August 31, 2020

Limited Environmental Review and Finding of No Significant Impact

Northeast Ohio Regional Sewer District
Southerly Disinfection and Solids Handling Improvements
Loan number: CS391430-0174

The attached Limited Environmental Review (LER) is for a wastewater treatment project in Cuyahoga 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
Assistant Chief
Division of Environmental and Financial Assistance

Attachment
LIMITED ENVIRONMENTAL REVIEW

Project Identification

Project: Northeast Ohio Regional Sewer District
Southerly Disinfection and Solids Handling Improvements

Applicant: Northeast Ohio Regional Sewer District
3900 Euclid Avenue
Cleveland, Ohio 44115

Loan Number: CS391430-0174

Project Summary

The Northeast Ohio Regional Sewer District (NEORSD) has requested financial assistance from the Ohio Water Pollution Control Loan Fund (WPCLF) for the Southerly Disinfection and Solids Handling Improvements project. Work for this progressive design-build project includes improvements to the disinfection and solids handling unit process equipment, tank access, and regulatory sampling facilities. The project is designed to improve the reliability of several unit processes, allow the facility to meet the regulatory sampling requirements for the chemically enhanced primary treatment process, and improve safety for operations and maintenance (O&M) personnel at the Southerly Wastewater Treatment Center (WWTC). This project is also one of several projects NEORSD has completed, has under construction, or is planning, to implement its consent decree to address combined sewer overflows (CSO). The loan amount is $5,005,701. Debt for the project will be repaid from monthly service charges. The project is scheduled to begin in autumn 2020 and be completed in 26 months.

History & Existing Conditions

NEORSD is responsible for wastewater treatment facilities and interceptor sewers in the greater Cleveland metropolitan area. This service area encompasses the City of Cleveland and all or portions of 61 suburban municipalities in Cuyahoga, Summit, Lake, and Lorain counties. The proposed project is located within NEORSD's Southerly WWTC, which is one of the three wastewater treatment facilities owned and operated by NEORSD.

NEORSD's Southerly district serves a population of more than 601,000 in the Greater Cleveland area, with its flows transported to the Southerly WWTC. Southerly WWTC is one of the largest plants of its kind in the country and has an average wastewater flow of 125 million gallons per day (MGD). It

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1 Combined sewer systems are sewers that are designed to collect rainwater runoff, domestic sewage and industrial wastewater in the same pipe. Most of the time, combined sewer systems transport all of their flow to a sewage treatment plant where it is treated and then discharged to a water body. During periods of heavy rainfall or snowmelt the combined flow volume in a combined sewer system can exceed the capacity of the sewer system or treatment plant. For this reason, combined sewer systems are designed to overflow occasionally (combined sewer overflow) and discharge excess combined sewage directly to nearby streams, rivers or other water bodies.
can provide complete treatment to 400 MGD of wastewater, and primary treatment to an additional 335 MGD of storm water. The Southerly WWTC is situated on a 273-acre site at 6000 Canal Road, Cuyahoga Heights, and discharges it treated wastewater into the Cuyahoga River.

The Southerly WWTC provides tertiary (advanced) treatment by utilizing primary clarification, a two-stage biological process, effluent filtration, and chlorination/de-chlorination. The first stage activated sludge process is operated to provide an effluent amenable to conditions needed for the second stage. The second stage activated sludge process grows bacteria which will remove ammonia nitrogen. As a final step, the flow is passed through multimedia filters and is disinfected by a chlorination/de-chlorination process during the warmer months of May through October.

In 2011, NEORSD entered into a consent decree with USEPA, U.S. Department of Justice, and Ohio EPA to implement, within a 25-year period, a Long-Term Control Plan (LTCP) to address combined sewer overflows (CSOs) currently impacting Lake Erie and its tributaries within the District’s service area. Since the last major expansion, the NEORSD has conducted various studies to ascertain and improve the Southerly WWTC wet weather treatment capacity, address capital improvement needs, and how best to comply with the consent decree requirements. One such study is the Southerly WWTC Comprehensive Facilities Plan (Malcolm Pirnie, April 2009). The study provides a 30-year master plan with recommendations for short-term and long-term improvements to address wet weather flows, and operation and maintenance issues at the Southerly WWTC.

NEORSD has undergone many changes and upgrades at its wastewater collection and treatment facilities and processes, including at the Southerly WWTC. The current project is being undertaken, in part, to address NEORSD's consent decree requirements.

**Project Description**

Southerly Disinfection and Solids Handling Improvements project (see Figures 1 and 2) is a progressive design-build project being undertaken to maintain, replace, and upgrade various facilities and operation within the Southerly WWTC, and specifically includes the following:

- Grit receiving stairs improvements
- Tunnel #5 concrete and pipe support repair and painting
- Sludge storage tank central gallery concrete repair and waterproofing
- Skimming storage tank access improvements
- Expansion joints replacement
- Gravity thickener skimmer drain improvements
- Gravity thickener #6 improvements
- Gravity thickener sump pump replacement
- Gravity thickener electrical improvements
- Sludge storage tank #10 improvements
- Incinerator scrubber drain replacement
- Centrifuge rag control improvements
- Cuyahoga Valley Interceptor lift station improvements
- Disinfection building improvements
- Redundant power to the disinfection building and electrical improvements
Implementation

The total cost of the Southerly Disinfection and Solids Handling Improvements project is $5,005,701, all of which NEORSD proposes to borrow from the WPCLF. The project service area qualifies for the standard WPCLF below-market interest rate on 20-year construction loans, which for September is 0.53 percent (WPCLF loan interest rates are set monthly and the rate may change for a later loan award). Borrowing at 0.53 percent will save NEORSD approximately $689,000 over the life of the loan compared to the current market rate of 1.78 percent.

The sewer service charges for NEORSD customers are driven by the total indebtedness of NEORSD (and annual O&M costs), as opposed to the specific indebtedness of any particular project. NEORSD will not enact a special increase in user rates specifically to pay for this project; instead, rates were increased in 2017 to cover debt expected during the period of 2017-2021, which includes debt for this and other projects.

### NEORSD Monthly Sewer Service Charge Rates

<table>
<thead>
<tr>
<th>Rates Effective</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleveland</td>
<td>$108.10</td>
<td>$116.20</td>
</tr>
<tr>
<td>Suburbs</td>
<td>$108.70</td>
<td>$116.50</td>
</tr>
</tbody>
</table>

The median household income of the benefitting properties is $46,720. The annual sewer bill based on 7,480 gallons of monthly water use is $1,301. This represents 2.78% of the MHI.

Public Participation

NEORSD has a long history of working with the general public and local public officials when proposed projects are to be located in their community. NEORSD has several publications and an internet website that serve to keep the members of their district informed of upcoming projects. NEORSD conducted public participation by advertising for bids and providing bid updates on their website, and by advertising for bids in the Cleveland Plain Dealer. This Limited Environmental Review will be posted on the websites of NEORSD and Ohio EPA – Division of Environmental and Financial Assistance. Thus, there have been adequate opportunities for information dissemination and public participation.

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 within existing wastewater treatment facilities 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 within existing wastewater treatment facilities where extensive excavation has previously taken place and where no high-value resources are present.
Is cost-effective, as the proposed action satisfies technical goals of the project and utilizes a progressive design-build process to minimize project costs.

Is not a controversial action, as there is no known opposition to the proposed project, he cost of the project is not overly burdensome to ratepayers, and will be financed through the WPCLF, saving approximately $689,000 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 facilities.

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 disinfection and solids handling unit process equipment, tank access and regulatory sampling facilities. Once completed, the project will improve the reliability of several unit processes, allow the facility to meet the regulatory sampling requirements for the chemically enhanced primary, and improve safety for O&M personnel at the Southerly WWTC. Also, by using WPCLF low-interest financing, NEORSD has minimized the project cost.

Contact information

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Figure 1: Southerly WWTC (in red)
Figure 3: Southerly WWTC