



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

May 22, 2019
Limited Environmental Review and Finding of No Significant Impact
Steubenville Water System Improvements – Waterline Replacement, Phase 2
Jefferson County
FS390883-0029

The attached Limited Environmental Review (LER) is for a drinking water treatment project in your area 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 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.

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. This project's relatively narrow scope and lack of environmental impacts qualifies it for the 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 document.

Loan award will proceed without further environmental review or public comment unless new information shows that environmental conditions of the proposed project have changed significantly.

Sincerely,

A handwritten signature in blue ink that reads "Jerry Rouch". The signature is written in a cursive, flowing style.

Jerry Rouch, Chief
Division of Environmental and Financial Assistance
Office of Financial Assistance

Attachment

LIMITED ENVIRONMENTAL REVIEW

Project Identification

Project: Steubenville Water System Improvements – Waterline Replacement, Phase 2

Applicant: James S. Mavromatis, City Manager
City of Steubenville
115 South Third Street
Steubenville, Ohio 43952

Loan Number: FS390883-0029

Project Summary

The City of Steubenville, located in Jefferson County, has applied for financing from the Ohio Water Supply Revolving Loan Account (WSRLA) to fund the Water System Improvements – Waterline Replacement, Phase 2 project. This project is necessary to improve the aged and deteriorated water distribution system in Steubenville and will include the installation and replacement of approximately 12,000 linear feet (LF) of water lines, replacement of various water isolation valves, and repairs of leaking pipes. The estimated loan amount for this project is \$4,865,611, with construction scheduled to begin in autumn of 2019 and last approximately 12 months.

History & Existing Conditions

Steubenville’s water treatment plant (WTP), located at 1565 University Boulevard, utilizes the Ohio River as its source water, which is then treated by coagulation, flocculation, clarification, filtration, and disinfection prior to distribution. The WTP has an average daily flow rate of 3.8 million gallons per day (MGD). Steubenville’s distribution system has experienced a disproportionately recent and large number of waterline breaks. These breaks are believed to be primarily due to leaky pipes which have exceeded their useful life. Despite having an ongoing water pipe replacement program that prioritizes replacement based on areas with the highest number of pipe breaks, Steubenville has an annual calculated water loss in excess of 65%. Over the last eight years Steubenville has experienced approximately 80 waterline breaks per 100 miles of pipe per year, while the average in the region is approximately 26 breaks per 100 miles of pipe. Water line leaks and breaks create added expense for Steubenville related to routine and emergency repairs, cause boil alerts and necessitate energy and resources for the treatment of a greater volume of water than the customer demand.

On January 12, 2018 in Steubenville’s downtown water district, an emergency water system event occurred, resulting from one significant waterline break and one non-functioning isolation valve, that was not resolved until January 24, 2018. The event resulted in that service area being without water for a substantial period of time. As a result of this event and city-wide leaks, Ohio EPA issued a deficiency violation to Steubenville on February 7, 2018.

Future Needs

Steubenville's population of 18,305 has decreased by approximately 2,000 residents since 2000. During that same period, three major water customers, Wintersville, Jefferson County, and RG Steel Mill were lost. Population trends show a likely continued decline in the water system's customer base.

Primary needs for the water system include continued improvements in the aged distribution system. This includes distribution line improvements to aged and leaking lines and elevated water tank improvements.

Alternatives

Steubenville initially submitted designs to address their compliance requirements by replacing or repairing all critical isolation valves. This project would allow Steubenville to achieve compliance and follow up the project with repairs to the various non-critical isolation valves in the service area. However, during subsequent discussions with Ohio EPA and its consultants, Steubenville determined that the project, as designed, would not efficiently allow the necessary repairs and make the best use of WPCLF principal forgiveness monies (principal that does not need to be repaid) made available to the city.

On October 15, 2018 Steubenville submitted phased alternative improvement projects to meet its compliance requirements, and this two-phased alternative was accepted by Ohio EPA. Phase I was designed to improve a subset of utilities and to gain further information for future utility work, to be followed by Phase II, which will be further designed based on the findings of Phase I. The projects consist of the following:

Phase I: Valve Replacement/Rehabilitation and Leak Detection, which allowed Steubenville to expedite their path to compliance by locating, mapping, exercising, repairing or replacing broken or non-functioning valves as required per the Ohio EPA Notice of Violation. Phase I, the Isolation Valve Replacement and Rehabilitation project, was awarded a WRSLA loan in February of 2019 and results of this project went into the design of Phase II.

Phase II: Prioritized Pipe Replacement for Leak Reduction, which allows Steubenville to utilize data collected in Phase I to prioritize and replace or rehabilitate distribution pipe to further minimize Steubenville's real water losses as well as providing a reduction in pipe breaks.

Selected Alternative

With the Phase I project having already been substantially completed, Phase II (see Figures 1 and 2) will primarily involve replacement of aged and leaking water distribution lines.

The project includes the replacement of approximately 11,560 LF of 6-inch and 630 LF of 12-inch diameter water distribution lines, point repairs of leaking pipe, replacement of 16 isolation valves ranging in size from 6-inch to 12-inch, distribution system disinfection and restoration activities.

The seven project locations all include existing, aged water distribution lines to be replaced via open cut construction. Five of the locations occur within previously disturbed and developed roadways and road rights-of-way. One construction location is within a former public golf course which is maintained as a mowed park area with limited trails. The final construction location is within Beatty

Park and includes excavation just off of the park road and within a small stream. Work in the Beatty Park location is necessary to replace the existing pipe which has been exposed due to erosion from the stream and has the potential to be damaged due to the lack of pipe support and protection.

Implementation

The total estimated cost of the proposed project is \$4,865,611 and borrowing that amount over 30 years at the current market rate of 3.29 percent would cost Steubenville approximately \$7,700,000. However, Steubenville is eligible to receive principal forgiveness from the WSRLA in the approximate amount of \$2,423,650 to address their drinking water issues, leaving an estimated outstanding balance for the project of \$2,441,961. Steubenville is eligible for a 30-year loan at the Disadvantaged Communities zero-percent interest rate for human health projects. The combination of principal forgiveness funding and borrowing \$2,441,961 over 30 years at zero percent, as opposed to financing the total project amount at the current market rate of 3.29 percent, would save Steubenville approximately \$3,850,000.

Construction of the proposed project is estimated to begin in autumn of 2019 and last approximately 12 months.

Public Participation

Steubenville has conducted numerous public meetings pertaining to city water issues and this project, and they have been well attended by residents. There have also been extensive newspaper articles and online reporting regarding water issues, the proposed project and rate increases. Several residents have expressed concern or opposition to the rate increases. However, the proposed project is the most affordable option for Steubenville to address Ohio EPA's Notice of Violation and an aged and deteriorated distribution system requiring significant improvements. Also, a public notice announcing the availability of this Limited Environmental Review will be posted on City of Steubenville and Ohio EPA Division of Environmental and Financial Assistance websites. Thus, there have been adequate opportunities for information dissemination and public participation.

Environmental Impacts

The project has the potential to affect the following features, but the effects will be reduced or mitigated to acceptable levels as explained below.

Surface Water and Ground Water: Construction will not have significant adverse long-term impacts on surface water resources as the work will primarily be performed in areas in which the cover is paved roads, gravel and lawn grass. The project areas include no wetlands. However, one project area will include an open cut crossing of an unnamed tributary to Permar's Run. This intermittent stream underwent a Primary Headwater Habitat Evaluation which found no favorable habitat for aquatic species. Work at this location will take place under a U.S. Army Corps of Engineers Nationwide Permit 3 for maintenance of existing structures. Minor, short-term impacts from open-cut construction could occur. Excavation of the project areas could be prone to erosion and deposition if construction mitigation is not followed. A Stormwater Pollution Prevention Plan (SWPPP), which describes the measures that will be taken to prevent pollution caused by runoff into surface waters, is required. Dewatering of ground water to enable work below grade may be necessary, but engineering controls are part of the specifications to minimize the impacts of discharging pumped ground water to a river or stream. No impacts to ground water resources are expected as all properties are connected to public water. The project areas are predominately located

outside of the 100-year Ohio River floodplain and will add no new above-ground structures in the 100-year floodplain. Once construction is complete, all areas will be restored to pre-construction conditions.

Terrestrial and Aquatic Habitat: The U.S. Fish and Wildlife Service (USFWS) indicates that the endangered Indiana bat and threatened northern long-eared bat can be found in Jefferson County. The majority of the project alignment is within paved roads, gravel and lawn grass, where no trees are expected to be taken down or trimmed. Two project locations include limited tree clearing, trimming and grubbing of potentially sensitive habitat. Trees within these project areas range from small to large-sized trees of limited desirability to these species, one dead tree with peeling bark, and scrubby brush. Tree clearing and trimming will be limited to those that are necessary for completion of the project (e.g., trees within the excavation location or within the path of heavy equipment, etc.). Other mature trees are located outside of the work area and would provide alternative habitat. Tree removal will only be permitted to occur between October 1 and March 31 or in coordination with USFWS. These tree clearing restrictions will further ensure that any potential impacts to Indiana bats or northern long-eared bats are avoided.

The species of concern eastern hellbender salamander can be found in Jefferson County. However, while the project does include one stream crossing, this species is found in medium to large rivers. The intermittent stream in this project is not conducive to this species. Furthermore, the project will include adherence to a SWPPP. Therefore, no impacts to this species are anticipated.

The species of concern bald eagle can be found in Jefferson County. However, they are not believed to be present in the project area. Therefore, we have determined that the project may affect, but is not likely to adversely affect, the bald eagle.

Air Quality: Jefferson County meets standards for five of the six regulated air pollutants (carbon monoxide, nitrogen oxide, lead, particulate matter and ozone). The area is currently in nonattainment for sulfur dioxide; however, air quality will be unaffected by this project. The project will add no permanent sources of air pollution, although short-term, insignificant increases in dust and local air pollution from construction vehicle exhaust are expected during construction and will be controlled by standard construction best management practices. For these reasons, the project should have no significant adverse short-term or long-term impacts on local air quality.

Dust, Noise, Odors, Safety and Traffic: Standard construction best management practices will minimize noise and dust. Construction noise will be audible but generally insignificant compared to normal vehicle traffic in the greater project area. Traffic will be disrupted temporarily due to excavation in rights-of-ways and will be controlled and minimized by standard traffic controls (signs, barricades, flaggers). Public safety will be protected during construction primarily by proper traffic management in the construction areas and by covering or filling excavations at the end of each workday. Local aesthetics will be unchanged after construction as project areas will be restored to pre-construction conditions.

The project is expected to have a net reduction on local or regional energy supplies related to a reduction in the volume of drinking water needing treatment due to repairs to leaking water distribution lines.

Archaeological and Historical Resources: Ohio EPA has concluded, based on the project's alignment, a thorough review of State Historical Preservation Office (SHPO) mapping data, and prior disturbance within the project locations, that no features listed on, or eligible for listing on, the National Register of Historic Places will be adversely impacted by the proposed project.

Based on this information, Steubenville and Ohio EPA believe that unrecorded archaeological sites or properties eligible or listed on the National Register of Historic Places are not likely to be impacted.

In the event that archaeological properties are found during construction, contractors and subcontractors are required under Ohio Revised Code Section 149.53 to notify the Ohio State Historic Preservation Office (and Ohio EPA) and to cooperate with those entities in archaeological and historic surveys and salvage efforts when appropriate.

Local Economy: Debt for this project will be repaid from monthly water rates and a Water Infrastructure Improvement Fund fee. Water rates were raised significantly in 2018 and were scheduled to increase annually over the next five years in anticipation of this project and various future water infrastructure improvements. Likewise, the Water Infrastructure Improvement Fund fee that was instituted is scheduled to increase annually over the next five years. The residential water bill in Steubenville, based on average water usage, is \$71.90, plus a \$6.00 Water Infrastructure Improvement Fund fee, for a total of \$77.90 per month, or \$934.80 per year. This is 2.8 percent of the median household income of \$33,369, which is considered high. However, based on the extensive deficiencies within the drinking water infrastructure and various proposed projects, this rate represents the minimum amount necessary to fund this project and make other necessary improvements going forward.

Unaffected Environmental Features: No state-designated scenic rivers or state-designated or federally-designated wildlife areas are present in or near the work sites. No farmland losses are expected as a result of this project. The project is not located in the Lake Erie coastal zone. No sole source aquifers are present under the project.

Conclusion

Based on the planning documentation, associated correspondence, and public participation, the proposed project as designed will have no adverse long-term effect on farmland, coastal zones, surface water, ground water, floodplains, wetlands, aquatic or terrestrial habitat, endangered species, state or federal wildlife areas, state-designated scenic or recreational rivers, cultural properties, air quality or the local economy. It will have no long-term adverse effects with respect to noise, dust and odors. It will have long-term benefits associated with the repair and functional replacement of aging drinking water infrastructure, and the provision of a safe and adequate supply of potable water that is maintained according to the standards of the Safe Drinking Water Act and is capable of providing adequate and reliable water pressure to support the needs of residential customers and businesses throughout the project area.

For further information, please contact:

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Figure 1: General project area (in red).

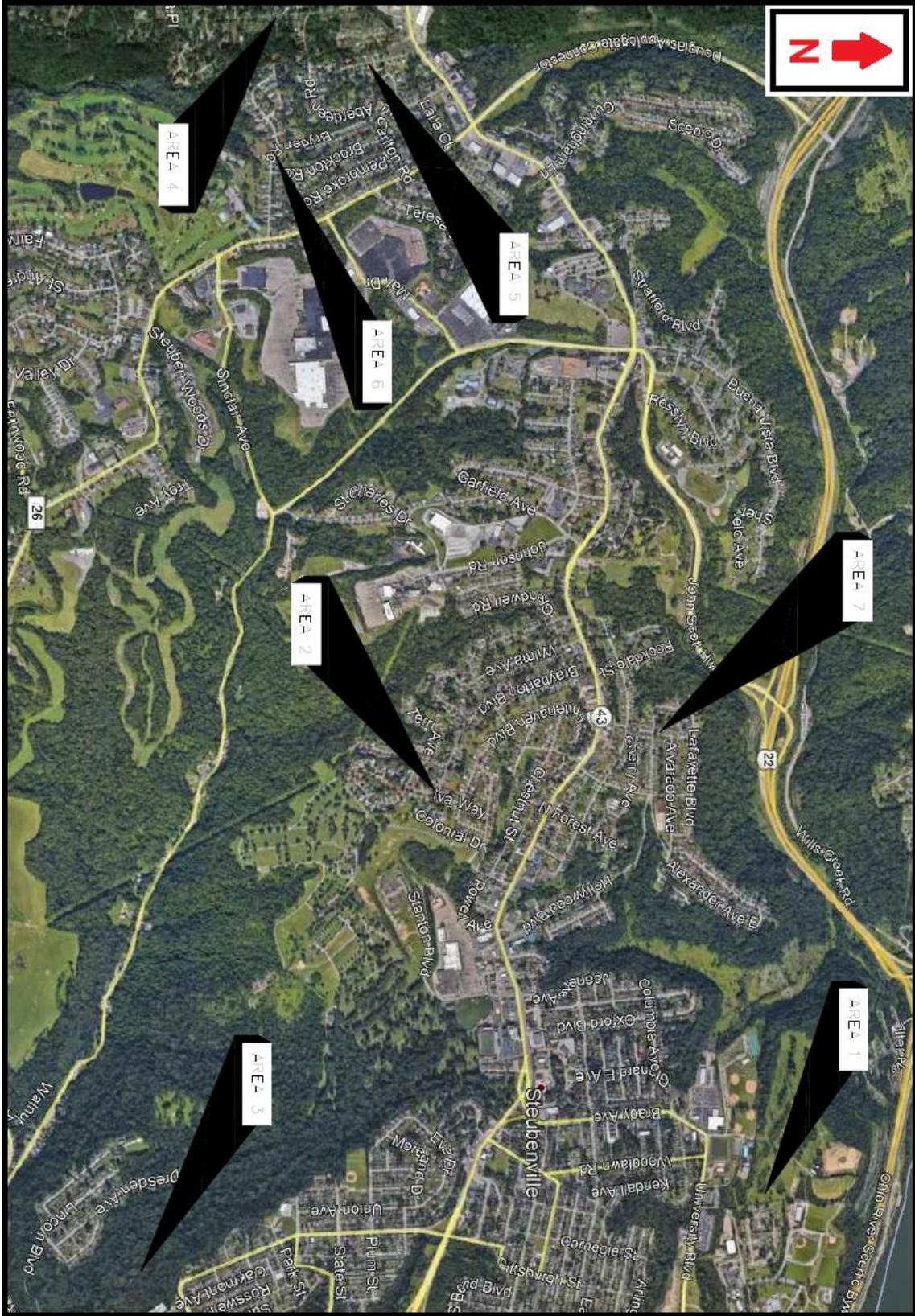


Figure 2: Project's seven locations