Ohio Environmental Protection Agency

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

**August 4, 2022**

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

**City of Lancaster – Fairfield County**
**North Water Treatment Plant Replacement**
**Loan Number: FS390504-0033**

The attached Environmental Assessment (EA) is for a water treatment plant replacement project in Lancaster which the Ohio Environmental Protection Agency intends to finance through its Water Supply Revolving Loan Account (WSRLA) 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 WSRLA 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 City of Lancaster can then proceed with its application for the WSRLA loan.

Sincerely,

Kathleen Courtright

Kathleen Courtright, Assistant Chief
Division of Environmental & Financial Assistance

Attachment

**ENVIRONMENTAL ASSESSMENT**

## Project Identification

Project: North Water Treatment Plant Replacement

Applicant: City of Lancaster
121 E. Chestnut Street, Suite 100
Lancaster, OH 43130

Loan Number: FS390504-0033

## Project Summary

The City of Lancaster in Fairfield County has requested $87,718,425 from the Ohio Water Supply Revolving Loan Account (WSRLA) to construct a new water treatment plant at the intersection of Memorial Drive and West Sixth Avenue in Miller Park to accommodate potential growth and development in and around the city of Lancaster. The new water treatment plant (WTP) will replace the existing Miller Park WTP and include the construction of five new wells and associated piping.

Construction for this project will occur within the previously disturbed footprint of Miller Park, located next to the existing WTP, therefore limiting impacts to environmental features.

## History & Existing Conditions

Lancaster currently operates two water treatment plants: the Miller Park WTP which has a rated treatment capacity of 9 million gallons per day (MGD) and the South WTP, which has a rated capacity of 8 MGD.

Lancaster's water treatment plants receive their water supply from ground water, with wellfields located adjacent to the WTPs. The city's ground water supply is located within the Hocking River Valley Aquifer, which is composed of vast quantities of subsurface sand and gravel deposits. The Miller Park Wellfield consists of twelve operational ground water production wells. The production wells pump between just over 400 gallons per minute (GPM) to just under 900 GPM. The city uses ion exchange technology for softening of ground water at the Miller Park WTP. Treatment consists of aeration, gravity filtration, gravity bed zeolite softening, and chlorine disinfection.

Lancaster's Miller Park WTP, located in downtown Lancaster, was originally constructed in 1932. The Miller Park WTP was modernized in 1959 to meet the city's growing water demand and was last upgraded in 1976 to again add capacity to support the city's growth. After 95 years of treatment, the Miller Park WTP has now reached the end of its useful life. With the current condition of the building and antiquated equipment, it has been determined that the existing Miller Park WTP should not be upgraded but instead be replaced by a completely new plant.

## Population and Flow Projections

Lancaster's current annual average daily water demand is approximately 4.0 MGD and is expected to steadily increase. Over the past 15 years, development has increased along the U.S. 33 corridor. Lancaster has experienced increased interest in additional development along the corridor and has been approached by commercial and industrial developers that could add an additional average day water demand of 2.5 MGD by 2025. The recent growth in the U.S. 33 corridor is expected to increase at a rate that will exceed the city's current available water treatment plant capacity. Lancaster wants to continue to provide reliable water service and provide high quality water that meets the water quality standards being sought by some of the entities interested in development.

## Alternatives

Three alternatives were considered to address the existing and future conditions described above:

1) *Do nothing:* The city has the option to leave the current Miller Park WTP operating under its current capacity. However, this will leave the city continuing to use an aged treatment facility unable to support the planned commercial/industrial growth within its service area.
2) *Expand the Miller Park Water Treatment Plant:* To accommodate the planned commercial/industrial growth, Lancaster can expand the existing facility to provide additional capacity. However, the existing Miller Park WTP is beyond its useful life and therefore would not be cost effective to upgrade.
3) *Construct a new North Water Treatment Plant:* Construction of a new North WTP in place the existing Miller Park WTP would ensure adequate supply to the city and future growth within the service area. To determine the best long-term solution for the city's future water needs, possible locations were evaluated for a wellfield and WTP. Alternatives for this project include:
    - Alternative A – Existing Miller Park Wellfield
      Construct the new WTP on the north side of the existing Miller Park Wellfield and continue to utilize the existing wellfield.
    - Alternative B – Old Logan Road Wellfield
      This alternative involves locating the new wellfield on the Old Logan Road property that is south of downtown. The Hocking River runs through this property, and this property sits within the high-producing portion of the sand and gravel aquifer area that has similar potential yields to the existing Miller Park Wellfield. Based on the ground water aquifer data and the South WTP wells rated capacity, it was estimated that three production wells that produce 2,900 GPM each are needed at this site to equal the Miller Park Wellfield capacity of 9.3 MGD.
    - Alternative C – Duffy Road Wellfield
      This alternative involves locating the new wellfield on the Duffy Road property that is east of downtown. Based on existing well log data and the ground water aquifer map, it was estimated that eleven production wells that produce 600 GPM each would be needed at this site to equal the Miller Park Wellfield capacity of 9.3 MGD.

## Selected Alternative

The recommendation based on the above location analysis is to replace the Miller Park WTP with a new North WTP located on the northeast corner of the Miller Park Wellfield and continue to use the reliable Miller Park Wellfield as the site for the construction of five new additional wells.

Each of the three potential wellfield sites was evaluated by the city. Of the two potential new wellfield properties, the Old Logan Road property (Alternative B) was more desirable than the Duffy Road

property (Alternative C) because of its location within the aquifer. But with planned roadway construction within the Alternative B property, it made this alternative less feasible.

Based on the above evaluations, Alternative A (Miller Park Wellfield) was selected by Lancaster for the new WTP. The evaluation showed that the Miller Park site would be the most cost-effective wellfield site as there are minimal wellfield development costs including no land acquisition and there are already connections to the existing distribution systems.

At the new WTP, the recommended water treatment process will consist of gravity media filtration for all raw water and softening using reverse osmosis membranes. The proven performance, ease of operability and maintenance, and low operating cost of gravity filtration coupled with the high reduction of dissolved solids provided with the reverse osmosis water softening membranes will provide a high level of finished water quality that meet future regulatory requirements and provide the city with reliable treatment and supply. The design of the North WTP will incorporate the ability to expand the building to allow for future capacity expansion in the event that the wellfield capacity is expanded or that additional space is required for future treatment technologies.

The construction footprint for this project will remain within the previously disturbed footprint of Miller Park and located next to the existing water treatment plant, thereby minimizing effects on environmental resources. The contractor is responsible for best management practices to control erosion and sedimentation and minimize the creation of dust during construction.

Maps of the project location are provided in the exhibits below.

## Implementation

*Project Costs*
Lancaster plans to borrow $87,718,425 from the WSRLA to finance the project. During the 20-year loan period Lancaster will save $13,369,192 by using WSRLA dollars at the standard rate of 2.36%, compared to the market rate of 3.61%.

*Project Schedule*
The anticipated loan award will occur in September 2022 and construction is expected to begin after financial assistance is awarded and be completed by October 2024.

## Public Participation

The City of Lancaster has published information regarding the proposed WTP on Lancaster's website. The city created a presentation titled "North Water Plant Replacement" which was presented at a city council meeting on April 12, 2021 and requested public comments or suggestions. The public meeting, presentation, meeting minutes, and project related documents are available on Lancaster's project website.

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 to interested parties. Information supporting this Environmental Assessment (EA) is available from the project contact named below.

## Environmental Impacts

Construction of this project could affect environmental features, but the effects will be reduced or mitigated to acceptable levels as explained below. Construction will occur in previously disturbed areas immediately adjacent to the existing WTP. No change to land use or topography will occur.

Air Quality

Fairfield County is in attainment for all regulated criteria air pollutants. The contractor will prevent unnecessary dust from construction activities from entering the atmosphere. Dust on unsurfaced streets or parking areas and any remaining dust on surfaced streets shall be controlled with water as needed. Because of this approach, there will be no significant adverse short-term or long-term impacts on local air quality.

Archaeological and Historical Resources

The planned area of construction has been previously developed into an existing sports park and all excavation work will take place adjacent to the existing treatment plant. All construction will occur on previously disturbed property so no impacts are expected to archaeological or historical resources.

In the event of archaeological finds during construction, Ohio Revised Code Section 149.53 requires contractors and subcontractors to notify SHPO of any archaeological discoveries in the project area, and to cooperate with SHPO 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.

Terrestrial Habitat and Endangered Species

Four federally listed species occur in Fairfield County: the endangered Indiana bat, the endangered running buffalo clover, the threatened northern long-eared bat, and the threatened eastern massasauga.

The area of disturbance during construction is limited to the area adjacent to the existing WTP in a previously disturbed sports park complex. No habitat suited to the species listed above is in the project area. Based on this information, the project will have no significant adverse short-term or long-term effect on terrestrial habitat or endangered species.

Farmland Protection

Based on the review of the project planning and design, the project will not remove or change the use of prime farmland, so no farmland losses are expected as a result of this project.

Floodplains

According to project planning and design, no construction is scheduled to occur within designated floodways. Construction is scheduled to occur within the Hocking River floodplain, and all proper local flood permits shall be obtained prior to construction within this flood hazard zone.

Ground Water Resources

To avoid adverse impacts to ground water resources, the construction contract includes specifications for appropriate and safe dewatering of deep excavations and management of ground water.

Safety, Noise, Traffic, and Aesthetics

Construction for this project will be confined to the footprint of the existing park adjacent to the current water treatment facility. Therefore, construction work will not impact public traffic. Local

aesthetics will be unchanged after construction is complete. For these reasons, the project will not adversely affect noise, traffic, public safety, or aesthetics.

Surface Water Resources
An Ohio EPA General Storm Water NPDES Permit for Construction Activities will be obtained, and the contractor will minimize soil from eroding or otherwise entering onto all paved areas and into natural watercourses, ditches, and public sewer systems. Designated Wild and Scenic Rivers will be unaffected by this project as there are none located within the project's vicinity.

Wetlands
According to a review of project planning and design and the Ohio Wetlands Inventory, this project will contain no in-wetland work and therefore will have no impacts on wetland areas.

Energy Use
Through utilizing the existing wellfield and associated piping in place, this project will have little effect on local regional energy supplies.

Local Economy
Lancaster has minimized project costs by obtaining a low-interest loan through the WSRLA. This allows a lower annual water bill for customers than otherwise would be possible. The projected annual residential water bills with the implementation of this project will be approximately $375. This is 0.9% of the median household income (MHI) of Lancaster, which is $41,881. For comparison, the average annual water bill in Ohio is $697.

## 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.

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 on the quality of the human environment or on sensitive resources.

The project will provide additional water treatment capacity to the City of Lancaster to allow for commercial/industrial growth and development while simultaneously ensuring a safe and reliable supply of potable drinking water.

## Contact information

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**Exhibit 1: Project location map**


**Exhibit 2: Project location map**