April 12, 2022

Limited Environmental Review and Finding of No Significant Impact

City of Lorain – Lorain County
East Lorain Water Line Replacement; Lead Service Line Replacement Phase 1
Loan numbers: FS390532-0029; FS390532-0036

The attached Limited Environmental Review (LER) is for two water distribution system projects in Lorain 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 LER describes the projects, their costs, and expected environmental benefits. Making available this LER 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 projects should not result in significant adverse environmental impacts. This projects’ relatively narrow scope and lack of environmental impacts qualifies them for an LER rather than a more comprehensive Environmental Assessment. 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 projects have changed significantly.

Sincerely,

Kathleen Courtright
Kathleen Courtright, Assistant Chief
Division of Environmental and Financial Assistance

Attachment
LIMITED ENVIRONMENTAL REVIEW

**Project Identification**

Projects: East Lorain Water Line Replacement; Lead Service Line Replacement Phase 1

Applicant: City of Lorain  
200 West Erie Avenue  
Lorain, Ohio 44052

Loan Numbers: FS390532-0029; FS390532-0036

**Project Summary**

The City of Lorain in Lorain County has requested approximately $4.5 million in financial assistance from Ohio EPA's Water Supply Revolving Loan Account (WSRLA) to replace and upgrade existing water lines with properly sized publicly owned water mains and service lines in the area known as East Lorain (see Figure 1). All work will be under and along streets, rights-of-way, and easements disturbed by previous construction and in an area generally lacking important environmental features. The city's existing water lines in East Lorain need replacement due primarily to their susceptibility to breakage.

![Figure 1. East Lorain project area](image)
While the city previously announced plans to determine if future water rate increases will be needed through 2027 as part of its ten-year capital improvements plan, Lorain has indicated that this individual project should not require them. The city has dedicated revenues collected through its water fees as its loan repayment mechanism for this proposed project. This conclusion is drawn mainly because the city has shown that it expects to carry annual and cumulative account surpluses over the expected 20-year term of its WSRLA loan. The city’s last major water rate increase of 9.6% was adopted in 2019.

Lorain has also requested $1 million in WSRLA principal forgiveness funding to replace lead service lines in parts of the city; this project is expected to be the first phase of a larger effort.

**History & Existing Conditions**

The City of Lorain owns and operates a complete water system consisting of source supply, treatment, storage, and distribution that serves both the City of Lorain as well as adjacent communities like Amherst and Sheffield Lake. The city’s largest water customer is Northern Ohio Rural Water at the western end of its service area.

Raw water from Lake Erie is treated at the city’s 17.2 million gallons per day water treatment plant, built in 1906, before entering the city’s storage and distribution system consisting of three pressure zones, two booster pump stations, storage tanks, and about 316 miles of water mains. The remainder of this document will cover a part of the largest of the city’s three pressure zones or districts, the central pressure zone as shown in Figure 2.

![Figure 2. Lorain pressure zones map](image)

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The central pressure zone is located on the north and west sides of Lorain and provides water directly from the city's water treatment plant through about 230 miles of water mains. The city's proposed project in East Lorain covers a much smaller area and is expected to address problems with about 14,500 linear feet (lf) of water mains. In addition to being susceptible to breakage due to age, the city's water lines in East Lorain are undersized and typically do not provide adequate water pressure. Other than the problems experienced with the city's water mains shown in Figure 1, there are no known problems with other water mains in the vicinity. The water demand in the project area east of the Black River has been stable and is not anticipated to grow or decline in the future.

Based on Lorain's assessment of the probability of lead on the public and private sides of the water service lines in the city, the water service lines in the Phase 1 project area have been identified as likely to contain lead. The city reached this conclusion using the age of homes and in-house records. By removing these service lines from the Phase 1 area, the city will be addressing an important health concern.

**Project Descriptions**

The City of Lorain has chosen the following improvements as its selected alternative for the East Lorain project area in Figure 1: a new transmission main along G Street for increased pressures, reliability and redundancy, and replacement water mains due to size, age, and break history. Water main replacements are proposed for portions of the following streets: New Hampshire Avenue, McKinley Street, Colorado Avenue, California Avenue, Arkansas Avenue, Arizona Avenue, Lakeside Avenue, and Erie Avenue. Overall, the proposed project's major benefits include cost savings from no longer having to repair water main breaks and elimination of low pressure and water loss problems.

In addition to the roughly 15,400 linear feet of service and water lines comprising the proposed East Lorain improvements, the city proposes to replace both private and publicly owned lead service lines during its Phase 1 lead service line replacement project. These locations include West Seventh Street, Harborview Boulevard, Jefferson Boulevard, McKinley Street, Idaho and Georgia Avenues, Maine Avenue, and Pole Avenue. Figure 3 below illustrates a typical situation where lead and other similar material service lines may require replacement to address potential human health concerns. The entire scope of the Phase 1 activities is presented in Figure 4.

![Figure 3. General illustration of typical lead service line replacement](Image)
**Implementation**

To implement the proposed $4.5 million East Lorain improvements described above, the City of Lorain intends to finance its project through a 20-year low-interest loan from Ohio EPA’s WSRLA. Currently, the WSRLA standard interest rate is 1.16%. This fixed interest rate is adjusted monthly to reflect changing market conditions.

Under the previously established water rates in effect in January 2021, a typical, in-city residential customer using on average 685 cubic feet of water per month is currently paying a fee of $48.46 per month, or about $581 a year. When expressed as a percentage of the service area’s latest median household income (MHI) figure of $38,291, this annual fee is about 1.52% of the area’s MHI. For qualifying residents on fixed incomes or with disabilities, the city currently offers a reduced usage fee that is $1.20 less than the regular fee.

Assuming the project funding presented above, Ohio EPA expects that the city will save about $640,000 when compared to a market-rate loan of 2.41% on the project’s estimated total project cost of $4.5 million. By proposing to fund their project in this way, Ohio EPA anticipates that the City of Lorain should be able to generate enough revenue under its current and proposed rate structure to continue to own, operate, and maintain its water distribution and treatment systems well into the future.
Under the city's proposed project schedule, WSRLA funds are expected to be awarded in April 2022, so that construction can commence soon thereafter. The city estimates that construction on this project can be completed in about one year.

In addition to WSRLA financing of the East Lorain water line replacement project, the city has requested $1 million of WSRLA principal forgiveness funding to pay for the replacement of roughly 300 public and private lead service lines. By coordinating with local residents and other parts of city government, any potentially sensitive historical areas of Lorain will be addressed during installation of new service lines that meet current federal standards under the Safe Drinking Water Act.

**Public Participation**

During project planning, the City of Lorain indicated that there had been no public participation to date and that it intended to hold a public meeting with affected residents in the future to inform them of the improvements and the increased water pressures. Subsequently, the city held a council meeting on January 3, 2022 at which WSRLA funding of the proposed project was addressed. According to the city, it expects to share project information through its website and social media. Other possible public outreach efforts may include notifying all affected customers before construction starts.

The creation in 2021 of the city's sewer and water advisory board represents another opportunity for residents to learn more about the city's infrastructure needs and their costs.

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](https://epa.ohio.gov/divisions-and-offices/environmental-financial-assistance/announcements)) and will provide it upon request. A copy may also be posted at city hall, other city buildings, and on its web site (if available).

For the city's lead service line replacement project, there has been no public participation to date. The contractor with the lowest and best bid price will be required to send out letters to the affected homeowners in the project area to inform them of the project.

**Conclusion**

The city's proposed projects meet the project type criteria for a Limited Environmental Review (LER); namely, they are actions within an existing water distribution system, which involve the functional replacement of and improvements to existing water mains and service lines. Furthermore, the projects meet the other qualifying criteria for an LER; specifically, the proposed projects:

**Will have no significant environmental effect on high-value environmental resources and will require no extensive impact mitigation unique to the assistance proposal** because the proposed water line replacement project is limited to a prior-disturbed area of Lorain east of the Black River that does not encompass any unique or sensitive areas. Construction activities will be in and along city streets and adjacent rights-of-way. Although some of the proposed improvements will occur within Lake Erie's coastal management area, the net effect will be no change to the area because the project entails replacement of existing water lines and not extension of service to an undeveloped area. Routine management practices as are typically found in storm water pollution prevention plans and other impact mitigation related to air quality, noise and traffic control, tree and drip line area protection, site dewatering, and archaeological resources are part of the city's proposed project during its estimated one-year construction timeframe.
For the lead water service line replacement project, all the improvements will occur in prior-disturbed areas. On this basis, no high-value resources such as streams or wetlands will be affected. In addition, most installations will entail the use of no-dig (trenchless) technologies and so not require extensive impact mitigation. Finally, this work is not expected to require tree removal.

Are cost effective and not the subject of significant public interest, or controversy. The necessary improvements were selected by Lorain as more cost effective than a no-action option on the basis of costs and non-monetary factors. Moreover, the proposed improvements constituting the city’s two projects are non-controversial because they will not adversely impact the environment, or the residential rates paid for water service.

Do not create a new, or relocate an existing discharge to surface or ground waters, and do 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, or substantially increase the volume of discharge or loading of pollutants from an existing source or from new facilities to receiving waters because the proposed East Lorain project’s purpose is restricted to addressing areas of Lorain where the main problems are inadequate (low) water pressure and reliability, water loss from the distribution system, and water line breaks resulting from the age and material of the existing water mains. Similarly, the city’s lead service line replacement project will have no significant effect on water use or the discharge of water pollutants.

Will not provide capacity to serve a population substantially greater than the existing population. Based on information provided by the city during planning, Lorain and vicinity have experienced declining populations and are not expected to grow in population over the next twenty years. This is particularly true for the East Lorain project area which is built out. As a result, by replacing the water system components which have come to the end of their useful life, this proposed project is not meant to address future growth, but only to maintain the city’s distribution system. On this basis, the proposed East Lorain project, the accompanying lead service line replacement project, and the population they are expected to support should have no effect on environmental attributes that are typically affected by growing populations.

To conclude, the city’s two proposed projects are sufficiently limited in scope and meet all applicable criteria to warrant an LER. The planning activities for the proposed projects identified no potentially significant, direct, indirect, or cumulative adverse impacts. The proposed projects are expected to have no short- or long-term adverse impacts on the quality of the human environment or on sensitive resources such as ozone levels and air quality, floodplains, wetlands, coastal areas, archaeologically or historically significant sites, or threatened or endangered species. The City of Lorain’s proposed projects will enable it to address its responsibilities under the Safe Drinking Water Act. Public health risks associated with potential exposure to lead in the city’s distribution system in the project area are also expected to be reduced.

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