



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

June 5, 2019

**Limited Environmental Review and Finding of No Significant Impact**

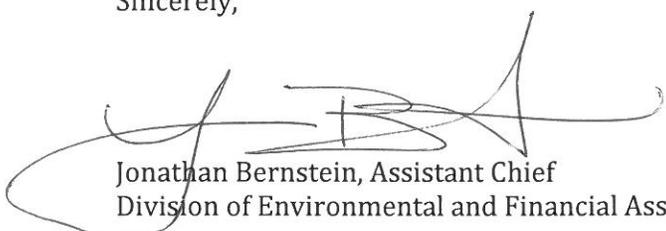
**City of Warren - Trumbull County  
Warren Water Pollution Control Center (WPCC)  
Primary Settling Tanks (PST) Clarifier Early Action Project  
Loan number: CS390955-0034**

The attached Limited Environmental Review (LER) is for the above-referenced project in Warren, Ohio 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, as described in Ohio Administrative Code (OAC) 3745-150-05.

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 an LER rather than a more comprehensive Environmental Assessment, as described in in OAC 3745-150-06. 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,



Jonathan Bernstein, Assistant Chief  
Division of Environmental and Financial Assistance

JB/KH  
Attachment

## LIMITED ENVIRONMENTAL REVIEW

Date: June 5, 2019

### Project Identification

Name: City of Warren  
Warren WPCC PST Clarifier Early Action Project

Address: Mr. Enzo Cantalamessa, Director of Public Service and Safety  
City of Warren  
391 Mahoning Ave. NW  
Warren, OH 44483-4634

Loan Number: CS390955-0034

### Project Summary

The City of Warren nominated this estimated \$2,050,000 wastewater treatment plant (WWTP) project for Ohio EPA Water Pollution Control Loan Fund (WPCLF) financial assistance in August 2018. Based on recently received bids, the construction costs are now \$2,594,000 and the total project cost is \$3,112,300. All of the proposed construction, as the first phase of a multiple phase project to enable processing higher projected daily maximum (wet weather) flow, will occur within the confines of the city's WWTP, known locally as the Water Pollution Control Center (WPCC). More specifically, the project consists of upgrading the four final clarifiers to include density current baffles with a minimum baffle width of 47 inches, and replacing the existing primary clarifier mechanical components and primary clarifier sludge pumps with same size new clarifier and pump components. These proposed improvements are expected to maintain, if not improve, the operation of the city's WPCC.

While the city is in the middle of completing a rate study, this relatively low-cost project for Warren is not expected to require a sanitary sewer service charge increase. Future rate increases for the city will be determined upon conclusion of the rate study.

Currently, the city charges an average residential wastewater customer using 776 cubic feet per month \$27 (\$324 per year) based on a sanitary sewer usage rate of \$3.48 per 100 cubic feet (750 gallons) in 2019. Comparable charges for water service are about \$32 per month.

### Existing Need

The City of Warren owns and operates a wastewater collection and treatment system consisting of three major parts: a sanitary sewer system dating back to 1895 with approximately 195 miles of sanitary sewers ranging in size from 6 inches to 78 inches in diameter, 7 pump stations, and 1 major WWTP. These collection and treatment systems have historically experienced problems associated with wet weather and combined/sanitary sewer overflows for more than 30 years. A major component of the wastewater flowing through the city's sanitary sewer system to the WPCC during

wet weather has been infiltration/inflow (I/I).<sup>1</sup> These extraneous flows are largely responsible for the sanitary sewer overflows (SSOs) from one known location (the High Street regulator) in Warren's downtown area.

Currently, the City of Warren is under a compliance schedule issued by Ohio EPA for its wastewater systems to eliminate unauthorized discharges from SSO sites in the collection system and unpermitted secondary bypasses at the WPCC. Under this compliance schedule, the city needs to make specific improvements to its primary settling tanks and final clarifiers as the first early action step in addressing the long-term (twenty year) needs in its wastewater systems.

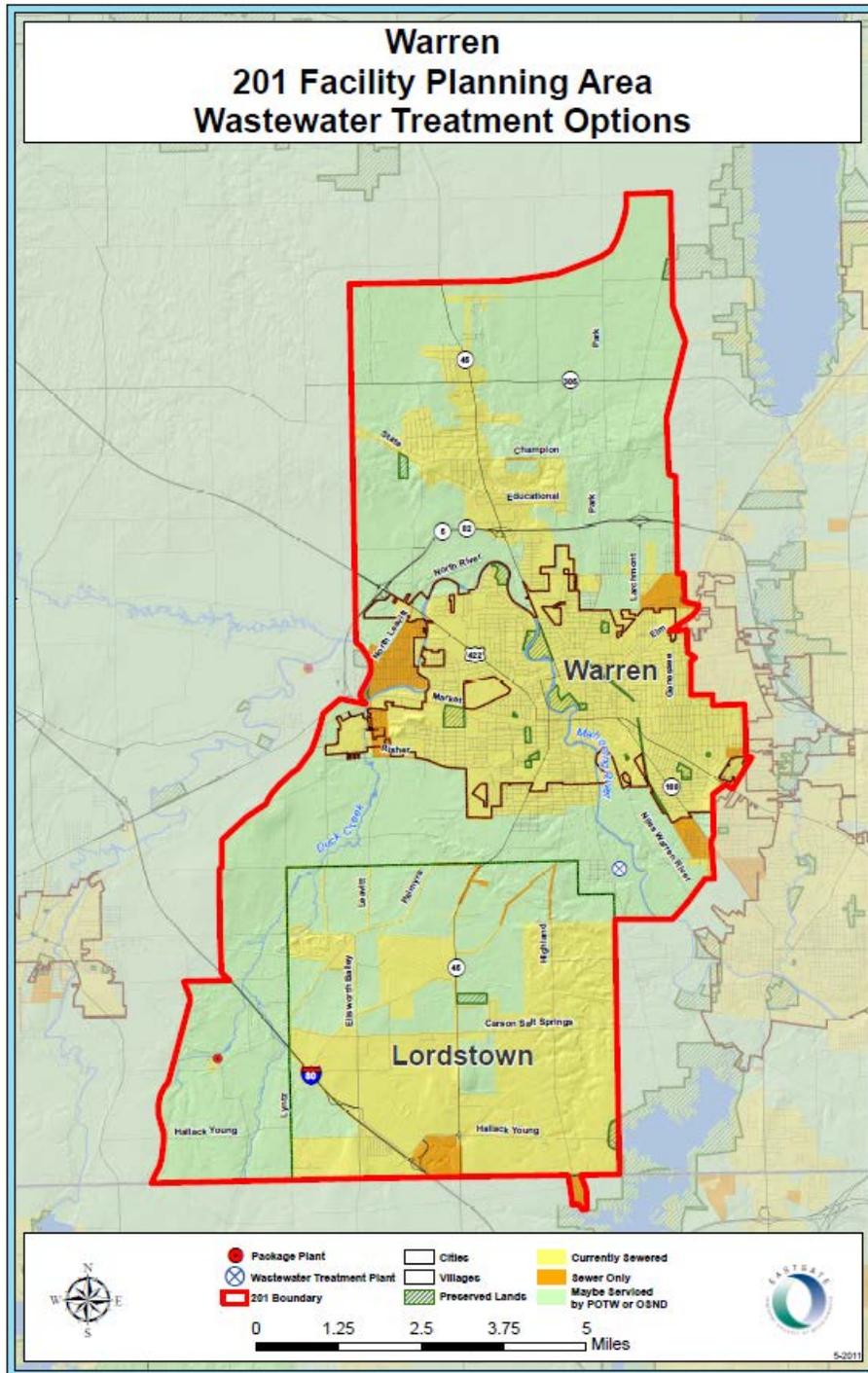
Warren's WPCC was constructed in 1962 and last upgraded in 1997. The facility has an average design flow of 16 million gallons per day (mgd) and a peak hydraulic capacity of 40 mgd to handle wet weather events. On average, this facility processes 12.1 mgd and a peak flow of 43.86 mgd during wet weather. This facility serves a population of approximately 56,500 in Warren and adjacent cities (Lordstown) and townships in its service area as shown in Figure 1a. Of the flows processed at the city's WPCC, 90% passes through the city's Main Street Pump Station and 10% comes through two gravity sewers from Lordstown.

The collection system within the service area of the city's WPCC is comprised of separate sanitary sewers and combined sewers. The WPCC has the following treatment processes: septage receiving, raw sampling, screening, grit removal, primary settling, flow metering, aeration, final settling, chlorination, dichlorination, post aeration, and sludge processing. In addition to the liquid process units, the city's WPCC utilizes a sludge holding tank, belt filter presses, lime stabilization and pasteurization followed by sludge cake production for beneficial reuse or disposal at a municipal landfill (see Figure 3-5 below).

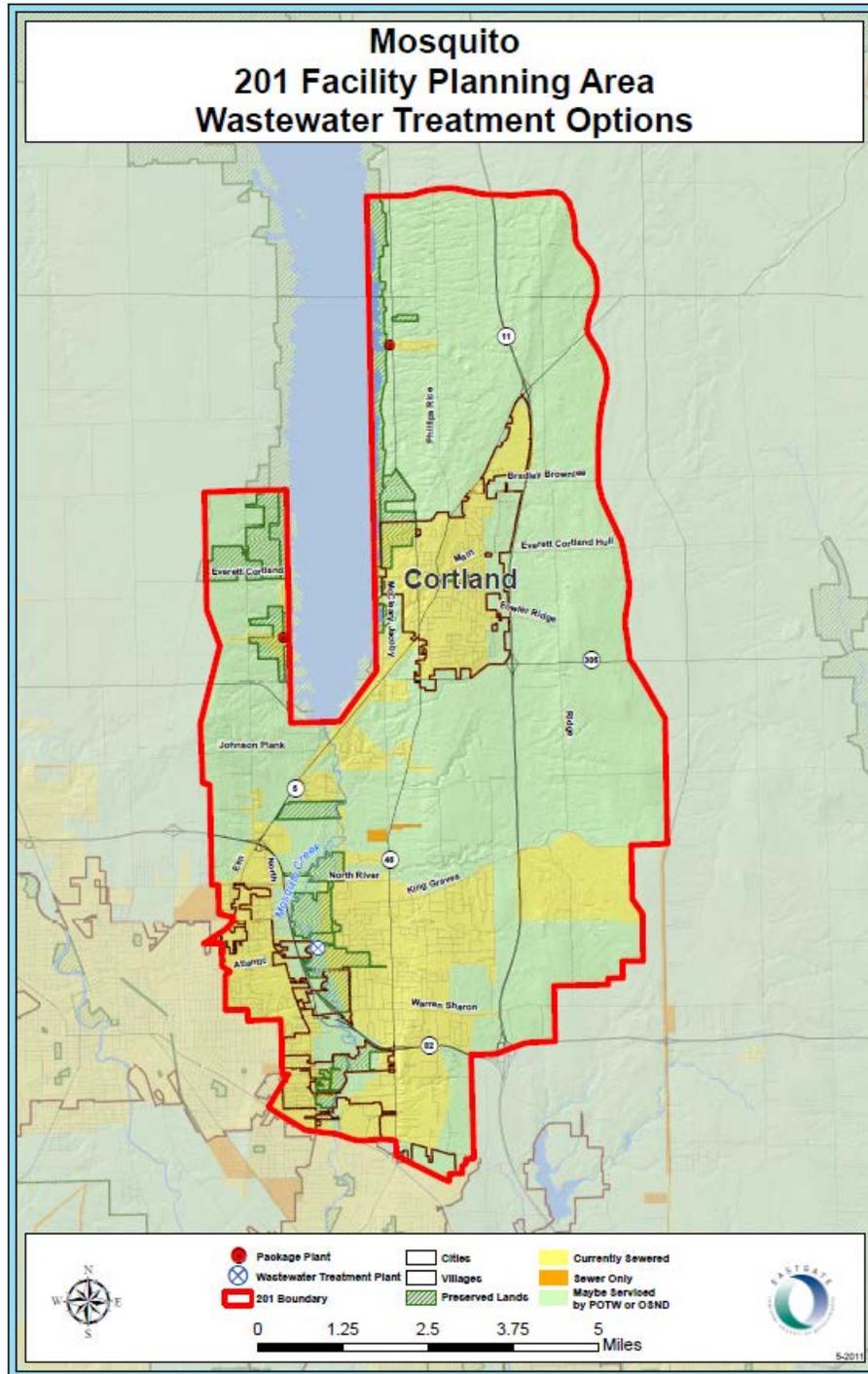
Nearly all of Warren's wastewater is treated at its WPCC as shown in Figure 1a below. A small part of the city on the east side of Warren is served by Trumbull County's Mosquito Creek WWTP (see Figure 1b).

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<sup>1</sup> 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 laterals, etc. Inflow may include clear water entering the system through manhole covers, roof or foundation drains, direct storm sewer connections, etc.



**Figure 1a, City of Warren’s WPCF Facilities Planning Area Map  
(from Eastgate Regional Council of Governments or ERCOG)**



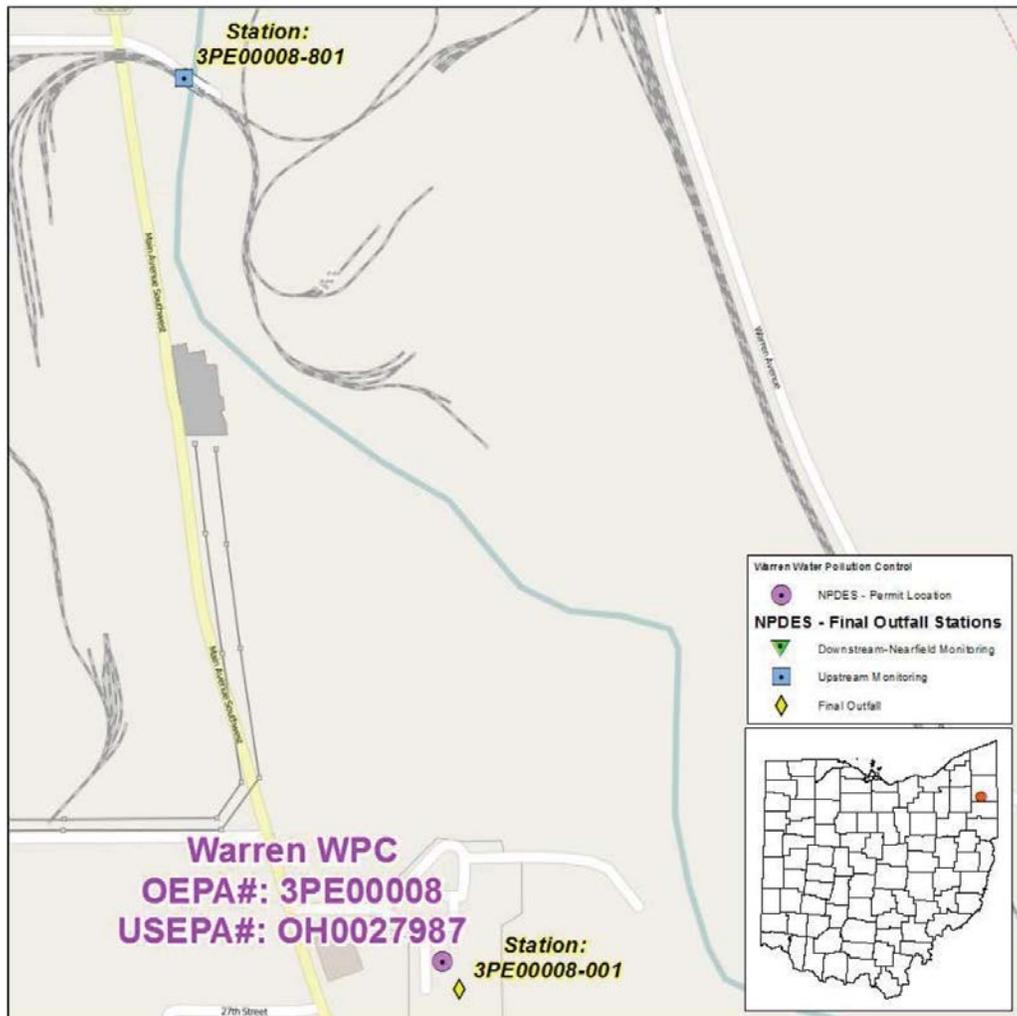
**Figure 1b, Mosquito Creek WWTP Facilities Planning Area Map (from ERCOG)**

Alternatives Analysis and Project Description

During the planning for this proposed project, the city considered a “no-action” option to compare to its “action” options. The latter consisted of making major improvements to its primary settling tanks

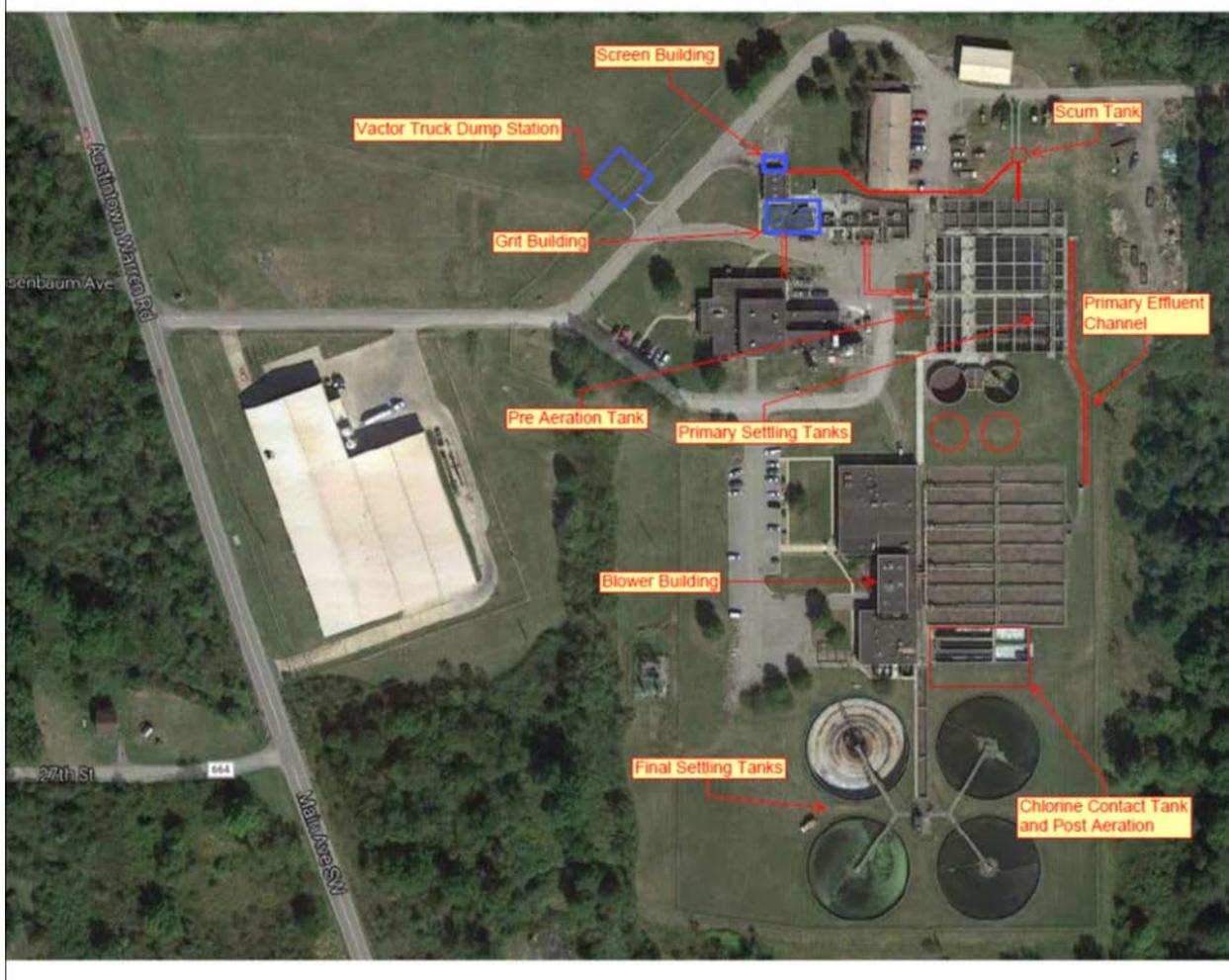
and to its final clarifier (settling tanks) components at the Warren WPC. After noting that no-action was not a feasible alternative, the city prepared detailed costs summaries of each action option (Primary Settling Tanks [PST] Option 1 - Five Tanks with CEPT, PST Option 2 - Refurbish Five Tanks and Add Sixth Tank, Final Settling Tank (FST) Improvements Option 1 - Upgrade Four Existing Tanks, and FST Option 2 - Add Fifth Tank And Upgrade Existing Tanks). In each instance, Warren chose to construct Option 1 in phases to better manage construction and day-to-day operations of its WPC. More information on the city's two selected alternatives can be found below.

While conditions in the city's sanitary sewer system and at its other WPC components influenced the planning and design of the city's early action project discussed in this LER, they are not specifically addressed here. Instead, they will be discussed in future review documents. For that reason, this LER only covers the immediately needed improvements to the primary settling tanks and final clarifiers. Figure 2 below shows the location of the Warren WPC which discharges to the Mahoning River at River Mile 32.25. Readers should note that dams and the associated impoundments on the Mahoning River are the major sources of impairment in the lower Mahoning River basin from the Leavittsburg Dam at RM 45.73 to Youngstown at River Mile 21.14.



**Figure 2, Warren WPC Location Southeast of Warren on Main Avenue SW**

Figures 3 and 4 below show the Warren WPCP including the areas expected to be used by the city's contractors during construction of the proposed project. Overall, these improvements will be completed within the existing WWTP site as shown in Figures 3-4 and outside of the Mahoning River floodway (red or crosshatched area) shown in Figure 5.



**Figure 3, Wet Stream Improvements**



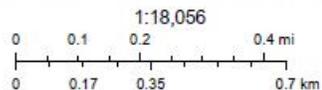
**Figure 4, Solids Handling Improvements**

## DEFA Project Planning Map



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- |                                  |                                   |
|----------------------------------|-----------------------------------|
| NPDES Individual Permits         | Special Floodway                  |
| ▲ Individual Permit - Industrial | Area of Undetermined Flood Hazard |
| ▲ Individual Permit - Public     | 0.2% Annual Chance Flood Hazard   |
| Flood Hazard Zones               |                                   |
| 1% Annual Chance Flood Hazard    |                                   |
| Regulatory Floodway              |                                   |



Eri, HERE, Garmin, (c) OpenStreetMap contributors, Eri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Eri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Division of Surface

Ohio EPA  
2019

**Figure 5, Mahoning River Floodplains Near Warren, Ohio**

After completing its alternatives analysis discussed above, the city decided to make the proposed improvements to its WPCC primary settling tanks and final clarifiers as described below. All of the proposed construction will occur within the prior-disturbed confines of the Warren WPCC located outside of the regulatory floodway shown above in Figure 5. Readers should note that the proposed

project will have no major effect on the rated design capacity of the Warren WPCC except that some minor yard piping will be increased in size in anticipation of future project phases.

As shown in Figure 1a, the proposed improvements include four main parts: (1) adding improved types of baffles in the existing final clarifiers, (2) replacing sludge and scum collection and removal equipment in three primary settling tanks, (3) replacing four sludge pumps, and (4) installing related electrical and control system, piping and appurtenance upgrades. Accordingly, this project is meant to provide an initial phase in meeting the city's existing and expected 20-year wastewater needs in the entire facilities planning area shown above. In this first step, all the proposed improvements that are the subject of this document will be made within prior disturbed areas where the main vegetation is grass or the only substrate is concrete. By completing the proposed project, Warren expects to have a more reliable means of handling its solids at its WWTP. In turn, this should also help reduce maintenance issues within the city's entire wastewater system. Restoring the project area to its existing (or better) condition is an additional component of the proposed project.

The total as-bid cost of the city's proposed project is \$3.11 million, of which approximately \$2.86 million is for construction and \$0.25 million is for contingencies. No prior-incurred planning, design, and engineering services costs are included in these figures. Ohio EPA expects that a standard interest rate of 1.66% will be used to finance the project component improvements discussed above, assuming loan award in June 2019. Readers should note that these figures do not include the future WPCC projects currently under review by Ohio EPA that the city expects to continue working on in 2019.

#### Limited Environmental Review (LER) and Finding of No Significant Impact (FNSI) Criteria

Because the proposed project meets certain minimum conditions, and will not individually, cumulatively over time, or in conjunction with other federal, state, or private actions have a significant adverse effect on the quality of the human environment, an LER and FNSI are warranted. More specifically, these conditions cover actions in sewerred communities that are for minor upgrading and/or minor expansion of existing wastewater treatment works. As all the proposed improvements will be limited to previously disturbed locations as shown in Figures 1-5, the proposed 16-month long construction period for this project in Warren is expected to result in no short- or long-term adverse environmental impacts.

The proposed project meets the following, specific criteria for an LER:

**1. 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, placement at a previously disturbed location within an urbanized area, and the absence of any notable above-ground natural features in the immediate project locations shown in Figures 1-5, the proposed project will not result in any adverse environmental impacts. This conclusion is validated by the reviews completed by Ohio EPA and federal, state, and other governmental agencies. The known features of the project areas and the city's approach to addressing them are discussed in more detail below.

Ohio EPA consulted with Ohio Department of Natural Resources (ODNR) during the project review and determined that the proposed project will have no effect on important natural resources, such as floodplains or other natural features. In particular, we reached this conclusion primarily because

the city's existing WPCP is located outside of the regulatory floodway of the Mahoning River, and none of the proposed improvements or construction activities will encroach onto the Mahoning River's floodway (see Figure 5 above). In addition, significant wooded areas or other areas of native vegetation are absent from the project areas. The only remaining vegetation in the construction areas appears to be grass. Accordingly, the city's environmental impact mitigation in the project's contract documents should address these concerns.

**2. The proposed project will not require extensive impact mitigation unique to the assistance proposal.** The proposed work to complete this project is straight-forward and does not require any extensive mitigation of environmental impacts, as all the WWTP improvements will be made within previously disturbed areas (as shown in Figures 1-5). In that regard, relatively minor earth-moving activity is associated with these improvements, 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.

**3. The proposed project is cost-effective and not the subject of significant public interest.** In comparison to the no-action and other action alternatives considered during project planning, the chosen improvements were selected by Warren 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. Please see the Project Implementation and proposed project schedule parts of this document following this section.

Information on the city's public participation activities is presented below.

**4. The proposed project will not create a new, or relocate an existing, discharge to surface or ground waters, or cause pollution of surface or ground waters. It will also not create a new source of water withdrawals from either surface or ground waters, or significantly increase the amount of water withdrawn from an existing water source.** 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 or bypassed 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 the primary settling tanks and final clarifiers within the city's WPCP and enable it to better comply with its permit to discharge treated wastewater to the Mahoning 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 phase of the city's overall project.

Similarly, the fact that this project involves making improvements designed to meet current wastewater engineering standards and the city's 20-year wastewater treatment needs also supports our conclusion that this project does not involve creation of a new, or support expansion of an existing, source of water withdrawn from either surface or ground waters.

**5. The proposed project 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 Warren's WPCC are not designed to facilitate future growth in or around the city, 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 Warren WPCC 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.

**6. The proposed project will not provide capacity to serve a population substantially greater than the existing population.** Based on information provided by the city during planning, Warren and vicinity (see Figure 1a) have experienced declining populations. The flows currently being processed at Warren's WWTP during dry weather are indicative of this pattern, when compared to the original design capacity. In addition, the 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. 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. For example, all of Trumbull County is currently in full attainment of all of the six priority air pollutants regulated under the Clean Air Act and the project is required to control fugitive dust from any construction work as a condition of the permit-to-install issued for these proposed improvements.

#### Project Implementation

To implement the proposed project described above, the City of Warren intends to finance the improvements to its WPCC through a 20-year low-interest loan from Ohio EPA's WPCLF. Currently, the WPCLF standard interest rate is 1.66%. This fixed interest rate is adjusted monthly to reflect changing market conditions.

Under the wastewater rates effective in March 2019, a typical, in-city residential customer using on average 776 cubic feet per month currently pays a fee of \$27 per month, or about \$324 a year. When expressed as a percentage of the service area's latest median household income (MHI) figure of \$29,176, this annual fee is about 1.11% of the area's MHI, and is considered generally affordable for an average residential wastewater customer of Warren's WPCC on the basis of public acceptance.

Assuming the project funding presented above, Ohio EPA expects that the city will save about \$457,045 when compared to a market-rate loan of 2.91% on the project's total project costs of \$3.11 million. By proposing to fund their project in this way, Ohio EPA anticipates that the City of Warren should be able to generate enough revenue under its current and proposed water 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 June 2019, so that construction can commence soon thereafter. The city estimates that construction on this project can be completed in about 16 months. Other projects underway could affect this completion date.

## Public Participation and Notice

According to the city, the public was provided with multiple opportunities to learn more about this WPCC project, the city's wastewater rates, and the overall condition of Warren's collection system and WPCC between 2015 and 2017. On the basis of these presentations, the WPCC tours, 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.

Additional information that supports this decision to issue an LER is available for public inspection upon request at the City of Warren main office located at 391 Mahoning Ave. NW, Warren, OH 44483-4604. Mr. Enzo Cantalamessa, Director of Public Service and Safety is the city's main contact, and can be reached by phone at (330) 841-2601 to answer questions related to this important project for the city.

## Interagency Coordination

The proposed project has been reviewed by the following agencies for technical input, or for conformance with legislation under their jurisdiction by Ohio EPA; these findings support a LER:

Ohio Department of Natural Resources  
State Historic Preservation Office

Ohio EPA  
United States (U.S.) Fish and Wildlife Service

## Conclusion

The proposed project is sufficiently limited in scope and meet 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. The City of Warren's proposed WWTP improvements project will enable the city to address its regulatory responsibilities under the Clean Water Act -- especially those related to operation of its WPCC 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, while overall good water quality will be maintained outside of the impaired impoundments on the Mahoning River.

For further information, please contact:

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