Ohio Environmental Protection Agency

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

July 26, 2021

Limited Environmental Review and Finding of No Significant Impact

City of Alliance – Stark County
WWTP NFA Phase 1 Improvements
Loan number: CS390099-0005

The attached Limited Environmental Review (LER) is for a wastewater treatment project in Stark County which the Ohio Environmental Protection Agency intends to finance through its Water Pollution Control Loan Fund (WPCLF) 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 WPCLF 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 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 project have changed significantly.

Sincerely,

Jonathan Bernstein

Jonathan Bernstein, Assistant Chief
Division of Environmental and Financial Assistance

Attachment

LIMITED ENVIRONMENTAL REVIEW

Project Identification

Project: WWTP NFA Phase 1 Improvements

Applicant: City of Alliance
504 East Main Street
Alliance, Ohio 44601

Loan Number: CS390099-0005

Project Summary

The City of Alliance has requested financial assistance from the Ohio Water Pollution Control Loan Fund (WPCLF) for the WWTP NFA Phase 1 Improvements project. Work for this facilities improvement project includes a new secondary settling tank, expansion of the existing disinfection system, and construction of a new disinfection system for raw water bypass. These actions are taking place as a first phase in the elimination of wet weather bypass events as required by the wastewater treatment plant's (WWTP) National Pollutant Discharge Elimination System (NPDES) permit. The estimated loan amount is $12,350,000. Debt for the project will be repaid from monthly service charges. The project is scheduled to begin in autumn 2021 and be completed in 23 months.

History & Existing Conditions

Alliance, located in Stark County, owns and operates a sewer collection system and WWTP (see Figure 1). Alliance's sewer collection system is considered a separate sanitary sewer system that was not intended to receive stormwater. Infiltration and inflow (I/I)[1] of stormwater into the sanitary sewer creates influent flows that exceed the peak treatment capacity at the WWTP. Alliance operates an ongoing I/I reduction program. The program began in 1995 with the hopes of successfully reducing I/I in their collection system enough to reduce the magnitude of the program. However, by 2004 Alliance realized I/I is a persistent problem that requires on-going efforts, and the original goal of reducing I/I to a level that the WWTP is capable of treating was determined to be not feasible.

The WWTP is a conventional activated sludge plant with a rated capacity of 7.5 million gallons per day (MGD). It has a maximum hydraulic capacity of 32 MGD through primary treatment, and19 MGD through secondary treatment. The WWTP has two bypasses; one at the plant influent that receives no treatment before blending with the WWTP's effluent, and one at the intermediate flow equalization basin that receives primary treatment before discharging to the receiving stream. Between the two bypasses, the plant discharges untreated or partially treated wastewater an average of 2.7 times per year into Beech Creek.

Wastewater flows are conveyed to the WWTP headwork units where screening and grit removal occur. Following screening and grit removal, the wastewater is pumped at a maximum rate of 32 MGD to the primary settling tanks. After primary settling, flow enters an intermediate equalization

[1] Infiltration is the ground water that seeps into sanitary sewers through cracks, offset joints and other flaws in the pipe. Inflow is surface runoff that enters sanitary sewers through directly-connected downspouts, area drains, etc.

(EQ) basin. The EQ basin is equipped with an overflow (intermediate EQ bypass) to a stream which runs adjacent to the plant. The overflow only becomes active when the EQ basin is full.

Influent wastewater flow in excess of 32 MGD is pumped directly to two raw wastewater equalization tanks. During some wet weather events the WWTP has delivered a total flow of 8.0 MGD to the raw EQ basins. Influent flows in excess of 40 MGD are bypassed, measured, and recorded prior to this untreated effluent joining the WWTP effluent at the WWTP outfall for discharge.

The WWTP's NPDES permit requires Alliance to choose one of two options in proceeding to eliminate both bypasses: a No Feasible Alternatives Analysis (NFA) and Schedule, or a Municipal Construction Schedule. Alliance chose to proceed with the NFA and coordinated with Ohio EPA on development of this document. The first requested task of the NFA was to develop a wet weather treatment analysis report. The Alliance Wet Weather Treatment Analysis (AWWTA) report evaluated various alternatives to increase the WWTP's peak capacity and eliminate the bypass flows. Alliance's I/I program had shown that an expansion of Alliance's existing I/I program was not a feasible alternative to eliminate the bypasses at the WWTP. Alliance completed its NFA, which included the AWWTA report, I/I program results, an updated affordability analysis, and project schedules and requirements. The NFA recommended an alternative that centers around expansion of the secondary treatment capacity and flow equalization.

Alliance recently facilitated the reprogramming of the WWTP's flow meter so that a peak flow rate of 50 MGD can be recorded. This strategy will give Alliance an opportunity to collect accurate peak flow data and allow the design team to better size flow-sensitive improvements for actual peak flow conditions. In order to facilitate the design and construction of the needed improvements at the Alliance WWTP, and at the same time collect flow data to properly size wet weather systems, it was determined that WWTP improvement actions should be undertaken in two construction phases. Phase 1 improvements focus on expanding the capacity of the secondary treatment system and improving the conveyance of wastewater through the WWTP. Phase 2 improvements will primarily be related to wastewater flow equalization.

Project Description

The WWTP NFA Phase 1 Improvements project (see Figure 2) is being undertaken as the first of two construction phases to address wastewater bypasses at the WWTP to meet NPDES permit requirements. The project, which centers around expansion of secondary treatment at the WWTP, specifically includes the following:

- Construction of a new secondary clarifier
- Installation of a new secondary clarifier Return Activated Sludge (RAS) system
- Expansion of the chlorine disinfection system
- Expansion of the effective volume of the aeration tanks by raising the effluent weir plates
- Construction of a new plant effluent collection chamber
- Installation of peracetic acid injection equipment for the raw wastewater bypass
- Installation of a supplementary effluent outfall pipe
- Associated piping and appurtenances

Implementation

The total estimated construction cost of the project is $13,850,000. Alliance is expected to receive a grant from the Ohio Public Works Commission in the amount of $1,500,000. Alliance proposes to borrow the $12,350,000 balance for the project amount from the WPCLF. The project service area qualifies for the standard long-term WPCLF below-market interest rate on 20-year loans, which in August is 0.46 percent. Borrowing at 0.46 percent will save Alliance approximately $1,700,000 over the life of the loan compared to the current market rate of 1.71 percent.

Debt for the project will be repaid from Alliance's sewer user charge system without rate increases to pay for this project. The local median household income (MHI) is $35,020. Under the water rates that are effective in 2021 and based on average water usage, the average residential water bill is $38.60 per month, or $463.20 per year. This represents 1.32 percent of the MHI.

Public Participation

This project was discussed at various Alliance City Council and Alliance Water and Sewer Advisory Board meetings, and this project underwent public notice and comment period for its United States Army Corps of Engineers Individual 404 Permit and its Ohio EPA Individual Water Quality Certification 401 Permit. This Limited Environmental Review will be posted on the websites of Alliance and Ohio EPA Division of Environmental and Financial Assistance. Thus, there have been adequate opportunities for information dissemination and public participation.

The following agencies reviewed this project's planning information:

United States Army Corps of Engineers
United States Fish and Wildlife Service
Ohio Department of Natural Resources
Ohio History Connection
Ohio Environmental Protection Agency

Conclusion

The proposed project meets the project type criteria for a Limited Environmental Review (LER); namely, it is an action within an existing public wastewater treatment system, which involves the functional replacement of and improvements to existing equipment. Furthermore, the project meets the other qualifying criteria for an LER; specifically, the proposed project:

Will have no adverse environmental effect and will require no specific impact mitigation, as construction will take place primarily within an existing wastewater treatment facility where extensive excavation has previously taken place and where no high-value resources are present. There will be no significant adverse effects as a result of project implementation, or the need for any additional mitigation measures beyond typical erosion control and construction best management practices.

Will have no effect on high-value environmental resources, as construction will take place primarily within an existing wastewater treatment facility where extensive excavation has previously taken place and where no high-value resources are present. Areas outside of the extent of the facility boundaries have been coordinated with the United States Army Corps of Engineers and Ohio EPA Division of Surface Waters.

Is cost-effective, as the proposed action satisfies technical goals of the project, and was deemed the most cost-effective compared to other evaluated alternatives.

Is not a controversial action, as there is no known opposition to the proposed project, the cost of the project is not overly burdensome to ratepayers, and will be financed through the WPCLF, saving approximately $1,700,000 in interest payments compared to conventional financing.

Does not create a new, or relocate an existing, discharge to surface or ground waters, and will not result in substantial increases in the volume of discharge or loading of pollutants from an existing source or from new facilities to receiving waters, since the project involves the functional replacement of and improvements to existing equipment, and not increases to pollutant discharges.

Will not provide capacity to serve a population substantially greater than the existing population, since the project is not related to serving new growth or increasing capacity at the wastewater treatment facility.

In summary, the planning activities for the project have identified no potentially significant adverse impacts. The project is expected to have no significant short-term or long-term adverse impacts on the quality of the human environment, or on sensitive resources (surface water, ground water, air quality, floodplains, wetlands, riparian areas, prime or unique agricultural lands, aquifer recharge zones, archaeologically or historically significant sites, federal or state-designated wild, scenic, or recreational rivers, federal or state-designated wildlife areas, or threatened or endangered species). Typical construction impacts, such as noise, dust, and exhaust fumes, will be short-term and addressed by standard construction best management practices.

The proposed project is a cost-effective way to make improvements to the WWTP's secondary wastewater treatment system and equipment. Once implemented, the project will update undersized secondary treatment infrastructure, helping Alliance to meet its NPDES permit requirements, and help to ensure the protection of human health and the environment by reducing the discharge of untreated effluent into surface water. Also, by using WPCLF low-interest financing, Alliance has minimized the project cost.

Contact information

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Figure 1: General project location (in red)

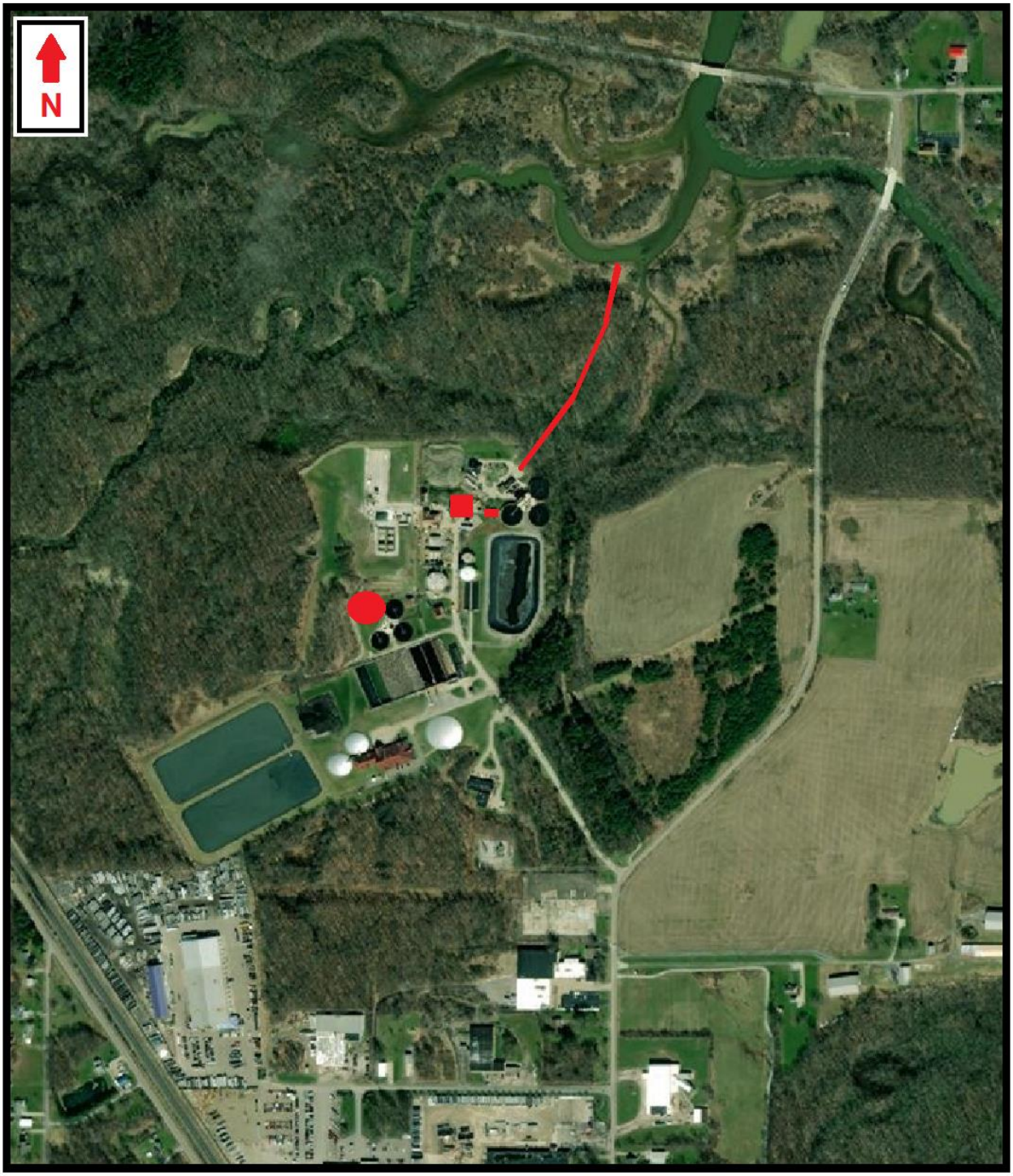

Figure 2: Alliance WWTP NFA Phase 1 Improvements project locations (in red)