May 16, 2019

DRAFT FINDING OF NO SIGNIFICANT IMPACT
to all interested citizens, organizations,
and government agencies

Trumbull County Board of Commissioners
Trumbull County
Mosquito Creek WWTP Capital Improvements Project

WPCLF No. CS390079-0042

The purpose of this notice is to seek public input and comments on the Ohio EPA’s preliminary decision that a Supplemental Environmental Study is not required to implement the recommendations discussed in the attached Environmental Assessment of a wastewater facilities plan submitted by the municipality mentioned above.

How were environmental issues considered?

The Water Pollution Control Loan Fund program requires the inclusion of environmental factors in the decision-making process. Ohio EPA has done this by incorporating a detailed analysis of the environmental effects of the proposed alternatives in its review and approval process. Environmental information was developed as part of the facilities plan, as well as through the facilities plan review process and during site inspections. The Agency’s preliminary Environmental Assessment found that the project does not require the preparation of a Supplemental Environmental Study.

Why is a Supplemental Environmental Study not required?

Our environmental review concluded that significant environmental impacts will not result from the action. Any adverse impacts have either been eliminated by changes in the facilities plan or have been reduced by the implementation of the mitigative measures discussed in the attached Assessment.
How do I get more information?

A map depicting the location of the project is included as part of the Environmental Assessment. The Environmental Assessment presents additional information on the project, alternatives that were considered, impacts of the action, and basis for our decision. Further information can be obtained by calling or writing the contact person named at the end of the Environmental Assessment.

How do I submit comments?

Any comments supporting or disagreeing with this preliminary decision should be submitted to me at the letterhead address. We will not take any action on this facilities plan for 30 calendar days from the date of this notice in order to receive and consider any comments.

What happens next?

In the absence of substantive comments during this period, our preliminary decision will become final. The municipality will then be eligible to receive loan assistance from this agency.

Please bring any information that you feel should be considered to our attention. We appreciate your interest in the environmental review process.

Sincerely,

Jerry Rouch, Assistant Chief
Division of Environmental & Financial Assistance

JR/TH

Attachment
ENVIRONMENTAL ASSESSMENT

Project Identification

Project: Mosquito Creek WWTP Capital Improvements Project

Applicant: Mr. Dan Polivka, President
Trumbull County Commissioners
160 High Street
Warren, Ohio 44481

Loan Number: CS390079-0042

Project Summary

The Board of Trumbull County Commissioners (Trumbull County) has applied to Ohio EPA's Water Pollution Control Loan Fund (WPCLF) for a loan to finance major upgrades to the Mosquito Creek Wastewater Treatment Plant (MCWWTP) in Warren, Ohio. The project will result in upgrades to all major components of the MCWWTP. The MCWWTP is operated by the Trumbull County Sanitary Engineer (Sanitary Engineer).

Total project cost is estimated at $31,782,653. Trumbull County will save an estimated $5,512,263 in interest payments by utilizing a 25-year WPCLF loan to finance the project. WPCLF financing is anticipated to be awarded in June 2019 with construction to begin shortly thereafter. The project will require approximately two years to construct.

History & Existing Conditions

The MCWWTP is an advanced treatment facility that was first constructed in 1963 with the last major modifications occurring in 1986. The MCWWTP is located at 7500 Anderson Avenue NE, Howland Township in Trumbull County, east of Warren (Figures 1 and 2). The MCWWTP serves parts of Howland Township, Bazetta Township, a small portion of the City of Warren, and part of the City of Cortland. Warren and Cortland are satellite communities and are responsible for the operation and maintenance of their respective portions of the collection system. Wet stream processes include the following operations:

- Mechanical Course Screening and Pumping
- Off-line Flow Equalization
- Fine Screening
- Grit Removal
- Primary Settling
- Activated Sludge Biological Treatment
- Intermediate Settling
- Nitrification Towers
- Final Settling
- Chlorination/dechlorination
- Post-aeration
The MCWWTP discharges treated wastewater effluent to Mosquito Creek. Mosquito Creek has been designed Warmwater Habitat (WWH) by Ohio EPA. WWH streams can support and maintain a balanced, integrated, adaptive community of warmwater fishes and aquatic insects. Extensive biological, physical habitat, and chemical water quality monitoring was conducted in the lower Mahoning River basin in 2011 and 2013 in which Mosquito Creek is located. Because of impairments caused by impoundments, urban runoff and stormwater, and other undefined natural causes, Mosquito Creek is in partial attainment of its WWH use designation. The MCWWT has been meeting its effluent limits established in its National Pollutant Discharge Elimination System (NPDES) permit issued May 14, 2016. However, new monitoring and requirements were set for dissolved orthophosphate to help address nutrients. This monitoring is required by Ohio Senate Bill 1, which was signed into law on April 2, 2015. Monitoring for orthophosphate is proposed to further develop nutrient datasets for dissolved reactive phosphorus and to assist stream and watershed assessments and studies.

In light of the age of the MCWWTP and anticipated limits in the next NPDES permit, Trumbull County commissioned the preparation of a Capital Improvements Plan (CIP) in order to ensure the MCWWTP meet the following goals:

1. Meet current and future NPDES permit limits;
2. Provide treatment options for phosphorus;
3. Optimize existing tanks, equipment, structures and processes;
4. Improve operator control and monitoring or processes, equipment, and treatment systems;
5. Increase Average Daily Flow (ADF) from current levels of 4.2 million gallons per day (MGD) to 5.25 MGD to accommodate for potential increases in the MCWWT service area;
6. Maximize treatable peak flow to the current design flow of 10.5 MGD;
7. Improve accessibility to equipment and systems to safely operate and maintain plant; and
8. Reduce Operation and maintenance (O&M) costs.

The CIP was finalized on February 2015.

Population and Flow Projections

The WWTP serves a population of 15,170 people and has an average design flow (ADF) of 4.2 MGD with a maximum daily flow of 9.5 MGD. Peak hydraulic capacity is 10.5 MGD. Monitoring data from the MCWWT indicate the plant is operating at or above design capacity. Flows to the MCWWT have been to be approximately 90% of the ADF for several years. NPDES permit limits are based on an ADF of 4.2 MGD. Typically, Ohio EPA recommends that a CIP for treatment plant expansion be initiated when a plant reaches 80% of its design flow.

Based on the current population and economic profile for Trumbull County, a downward trend in growth has existing since a peak in 1980. Likewise, the 208 Water Quality Management Plan, last updated in 2011, determined that Trumbull County would continue this downward trend in population. However, a redistribution of population within the MCWWT service area indicates potential growth in the service area and a conservative growth rate of 0.5% was used to model plant improvements.
Alternatives

The typical suite of alternatives for an aging WWTP include no-action, construct a new WWTP, and upgrade the existing plant. The no-action alternative was not considered viable because it would not address the project goals described above. Constructing a new WWTP was not given serious consideration because it would be cost-prohibitive. Upgrading the existing WWTP to extend its design life was considered the most economically feasible alternative. Accordingly, multiple alternatives were prepared for each major component of the MCWWTP to meet the goals of the CIP described above. A full evaluation of alternatives may be seen in the February 2015 CIP.

Selected Alternative

The selected alternative for each major component of the MCWWTP is summarized below. See Figure 3 for WWTP detail.

Influent Improvements

1. The MCWWTP lacks coarse screening. The existing comminutor will be removed and replaced with new bar screening to correct the lack of coarse screening for influent to the MCWWTP.

2. In the current configuration, all four influent pumps discharge to a common force main. Due to hydraulic constraints, the pumps may not be capable of handling flows, causing the wet well to flood. A new parallel 20-inch force main will be installed to accommodate all flows. One force main will be able to remain in service if any influent pumps need maintenance.

3. The existing fine screens will be maintained, and new controls and valves will be added to allow plant operators to automatically activate the screens when flows exceed 10.5 MGD. Additional improvements include a new compactor to dewater screenings prior to discharge into a roll-off box.

4. Grit removal will be improved by installing a new Eutek® grit collector that fits within the existing grit chamber with little modification to grit removal operations.

Equalization (EQ) Basin

5. The dividing wall within the existing EQ basin will be replaced to create separate 3-million gallon and 5-million gallon lagoons. Aeration/mixing equipment will be added to the smaller lagoon. The entire EQ basin will be cleaned out and regraded to create positive drainage towards an overflow structure.

Primary Settling Tanks

6. The primary settling tanks will accept all flow up to the peak design flow of 18.5 MGD. A new distribution structure will direct flows up to 10.5 MGD to secondary treatment. Flows in excess of 10.5 MGD will be directed to the EQ basin.
Aeration Tanks

7. The aeration tanks meet current permit limits and standards but will be upgraded to include Biological Nutrient Removal (BNR) to meet ammonia and phosphorus limits anticipated in the next NPDES renewal permit.

8. Pumps and motors will be replaced to provide the necessary pumping of return activated sludge (RAS) from the clarifier sludge well to the return sludge well. New flow meters will be installed on each RAS discharge line.

Secondary (Intermediate) Clarifiers

9. The clarifier mechanisms have deteriorated, and effluent launders and weirs need to be relocated. The clarifier equipment will be replaced with a standard sludge scraper system, the launders and weir will be relocated from inside to outside the clarifier walls. Density baffles will be installed inside the clarifiers, and an entirely new clarifier will be constructed to treated elevate flows and provide redundancy should one unit need to be out of service for maintenance.

Nitrification Towers

10. While the towers are currently operating properly, structural repairs to the concrete walls supporting the towers will be undertaken.

Final Clarifiers

11. The same issues and recommended improvements described for the intermediate clarifiers will be implemented for the final clarifiers.

Disinfection and Post-Aeration Units

12. A new 16-inch mag meter will be installed to replace the 10-inch Venturi meter. The larger meter will increase hydraulic capacity. No work is required for the Post-Aeration Units.

Solids Processing Improvements

Solids processing improvements include handling sludge to be landfilled without treatment as a solid waste and sludge that must undergo additional treatment for odor control and pathogen treatment. Landfilling is the primary method of handling sludge generated at the MCWWTP. While Ohio EPA biosolids regulations do not apply to this sludge, it must still be dewatered and digested for odor control to meet specifications to be landfilled.

13. A new dewatering compacter will be installed to accommodate both course and fine screened sludge to be landfilled. Grit from a new grit dewatering system will be co-mingled with the screened sludge. Skimming, consisting of grease, oil, fats, and other floatables, will be routed to a new scum well then co-mingled with the screening and grit.
14. Waste activated sludge (WAS) will continue to be routed to the gravity thickener, however, the thickener mechanism will be replaced. New pumps will convey the WAS to the thickeners.

15. Digesters will be operated in a series rather than in parallel as currently practiced. A new sluice gate will be installed between digesters 1 and 2 to provide circulation between the two tanks.

16. The conveyor belt to dewater biosolids needs to be over-hauled and updated. Construction will include a second floor to the house dewatering equipment and allow a loaded trailer to remain indoors to protect sludge from rain and freezing temperatures prior to being hauled to the landfill.

17. Sludge drying beds will be renovated as currently constructed and a portion of the beds will be covered by a Quonset style cover.

18. Site and building improvements will include major upgrades to the electrical, mechanical and HVAC systems to meet current safety and fire codes. The Operations/Laboratory/Administrative building will be remodeled to improve access and create more efficient work areas. Miscellaneous upgrades to the non-potable water system will also be included.

19. The Supervisory Control and Data Acquisition (SCADA) system will be upgraded to provide full plant monitoring and control of selected WWTP processes. Alarms will be provided for critical components.

20. The storage building will be upgraded with a reinforced concrete floor that slopes to facilitate drainage of rain, snow, and truck washdown water. A radiant heat pipe will be installed to prevent freezing of tanker truck contents and create more comfortable working space for WWTP staff. Fans will be installed to vent vehicle exhaust emissions.

**Implementation**

The project will be implemented in accordance with the following schedule:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertise for bids</td>
<td>January 28, 2019</td>
</tr>
<tr>
<td>Open bids</td>
<td>March 28, 2019</td>
</tr>
<tr>
<td>WPCLF Award date</td>
<td>June 27, 2019</td>
</tr>
<tr>
<td>Begin Construction</td>
<td>August 1, 2019</td>
</tr>
<tr>
<td>Complete construction</td>
<td>June 2021</td>
</tr>
</tbody>
</table>

**Public Participation**

Legislation authorizing Trumbull County to enter into a loan agreement to finance the project through the WPCLF was approved at a November 18, 2018 council meeting. Board meetings are open to the public. In addition, the proposed project was the subject of numerous newspaper articles, radio announcements, and various project updates were posted to the internet.

As part of its State Environmental Review Process, Ohio EPA will post this Environmental Assessment to the Division of Environmental and Financial Assistance (DEFA) web page located at: [http://epa.ohio.gov/defa/oaa.aspx#169638769-wpclf-documents-for-review-and-comment](http://epa.ohio.gov/defa/oaa.aspx#169638769-wpclf-documents-for-review-and-comment). Ohio EPA is unaware of any public opposition to the project.
Environmental Impacts

A review was conducted to determine whether any potential significant adverse impacts will result from project construction. The proposed upgrades will occur within the fenced boundaries of the existing MCWWTP and along Anderson Road between the MCWWTP and State Route 46. The entire project area is composed of pavement, maintained lawn, and existing structures associated with the MCWWTP. Due to its nature and setting, the project will have no significant impact on major landforms, floodplains, terrestrial or aquatic habitats, agriculture, land use, ground water resources, coastal zones, wild and scenic rivers, or archaeological or historic resources because those resources are not present in the project area.

Air Quality

Effects on air quality will be minimal and short-term. Trumbull County is currently in attainment with all federal air quality pollutant standards except for ozone. In addition to ozone, pollutants monitored for air quality are particulates, sulfur dioxide, nitrogen oxide, lead and carbon monoxide. The proposed project may result in a temporary increase of dust and fumes from construction activities. This will be mitigated using standard construction control practices, such as dust suppressants and use of properly operated equipment in good working order. With these mitigative measures in place, effects on air quality will be short-term, ending when construction is complete. Therefore, no significant adverse impact to air quality will result from project implementation.

Noise, Traffic, Safety, and Aesthetics

Project effects on noise, traffic, safety, and aesthetics will be possible for the duration of the project. The MCWWTP is approximately a half-mile from the nearest residence. Although construction will temporarily increase noise levels and detract from the aesthetic qualities of the area, these will cease once construction is complete. As such, there will be no significant long-term adverse impacts. To reduce the short-term impacts on noise, construction activity will be limited to daytime hours and equipment will be provided with mufflers, as appropriate.

The proposed project will not have a significant adverse effect on traffic; however, there will be a localized increase of construction-related traffic on Anderson Road near the MCWWTP for the duration of the construction period. Access will be maintained for residents living on Anderson Road and emergency vehicles. Also, barricades, warning signs, barrels, and/or flag persons will direct traffic flow, if needed, for trucks delivering materials to the MCWWTP. Once the project is complete, Anderson Road will be re-milled and repaved.

Surface Water

No streams, or wetlands or other waterways will be crossed or directly impacted as a result of this project. The MCWWTP discharges to Mosquito Creek, but no work on the outfall will occur as part of this project.

Because the project will result in the disturbance of more than one acre of surface area, a Storm Water Pollution Prevention Plan (SWPPP) is required. Proper implementation of erosion controls, such as silt fence, and strictly enforced work limits, will minimize runoff. Contractors will be prohibited from depositing excess material (spoil) in wetlands, 100-year floodplains and stream beds even with landowners' permission. Any necessary spoil disposal sites will be screened for suitability prior to being used.
Threatened and Endangered Species

According to the U.S. Fish and Wildlife Service, the Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*) and eastern massasauga rattlesnake (*Sistrurus catenatus*) are listed as occurring in Trumbull County. All work will occur within the fenced boundaries of the MCWWTP in areas of pavement, maintained lawn, and inside existing structures. Based on a review of the detailed plans, no habitat for other threatened or endangered species is located within the project area. No tree clearing is proposed.

Local Economy

The total cost of the project is estimated at $31,782,653, based on the awarded bid. The project qualifies for a 25-year standard long-term interest rate currently set at 1.99%. By financing the project through the WPCLF, Trumbull County will save an estimated $5,512,263 when compared to the market rate of 3.12%. Actual savings will vary depending upon final project costs and interest rate in effect at the time the loan is awarded.

The WPCLF loan will be repaid through existing user charges. Rate increases will not be necessary to retire the WPCLF debt nor are any additional rate increases currently under consideration. Based on an income survey, the median household income (MHI) for residences in the project area is $43,811. Trumbull County indicated that the average residential sewer bill is $23.90/month ($286.82/year) which comprises 0.65% of the MHI for these users, which is below the average rate of 1.1% for Ohio. For these reasons, this project is not anticipated to have any significant adverse effect on the local economy.

Conclusion

Based on its review of existing facilities plans and other information collected about this project, Ohio EPA concludes that no significant short-term or long-term adverse direct environmental impacts will result from the project as related to the environmental features discussed in this Environmental Assessment. This is because these features do not exist in the project area, the features exist but will not be adversely affected, or the impacts of construction will be temporary and mitigated. 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.

Contact Information

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Figure 1: Project Location

Figure 2: Project Location within Trumbull County