June 5, 2019

Limited Environmental Review and Finding of No Significant Impact

City of Geneva - Ashtabula County, Ohio
Geneva WWTP Screening and Grit Removal Improvements
Loan Number: CS390383-0023

The attached Limited Environmental Review (LER) is for the above-referenced project in Geneva, Ohio 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, as described in Ohio Administrative Code (OAC) 3745-150-05.

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 an LER rather than a more comprehensive Environmental Assessment, as described in in OAC 3745-150-06. 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,

[Signature]
Jonathan Bernstein, Assistant Chief
Division of Environmental and Financial Assistance

JB/KH
Attachment
LIMITED ENVIRONMENTAL REVIEW (LER)

Date: June 5, 2019

Project Identification

Name: City of Geneva, Wastewater Treatment Plant (WWTP) - WWTP Screening and Grit Removal Improvements Project

Applicant: Mr. Douglas Starkey, City Manager
Mr. Brandon Averill, Wastewater Superintendent
City of Geneva
44 North Forest Street
Geneva, OH 44041

Loan Number: CS390383-0023

Project Summary

The City of Geneva proposes to finance the above-referenced project through Ohio EPA's Water Pollution Control Loan Fund (WPCLF) as a key component of the twenty-year solution to the city’s wastewater treatment needs. All of the proposed screening and grit removal construction project will be restricted to prior-disturbed portions of the existing WWTP site. This project will provide new fine screens which will prevent blockages of the influent pumps by rags, such as disposable wipes. The project will also replace the WWTP's 1964 aerated grit removal system. The main objective of this project is to enable the city’s WWTP to address plant bypasses resulting from influent pump blockages. As-bid costs from April 2019 indicate that the project's construction will cost $4,841,291 out of an estimated total project cost of $5,980,158. Of this total, approximately $355,862 will cover rolling over the city's design loan into the city's construction loan. Altogether the project will be financed through a WPCLF 1% hardship interest rate construction loan to be repaid over twenty years.

Existing Need

The City of Geneva identified the WWTP Screening and Grit Removal Improvements project in its June 2017 No Feasible Alternatives report and its November 2017, WPCLF-funded facilities plan update as an important component of its overall strategy to provide a twenty-year solution to its wastewater treatment needs. Based on these two reports, the city has identified several wastewater needs that must be addressed to achieve compliance with its National Pollutant Discharge Elimination System (NPDES) permit.

Of these needs, perhaps the most significant is the WWTP internal bypass situation that arises when the influent flow rate exceeds five million gallons per day (mgd), or exceeds the hydraulic capacity of the headworks. This re-routing of a portion of the wastewater flows processed at Geneva's WWTP is not authorized by its NPDES permit. Most importantly, the city's bypassed flows do not receive primary and secondary treatment at its WWTP and result primarily from the excessive amounts of
infiltration/inflow (I/I)\(^1\) in the city’s sanitary sewer system. When the influent pumps become clogged and cease operation, or when wet weather flows exceed 5.0 mgd, the 36-inch diameter metered bypass pipe is used to divert flows before discharging them to Cowles Creek via the plant outfall sewer. Please note that these concerns have resulted in Ohio EPA including a compliance schedule in the Geneva WWTP’s NPDES permit to assure these problems are corrected.

In addition to the flow bypasses, the city’s WWTP experiences maintenance problems are associated with the current configuration of the aerated grit removal system and influent pumps respectively. More specifically, excessive detention time in the existing aerated grit tanks results in too much organic material settling out with the grit. Other problems include plugging of the diffusers in the tanks and there is a low grit recovery rate. Finally, the two manually cleaned bar screens have openings which are too large for WWTPs that land apply sludge. Figure 1 below shows the general location of the city’s WWTP, while Figure 2 shows the specific location of the proposed improvements. More details on this proposed project can be found in the next section of this document and in Figure 4 showing the process location of the WWTP bypass. The stream receiving these flows, Cowles Creek, is designated by Ohio EPA as a warm water habitat stream capable of supporting and maintaining a balanced, integrated, adaptive community of warmwater aquatic organisms. The Cowles Creek estuary downstream of Geneva is recognized as a seasonal salmonid stream where it enters Lake Erie.

**Project Description**

Nominated in August 2018 by Geneva, this proposed project will help address the problems noted above in the existing conditions section by (1) building a new headworks facility building, (2) demolishing the process equipment from the existing grit tank, (3) installing new pumps in the existing grit tank for pumping to the previously converted sludge holding tank, (4) replacing all slide gates in the existing rapid sand filters, (5) replacing a backup generator, (6) installing site piping, and (7) installing associated electrical, mechanical, and plumbing equipment. Other related improvements include (1) two new mechanical rake-style bar screens and one new manual rack bar screen; (2) a new grit dewatering unit, and (3) a new Parshall flume to measure flows entering the city’s WWTP. All three of these new components will be installed in the new proposed headworks facility building. Please see Figures 3a and 3b below.

Secondarily, as part of its twenty-year solution, Geneva’s WWTP will continue to handle 2.0 mgd and will better process solids (through this and the city’s prior project), while managing the decline in both average daily and peak flows occurring since 2015.

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\(^1\) I/I is defined as extraneous, clear water that enters a sanitary sewer system through surface or subsurface locations. Infiltration usually occurs when clear water enters the system below ground through cracked or broken pipes and manholes, poorly sealed or misaligned pipe joints, damaged or poorly connected sewer laterals, etc. Inflow may include clear water entering the system through manhole covers, roof or foundation drains, direct storm sewer connections, etc.
Figure 1. General Project Location Aerial Photo

Figure 2. Proposed Project Location
Figure 3a. Existing Geneva WWTP Components and Proposed Project Locations
Limited Environmental Review Criteria

Because the proposed project meets certain minimum conditions and will not individually, cumulatively over the useful life of these improvements, or in conjunction with other federal, state, or private actions (such as primary digester cleaning and repair by Geneva on its own) have a significant adverse effect on the quality of the human environment, an LER is warranted. More specifically, these conditions cover actions in sewered communities (such as Geneva) which are for minor upgrading and/or minor expansion of existing treatment works including, but not limited to, minor rehabilitation of existing facilities, functional replacement of existing mechanical equipment or structures, and construction of new ancillary facilities adjacent or appurtenant to existing facilities.

In addition, the proposed project also meets the following specific criteria for an LER:

1. **The proposed project will have no significant adverse environmental effects.** The city’s proposed project is located within a previously disturbed landscape inside the City of Geneva’s WWTP site. In particular, the proposal is to construct a new building, install replacement equipment, and remove worn-out equipment from the existing aerated grit tanks. During the environmental reviews of this project, Ohio EPA and the city’s engineering consultant identified all the potentially sensitive environmental areas in the project area and found that only one (Cowles Creek’s floodplain) is present there. By specifically prohibiting the placement of any excavated material in the wetlands near Geneva and within Cowles Creek floodplain, and by
requiring the city’s contractors to adhere to the routine prohibited construction activities in the
detail plans, no near- or in-stream work will be needed to complete this proposed project. On
this basis, the city’s proposed project is expected to have no significant adverse environmental
effects.

2. **The proposed project does not require extensive general or specific impact mitigation.**
   Due to the limited scope of the city’s proposed project and its location within a previously
disturbed landscape, no extensive general or specific impact mitigation is required. In
particular, the proposed project will only involve work in disturbed areas near and adjacent to
the existing WWTP facilities shown in Figure 3a above. Environmental impacts will be held
within acceptable levels through proper erosion and sedimentation controls and temporary and
permanent seeding of areas disturbed during construction, as well as adherence to prohibited
construction activities in the detail plans. Local residents should expect minor traffic disruption
during the construction of this project in Geneva.

3. **The proposed project will have no adverse effect on high value environmental resources.**
   As noted above, the project area is generally devoid of any high value environmental resources
and steps have been taken to assure that no adverse off-site impacts to floodplains, wetland, or
the species that depend on them occur during construction. No off-site spoil material is
expected to be generated during construction and all of the used equipment needing disposal
will be properly handled at facilities licensed for this purpose.

4. **The selected alternative for this project is cost-effective.** In comparison to a no-action
   alternative, the city’s selected alternative for this project is clearly more cost-effective. Taking
no action would leave the current conditions in place and not resolve the operational problems
noted above and in the NPDES permit’s compliance schedule section. Ohio EPA has reviewed
this project and found it to be consistent with the water quality management plan for Geneva.

5. **The proposed project is not a significantly controversial action.** Because the city’s
   proposed WWTP screening and grit removal improvements project was discussed at a public
meeting held on September 20, 2017 in city council chambers, and no adverse comments were
received from the public, this project is considered to be non-controversial. This public meeting
was announced via a project fact sheet distributed to the public ahead of the meeting.

   In terms of the project’s effects on users, the city indicated that the project’s costs borrowed at
1% from the WPCLF are equivalent to an approximate 4% rate increase. As this increase has
already been built into the rate increases authorized in 2016 running through 2022, no
additional or adverse socio-economic impacts on the residential customers of Geneva’s WWTP
living in the city or Harpersfield Township are expected to result from this project.

   At present, the city currently has a minimum wastewater charge of $12.71 for the first 200
cubic feet of water usage. With an average residential customer using about 400 cubic feet per
month, this usage is equivalent to a monthly fee of $25.42 based on the minimum charge plus
$6.36 for each additional 100 cubic feet of water used. This and other previously enacted rate
increases averaging 4% per year through 2022 appear not to have been controversial. In 2020,
this rate is expected to increase to $6.61 per 100 cubic feet with a minimum usage fee of $13.22
for the first 200 cubic feet of water. Assuming the same average usage above, the post-project
rate is equivalent to about $26.44 per month. Expressed as a percentage of Geneva’s recent
annual median household income of $41,640, a post-project fee of $317.28 is equivalent to 0.76% and is generally considered to be affordable for the average city resident.

6. **The proposed project does not involve new or relocated discharges to surface or ground waters.** The city’s proposed project will help address the long-term wastewater needs of its residents. As noted above, the project is limited in scope. By correcting the treatment process and bypassing problems at its WWTP, water quality conditions are expected to improve upon project completion.

7. **No substantial increase in the volume of discharge or the loading of pollutants from an existing source or from new facilities to receiving waters will occur.** As noted above, the city’s WWTP will continue to have an average daily flow rating of 2.0 mgd. Since this rating is not expected to change, the flows being delivered to the WWTP are expected to stay below this value (at about 0.95 mgd on an average daily flow basis) during the design life of the project, and this project will not substantially increase the volume of discharge or the loading of pollutants from Geneva’s existing WWTP to Cowles Creek, this proposed project should help assure that the flows from the WWTP’s service area are properly treated and discharged to Cowles Creek.

8. **The proposed project will not provide capacity to serve a population substantially greater than the existing population.** The city’s proposed WWTP screening and grit removal tanks project is solely intended to remedy an existing maintenance problem. As such, it is not intended solely to serve a population substantially larger than now exists, or an undeveloped area.

**Estimated Project Costs**

Prior to bidding this project, the total estimated design and construction costs were about $5.2 million. Of this total project cost, construction costs were estimated by the city’s consultant at $4.6 million in March 2019. Based on as-bid costs, construction costs are now about $4.9 million; planning, design, contingency, and other construction services costs are $1.14 million; and total project costs are about $5.98 million. To pay for construction of these improvements and related construction management and contingency costs, the City expects to borrow all of this amount from the WPCLF at a 1% hardship interest rate. Ohio EPA expects that Geneva will save about $1,317,462 over the twenty-year term of its loan when compared to a market-rate loan of 2.91%.

**Proposed Project Schedule**

Following opening bids for this project in April 2019, the city expects to receive WPCLF financing in June 2019. Construction of the proposed WWTP improvements project is expected to begin in July 2019 and be completed in one year and four months, including final restoration.

**Public Participation and Notice**

As noted earlier, Geneva held a public meeting on September 20, 2017. Only four people from the public attended the meeting that was publicly noticed via a fact sheet posted on the city’s web site one week ahead of time (November 13th). On this basis and the availability of the fact sheet after the
meeting, the City of Geneva appears to have adequately informed the public about its proposed project and addressed any concerns through these outreach efforts.

Information that supports this decision to issue an LER is available from the contact at the end of this document. Project information is available from either the City of Geneva’s consulting engineer, Ms. Lesley Gordon of CT Consultants or the city’s wastewater superintendent, Brandon Averill. He can be reached at 440-466-4228 or through the city’s municipal offices located at 44 Forest Street, Geneva, OH 44041 to answer questions regarding this project.

Interagency Coordination

The proposed project has been reviewed by the following agencies for technical input, or for conformance with legislation under their jurisdiction, and their findings support an LER:

- Ohio Department of Natural Resources
- State Historic Preservation Office
- Ohio EPA
- United States Fish and Wildlife Service

Conclusion

The proposed project is sufficiently limited in scope and meets all applicable criteria to warrant an LER. The planning activities for the proposed projects have identified no potentially significant adverse impacts. The proposed projects are expected to have no significant, short- or long-term adverse impacts on the quality of the human environment or on sensitive resources such as floodplains, wetlands, prime or unique agricultural lands, aquifer recharge zones, archaeologically or historically significant sites, coastal areas, or threatened or endangered species. The main benefit of this project will be the improvement of the primary treatment facilities at Geneva’s WWTP and elimination of its primary bypass.

For further information, please contact:

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