Ohio Environmental Protection Agency

Mike DeWine, Governor
Jon Husted, Lt. Governor
Anne M. Vogel, Director

February 3, 2023

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

City of Marietta – Washington County
WTP Replacement
Loan Number: FS390571-0014

The attached Environmental Assessment (EA) is for a water treatment plant replacement project in Marietta 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 Marietta 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: WTP Replacement

Applicant: City of Marietta
301 Putman Street
Marietta, Ohio 45750

Loan Number: FS390571-0014

Figure 1. Washington County

Project Summary

The City of Marietta, in Washington County (Figure 1), has requested $35,854,000 from the Ohio Water Supply Revolving Loan Account (WSRLA) to finance the Water Treatment Plant (WTP) Replacement project. Completion of this project is intended to remedy issues related to deterioration of Marietta's two existing WTPs by replacing them with a single, upgraded WTP.

History & Existing Conditions

Marietta operates two WTPs, referred to as WTP No. 1 and WTP No. 2, that source and treat water from a combination of seven groundwater wells located near the Muskingum River. Both WTPs are located at 2000 4th Street on a site with limited existing available space (Figure 2). WTP No. 1 uses a treatment process consisting of coagulation, flocculation, sedimentation, stabilization, and filtration, while WTP No. 2's process consists of coagulation and solids contact clarification, stabilization, and filtration. Both plants utilize lime softening to reduce water hardness and use the same chemicals for treatment. WTP No. 1 was built in 1934 and has a treatment capacity of 2.8 million gallons daily (mgd). WTP No. 2 was built in 1972 and has a treatment capacity of 3.0 mgd, together giving the WTPs a total capacity of 5.8 mgd. Marietta's average daily water demand is 2.3 mgd. The WTPs are operated on an alternating fashion, as both plants have adequate capacity to meet the daily demand. This is done to extend the life of and reduce the general wear and tear on treatment components. Many capital improvement projects have been completed over the years resulting in the current WTPs.

Despite the numerous improvement projects, both WTPs require significant rehabilitation or replacement. All of WTP No.1's and most of WTP No. 2's equipment and facilities far exceed their normal expected service life. Marietta has considered alternatives including rehabilitation of their existing facilities or replacement of the existing facilities with a new WTP to ensure they can maintain continued safe and reliable drinking water treatment into the future.

Population and Flow Projections

Marietta's population has remained relatively constant for the previous 20 years. Marietta is a regional water supplier that provides water service to roughly 19,000 individuals across Marietta, Oak Grove, and unincorporated Reno. Data comparisons in recent years show little to no growth in

customer base and have therefore been projected to remain the same to 2030. Additionally, overall water sales and water production has been declining slightly for the past three years.

While expansion of the existing treatment capacity is not expected to be necessary based on current projections, Marietta has incorporated consideration of potential growth in customer base and water demand into their alternatives analysis. This is critical in ensuring Marietta not only is able to provide adequate capacity for current projected customers but also effectively and efficiently meet potential increases in demand.

Alternatives

1. *Regionalization:* This alternative would involve Marietta abandoning their existing WTPs and regionalizing with a drinking water supplier for purchase of drinking water. Marietta is already a regional supplier and provides water to residents outside of Marietta in Oak Grove and unincorporated Reno. There are no drinking water suppliers in the area that could support Marietta's demand, and a connection to a nearby smaller supplier would require extensive improvements to treatment and distribution infrastructure. For these reasons, this alternative was eliminated from consideration.

2. *RO Softening:* This alternative would involve the replacement of both WTPs with a new WTP. Unlike the existing WTPs which utilize a lime softening system, the new WTP would use a reverse osmosis (RO) softening process. Utilizing an RO softening process would allow Marietta to no longer require the use of lime which would be preferred by WTP staff. Compared to a conventional WTP, such as is currently used by Marietta, an RO plant also has the advantage of providing removal of nitrates and per- and polyfluoroalkyl substances (PFAS) and limited removal of volatile organic compounds (VOCs).

3. *WTP Rehabilitation:* This alternative would involve the continued use of the existing WTPs, with both plants being maintained and utilized as they currently are. Plant components exceeding their design life would be replaced, along with a vast number of improvements including the following: construction of a raw water vault, new sludge and backwash tanks, and solids contact unit; piping interconnections between WTPs; replacement of pumps and chemical feed equipment; and structural and architectural repairs and improvements to ground stability in areas of the WTP property.

   Both Alternative 2 and Alternative 3 have a comparable probable cost within 5 percent of another.

   Due to the constraint of available space on the WTP property and the necessity to keep in service at least one of the WTPs during construction, rehabilitation of the existing plants is Marietta's only alternative if desired to continue the use of a conventional WTP. Marietta is not content with continuing to operate two interconnected WTPs on the same site, as this requires excessive operational effort and increases system complexity thereby increasing the number of potential failure points. Furthermore, Marietta has determined it undesirable to rehabilitate a facility and equipment that is in varying stages in excess of expected useful life. For these reasons, this alternative was determined to be less cost effective than Alternative 2.

Selected Alternative

After considering monetary and nonmonetary factors, Marietta has determined it most cost effective to move forward with the RO softening WTP detailed in Alternative 2.

Marietta will demolish WTP No. 2 and in its place construct the new RO softening WTP. The new plant will be sized for an average daily demand of 2.75 mgd with a maximum daily approved capacity of 4.5 mgd. The design of the facility will allow for the treatment capacity of the plant to be efficiently expanded to 6 mgd if needed to accommodate potential future growth. The existing WTP No. 1 will remain in service during demolition of WTP No. 2 and construction of the new plant. Following completion of the new RO softening WTP and subsequent testing to ensure proper functionality, WTP No. 1 will be taken out of service and demolished.

Dissolved solids removed from ground water during the RO treatment process will be conveyed to the Muskingum River through a new permitted outfall that will be constructed to the west of Muskingum Drive (Figure 2). Construction of the outfall piping required the demolition of the former residence at 273 Muskingum Drive which has already been completed by Marietta.

Implementation

Marietta proposes to borrow $35,854,000 from the Ohio WSRLA to cover the cost of this construction project. Marietta will receive the portion of the project cost associated with emerging contaminants as principal forgiveness, estimated to be $10.1 million, and will borrow the remaining amount at the standard market rate of 3.13 percent (interest rates are set monthly and may change for the requested March loan award). Additional funding for the project is coming from the Ohio Public Works Commission in the amount of $142,226. Borrowing WSRLA funds at this rate, along with the expected amount in principal forgiveness, could save Marietta roughly $25 million over the 30-year loan term compared to the current market rate of 4.43 percent.

The debt associated with this project will be recovered from monthly user charges. In 2022, Marietta contracted Ohio Rural Community Assistance Program (RCAP) to conduct a water rate analysis including water rate recommendations. Ohio RCAP determined that a rate adjustment is necessary for Marietta to cover operating expenses impacted by rising inflation along with scheduled capital improvements and the debt service associated with the WTP Replacement project. Based on the recommendations provided by Ohio RCAP, Marietta intends to implement a multi-year rate increase between 2023 and 2030 as follows: 7.5 percent in 2023 and 2024, 6.5 percent in 2025, 2026, and 2027, 5.5 percent in 2028 and 2029, and 5 percent in 2030. Based on a monthly usage of 4,500 gallons, the proposed rate increases will result in a 2023 average annual residential water bill of $427. This is 1.08 percent of the median household income for Marietta (MHI; $39,439) and compares favorably to the Ohio average annual bill of $697. Based on the same monthly usage, the proposed rate increases will result in a 2030 average annual residential water bill of $648 which is 1.64 percent of the current MHI for Marietta.

Construction is expected to begin following loan award and reach significant completion in mid-2025.

Public Participation

Information pertaining to this project has been discussed at public city council meetings, including a recent meeting held October 20, 2022, at which a presentation was held covering the proposed rate

adjustments. Marietta is continuing efforts to inform residents of the proposed rate adjustments. On September 1, 2021, Ohio EPA held a public hearing to discuss receipt of the application for modification to Marietta's existing wastewater discharge permit and permit-to-install for their water treatment plant which afforded residents an additional avenue to comment on the project. Information regarding this project has also been published in local news articles and included in social media posts.

Ohio EPA is unaware of controversy about or opposition to this project. Ohio EPA will make a copy of this document available to the public on the following webpage and will provide it upon request: https://epa.ohio.gov/divisions-and-offices/environmental-financial-assistance/announcements.

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.

Archaeological and Historical Resources

Review of the project was coordinated with the Ohio State Historic Preservation Office (SHPO) for consideration of potential effects to archaeological and historical resources. It was determined that neither WTP No. 1, WTP No. 2, or the home located at 273 Muskingum Drive, all of which will be demolished as part of this project, meet the eligibility criteria for listing in the National Register of Historic Places (NRHP). Furthermore, it was determined that the placement of rip-rap along the bank of the Muskingum River would have no adverse effect on the NRHP Muskingum River Navigation Historic District.

The area along which the portion of the concentrate sewer line nearest to the Muskingum River, between Muskingum Drive and the Muskingum River, falls within the Muskingum River floodplain and appears to be undisturbed. This topographic setting is considered archaeologically sensitive as other sites in similar settings have been documented along either side of the Muskingum River. An archaeological survey of this area was conducted and resulted in no finding of subsurface or buried cultural deposits or middens. Therefore, this area was not considered eligible for inclusion in the NRHP. Due to extensive ground disturbances having occurred on the WTP property from previous construction and development, as well as the planned use of directional drilling and jack-and-bore installation of outfall piping, impacts to archaeological resources are not anticipated in any other portion of the project area.

For these reasons, this project is unlikely to impact important historical or archaeological resources.

Floodplains

A portion of the outfall piping and outfall structure falls within the 100-year floodplain. The outfall piping will be installed below ground and surface elevations restored to preconstruction conditions upon completion of construction. Construction of the outfall structure and placement of riprap will have a no impact on surface flooding and stormwater conveyance. For these reasons, it is unlikely that this project will have an adverse impact on the floodplain.

Ground Water Resources

A portion of the outfall piping route and outfall structure falls within the designated zone of the Marietta public water system source water assessment and protection (SWAP) area. Construction within this area does not include activities with the likelihood of impacting ground water resources,

and special protection measures beyond standard construction best management practices that are already included are not anticipated to be necessary.

Land use

The former residence at 273 Muskingum Drive was purchased by Marietta and previously demolished. Removal of this single property and home will have a negligible impact on available residential space and housing in the city and will have no impact on public-use space.

Safety, Noise, Traffic, and Aesthetics

A pre-demolition hazardous material survey was conducted for WTP No. 1, WTP No. 2, and the former residence at 273 Muskingum Drive. The survey identified hazardous materials present in these three structures which will be the responsibility of the contractor to ensure are properly demolished, contained, and disposed of in accordance with all applicable safety and disposal regulations.

Otherwise, there are no specific safety concerns anticipated, nor are there special safety practices beyond standard construction best management practices expected to be necessary during construction. It will be the contractor's responsibility to implement all necessary best management practices (e.g., erosion and sediment control, traffic control, noise and dust minimization, etc.) pertinent to the work taking place.

The site of the former residence at 273 Muskingum Drive will be restored to a lawn following completion of the outfall piping construction.

Safe Drinking Water

To ensure ordinary water treatment operation during construction, WTP No. 1 will remain in service until after the new WTP is constructed and tested to ensure proper functioning. Only once the new WTP is confirmed to be functioning as intended and supplying water treatment as expected will WTP No. 1 be demolished.

Surface Water Resources and Aquatic Habitat

This project will result in a new permitted outfall which will convey dissolved solids removed from groundwater during the RO treatment process to the Muskingum River. Due to the limited nature of the WTP discharge, no significant adverse impacts to the Muskingum River are expected.

The proposed installation of riprap associated with the concentrate sewer outfall to the Muskingum River, which is considered waters of the United States, underwent review by the United States Army Corps of Engineers (USACE) in accordance with Section 404 and review by OEPA in accordance with Section 401. USACE determined that the proposed work meets the criteria for Nationwide Permit No. 7, and OEPA determined that impacts to water quality due to the proposed work are minimal and issued Director's Authorization.

Terrestrial Habitat

The WTP property is a largely developed, already cleared parcel of land that contains no unique terrestrial habitat or terrestrial habitat suitable for state and federally listed threatened and endangered species. Likewise, there is no unique or suitable terrestrial habitat located along the outfall piping route that falls within the developed neighborhood portion of Marietta, near Muskingum Drive.

The sewer route crosses a tree-covered area to the north of the WTP property. There will be no aboveground impacts in this area as outfall piping will be installed using directional drilling, a

trenchless installation method. The remaining portion of the piping, from Muskingum Drive to the Muskingum River, will be installed using traditional trenching. This area merely contains maintained lawn which will be restored to pre-construction conditions upon completion of construction. For these reasons, there are no anticipated impacts to terrestrial habitat.

Endangered Species and Fish and Wildlife

The project areas, including the WTP property and the areas along which the proposed outfall piping routes, either contain no suitable terrestrial habitat for state and federally listed threatened and endangered species or has the potential to contain suitable habitat that will be avoided during construction. The U.S. Fish and Wildlife Service (USFWS) indicates that the project is within the range of the endangered Indiana bat and the threatened northern long-eared bat. For the reasons previously mentioned and because this project involves no tree clearing, there will be no adverse impact to these species.

The USFWS indicates that the project is within the range of the endangered fanshell mussel, the endangered pink mucket pearly mussel, the endangered sheepnose mussel, the endangered snuffbox mussel, and the threatened rabbitsfoot mussel. Due to the limited nature of the proposed WTP discharge and the minor amount of riprap that will be installed along the bank of the Muskingum River, it is unlikely that this project will adversely impact state and federally listed threatened and endangered mussel species with the potential to occur in the project area.

Unaffected Resources

The following resources are not present and therefore will not be impacted by this project: Wild and Scenic Rivers, Wetlands, Farmland Protection, Coastal Zones, Air Quality, and Sole Source Aquifers.

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. Rather, completion of this project will ensure Marietta is able to continue providing safe, reliable water treatment into the future while also providing accommodation for potential increases in water demand and allowing for a higher degree of water treatment.

Contact information

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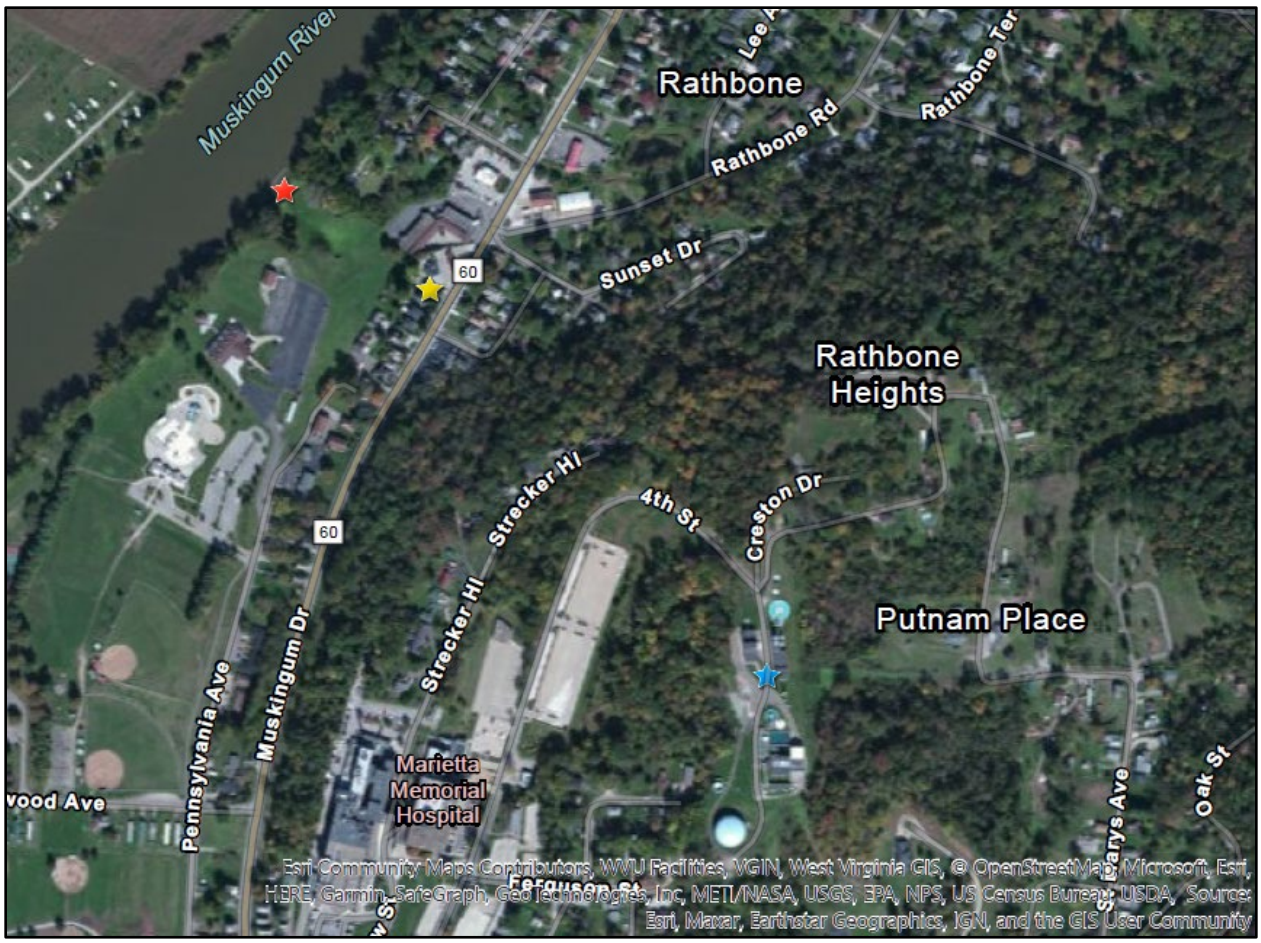

Figure 2. Location of WTP No. 1 and No. 2 (blue star), former residence at 273 Muskingum Drive (yellow star), and proposed concentrate sewer outfall (red star).