the project: 1) construct an appropriately sized basin at Forest Drive where the East Island SSO is located and use the Siphon Head Tank as additional peak storage; 2) construct a smaller basin at the location of the East Island SSO, use the Siphon Head Tank as additional peak storage, and transfer some peak flows to the WWTP for storage by modifying the siphon regulator chamber; or 3) construct a transfer pump station and force main to transfer the peak flows to property adjacent to the WWTP and construct a smaller tank using the WWTP surplus storage tank. Previously, the Siphon Head Tank was evaluated for cleaning and renovation. Due to frequent and costly cleaning of the basin, it is more cost effective to eliminate the Siphon Head Tank facility and construct a larger Lakeshore East basin. Alternative 2 was infeasible, as the two existing 16-inch siphons have no surplus capacity to carry flows to the plant. Alternative 3 was also infeasible as it would require construction of a new transfer pump station and force main across the river parallel to the existing siphons.

The selected alternative for this project is to construct an appropriately sized basin at Forest Drive and utilize the Siphon Head Tank as additional peak storage.

Project Description

In preparation for the new EQ basin, the City of Willoughby will construct 100 linear feet (LF) of 24-inch sanitary sewer, 1,065 LF of force main, and a pump station on a parcel owned by the city on Forest Drive in Eastlake in Phase 1 (see Figure 2). Phase 2 will include construction of the equalization basin (see Figure 3).

The below-ground concrete Lakeshore East EQ basin will have a storage volume of 1.35 MG and a pump station. The area containing the EQ basin, pump station, control building, parking area, access drive, and utility connections, will be fenced. Willoughby will maintain the Siphon Head Tank as emergency overflow capacity after construction of the Lakeshore East EQ basin is complete.

Implementation

For Phase 1, Willoughby requested \$1,565,972 from the Ohio WPCLF at the standard rate of 3.83% to finance the project. Borrowing this amount in WPCLF monies could save Willoughby roughly \$253,300

over the life of the 30-year loan compared to the market rate of 5.13%. Interest rates are set monthly and may change for a later loan award.

For Phase 2, the city requested \$6,500,000. This loan is expected to experience similar savings.

The debt associated with the project will be recovered from monthly user charges. Willoughby is currently undergoing a rate study to determine the amount of rate increase needed. The last rate increase was 4.4% in 2022. The average annual sewer bill for residents served by Willoughby, based on 4,000 gallons of water use per month, is \$381. This represents 0.5% of the median household income for Willoughby (MHI: \$70,807) and compares favorably to the Ohio average annual sewer bill of \$490.

Construction is expected to begin following loan award with final completion of both phases expected in November 2026.

Public Participation

Willoughby is currently performing a sewer rate study and anticipates rate increases to pay for this and other wastewater infrastructure projects. Eastlake passed a rate increase in 2025 and has scheduled annual increases over the next couple years. Eastlake presented sewer rate increases at public council meetings and the rate increase was passed by resolution. Willoughby will follow the same process once the study is complete and will inform residents of the rate increase.

Ohio EPA is unaware of any controversy about or opposition to this project. The Limited Environmental Review (LER) and Finding of No Significant Impact (FNSI) will be posted on the Ohio EPA Division of Environmental and Financial Assistance website. Additionally, the LER and FNSI have been provided to the City of Willoughby to be made available according to their public notification procedures.

Conclusion

The proposed project meets the criteria for an LER; namely, it is an action within an existing public wastewater collection system, which involves storage infrastructure improvements. Furthermore, the project meets the other qualifying criteria for an LER; specifically, the proposed project:

Will have no significant environmental effect, will require no specific impact mitigation, and will have no effect on high-value environmental resources. There are no historical or archaeological resources present in the project area as indicated by soil types and detailed information submitted to, and responses received from SHPO. Additionally, there are no other high-value environmental resources in the project area.

Is cost effective. Ultimately, Willoughby determined that construction of the 1.7-MGD equalization basin was the most cost effective, long-term option for eliminating the East Island SSO.

Is not a controversial action. The proposed project involves necessary improvements to the sanitary sewer collection system for Willoughby to ultimately eliminate the East Island SSO. Ohio EPA is unaware of any specific opposition to or controversy about this project. Residents have been notified

of potential rate increases as a result of this project through public council meetings. Results from Willoughby's rate study will be shared with residents.

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 will provide additional storage capacity for treatment, resulting in elimination of a sanitary sewer overflow discharge point. The project does not otherwise impact discharges nor add new users to the system.

Based upon Ohio EPA's review of the planning information and the materials presented in this Limited Environmental Review, 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 result in improved water quality in the Chagrin River, a state scenic river, by eliminating the East Island SSO.

Contact Information

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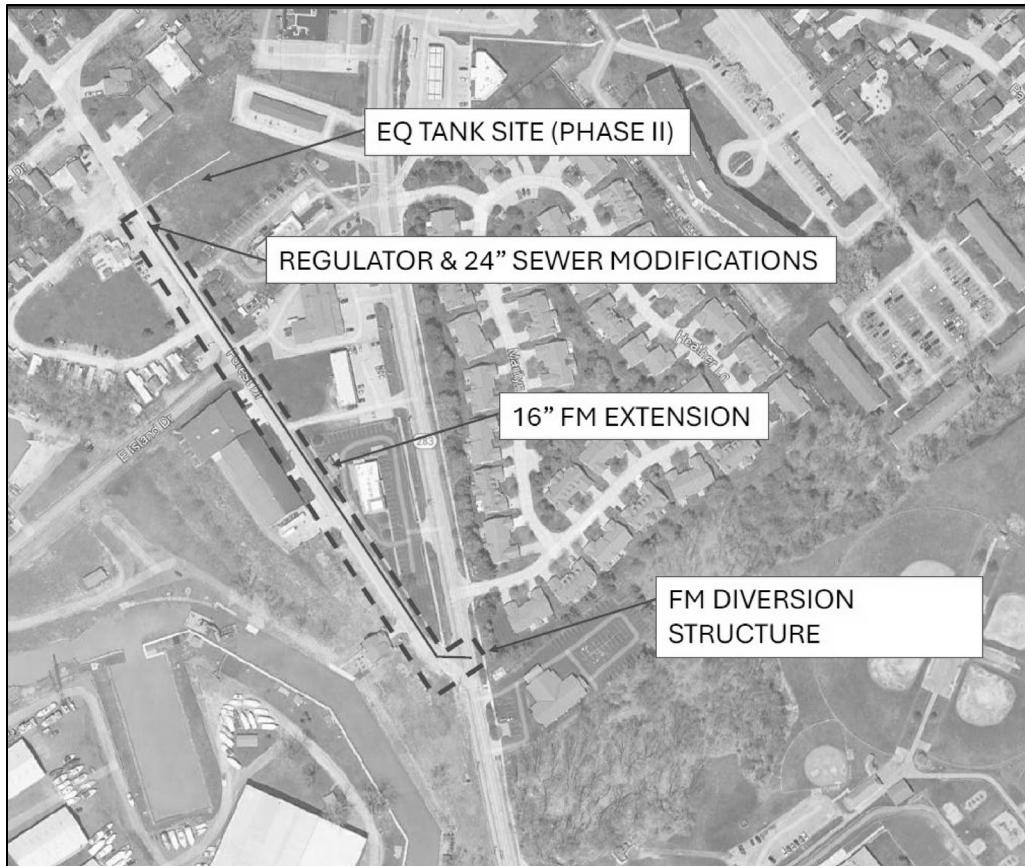


Figure 2. Phase I location



Figure 3. Location of equalization basin, pump station, and associated force main along Forest Drive.