August 29, 2019

Limited Environmental Review and Finding of No Significant Impact

Northwestern Water and Sewer District - Wood County
Rossford Eagle Point Sanitary Sewers Rehabilitation
Loan number: CS391432-0152

The attached Limited Environmental Review (LER) is for a wastewater collection project in the city of Rossford 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 qualify it for the LER rather than a more comprehensive Environmental Assessment, as described 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

Attachment
LIMITED ENVIRONMENTAL REVIEW

Project Identification

Project: Rossford Eagle Point Sanitary Sewers Rehabilitation

Applicant: Jerry Greiner, President
Northwestern Water and Sewer District
12560 Middleton Pike
Bowling Green, OH 43402

Loan Number: CS391432-0152

Project Summary

The Northwestern Water and Sewer District (NWWSD) has applied for funding from Ohio EPA's Water Pollution Control Loan Fund (WPCLF) for the Rossford Eagle Point Sanitary Sewers Rehabilitation project (here forward referred to as the "Eagle Point project"). The project is intended to reduce wet weather flows within the aged wastewater collection system by repairing and replacing sections of the existing collection system. The total estimated loan for the project is $1,377,463, with construction scheduled to begin in the autumn of 2019 and to be completed in nine months.

History & Existing Conditions

NWWSD, chartered under Section 6119 of the Ohio Revised Code, was organized in 1994 to assume the water and sewer operations of the Wood County Sanitary Engineer. The City of Rossford is located in northern Wood County, adjacent to the City of Toledo. All of Rossford's wastewater flows to sewers along Eagle Point Road toward Colony Road, eventually draining into Toledo’s collection system on Miami Street at Oakdale Avenue, with its flows conveyed to Toledo's Wastewater Treatment Plant (WWTP) for treatment.

The original sanitary sewer collection system in Rossford was constructed in 1937, which included portions of the project area. Sewer construction continued into the 1970s as the population grew and the area developed. The collection system in these areas was primarily constructed using concrete and vitrified clay pipe. Manhole structures in the original portions of the collection system were constructed using block or brick manholes. The majority of the original pipe sections are still in use today. Commencing in 1975, the sewer collection system in the Eagle Point area was expanded to provide service to additional parts of Rossford. Newer sanitary sewer mains were generally constructed using vitrified clay pipe with lateral sewers constructed using either vitrified clay pipe or PVC. Sewers in the project area are separated sanitary sewers and therefore are not adequately sized to handle non-sanitary sewer flows. Currently, the sanitary sewers are known to be plagued by high wet weather flows caused by inflow and infiltration (I/I).\(^1\)

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\(^1\) 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.
Numerous inspections, monitoring, and modeling have been performed on this system by NWWS and its contractors, the results of which were used in this project’s alternatives analysis. An earlier phase of work in this project area addressed defects through rehabilitation with trenchless methods such as grouting and cured in place pipe (CIPP) repairs. While these efforts have reduced the volume of I/I in the project area, during wet weather events these sewers often become overwhelmed by clean water I/I. To ascertain the condition of the sewer collection system, NWWS contracted a closed-circuit television (CCTV) inspection. This inspection found sewer main pipe with cracks, separated joints or broken pipe sections, pipe bellies, inconsistent pipe grade, blockages, infiltration at pipe joints, offset joints, sewer manholes with infiltration or inflow entering through various defects, sewer lateral pipes with clear water entering the main or lateral pipes, and defective or poorly constructed lateral connections.

The future sanitary sewer needs in Rossford are defined by dual goals of ensuring pipe structural integrity and reducing wet weather flows. Both goals are aimed at preserving the long-term sustainability of this collection system through a proactive response. As such, the results of the sewer inspection were reviewed with the goal of reducing wet weather inflow and infiltration as well as measures to ensure the longevity of NWWS’s sewers in Rossford. Minimal future development is expected in the project area requiring additional sewer capacity. As such, there is no need to enlarge these existing sewers from the current capacity. Instead, the main need for the area is reducing the I/I that generates excess flow in the collection system.

The population growth in Wood County from 1990 to 2010 has been consistently increasing at a rate of approximately 600 persons per year or approximately 0.5 percent per year. With this growth rate the projected population of Wood county in the year 2030 would be 135,530. This projected population growth is consistent with the Wood County Planning Commission’s projected 2030 population of 141,880 as listed in the 2008 Wood County Comprehensive Plan. While Rossford as a whole has experienced a population decrease of 2 percent, the planning for this project conservatively assumed a projection that targets a steady population for the near future.

### Alternatives

A “No Action” alternative was not considered as it is not consistent with NWWS’s stated mission of proactive responses to maintenance issues and would allow continued heavy I/I and likely pipe failure conditions to remain.

A “Sewer Rehabilitation” alternative was also considered. However, earlier projects had already addressed those sections of sewer and issues that could be reasonably corrected through repair actions. Recent inspections determined that, due to the severity of the defects of the lateral tap connections and widespread issues observed in the subject sewer segments, rehabilitation is not considered to be a reasonable approach to correcting the structural and infiltration concerns. Additionally, the defects in the subject sewer system are of a variety of different types which would require tailored rehabilitation methods resulting in a significantly higher cost with uncertain results expected.

A “Sewer Replacement” alternative was evaluated to achieve the greatest reduction of infiltration flows. The new proposed sanitary sewer would be constructed using premium water-tight joint pipe with precast manhole structures.
**Project Description**

The proposed Eagle Point project (see Figures 1 and 2) will include the replacement of approximately 2,840 linear feet (LF) of mainline sewers, 1,610 LF of lateral sewers, and repairs to manholes through a combination of open-cut construction and trenchless pipe-bursting technology. Pipe-bursting is a method whereby the existing pipe is split (burst) by a cone-shaped head advanced by a pneumatic air hammer or a static pulling cable along the alignment of the existing pipe. A new pipe is pulled in behind the bursting head. Pipe-bursting requires the existing pipe alignment and grade to be satisfactory as the method is unable to correct poor alignment and grade. Pipe-bursting is also generally less invasive above-grade than open-cut construction. Lateral sewers and manholes will be replaced with conventional open-cut construction methods.

This replacement strategy achieves the goals of addressing structural concerns, infiltration and extending the useful life of the sewer in these areas. Furthermore, using the trenchless pipe-bursting method where feasible will limit surface disturbance, soil and pavement restoration, and reduce the potential effects of erosion and construction runoff. Additionally, utilizing the pipe-bursting method is more cost-effective than a conventional open-cut construction method.

This project will allow NWWS to reduce wet weather flows to Toledo’s WWTP and the potential of sanitary sewer overflows bypassing into the Maumee River and Lake Erie. This will help reduce the public health risk from potential human contact with raw sewage as well as reducing potential impacts related to Harmful Algal Blooms (HAB).

**Implementation**

NWWS proposes to borrow the entire cost for the project from Ohio’s WPCLF. NWWS will recover debt associated with the project from a general maintenance fund, which means that the sewer rate paid by Rossford’s customers will not change to pay for the project. NWWS qualifies for the WPCLF standard long-term interest rate, which for August 2019 is 1.35 percent, over 20 years. The 2019 monthly residential sewer rate in Rossford is $103 ($1,236 annually), based on an average monthly usage of 1,037 cubic feet of water. This is 2.01 percent of the median household income of $61,485, which is considered affordable.

The total estimated project cost is $1,377,463. Borrowing this amount at 1.35 percent will save NWWS approximately $198,845 over the life of the loan compared to borrowing the same amount at the current market rate of 2.6 percent. Construction is expected to begin in the autumn of 2019 and be completed in nine months.

**Public Participation**

NWWS has a long history of working with the general public and local public officials when proposed projects are to be located in their community. This project has been discussed at NWWS board meetings, has been detailed on NWWS’s website, and has been advertised for bids. Advance notice to residents in the form of a letter will precede construction. NWWS is not aware of controversy surrounding this project. For a project of such limited scope and impact, this is considered adequate public involvement.
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 collection 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 significant environmental effect and will require no specific impact mitigation** because construction will not adversely affect any special resource type, general construction environmental protections will be in place: noise will be controlled with silencers on mobile equipment, dust and odors will be controlled, and air quality will be protected with emissions controls on mobile equipment and with the use of street sweeping and dust suppressants, as applicable. The project will have the public health and environmental benefits related to reducing risks related to potential human contact with raw sewage and will potentially reduce nutrients which contribute to Harmful Algal Blooms in Lake Erie.

**Will have no effect on high-value environmental resources** because the construction will be limited to the repair of sewer pipes under and within roads and in road rights-of-way. No significant ground disturbance will take place as part of this project, so there will be no effects to the following: floodplains, wetlands, surface water, endangered/threatened species or their habitat, state and federally designated wild and scenic rivers, recreational rivers, or wildlife areas, and archaeological, historic or cultural resources.

**Is cost-effective** because the combination of replacement of sewer mains, laterals, and manholes is the most cost-effective alternative, as it will remove the sources of I/I by using pipe-bursting technology, when possible, without the more intrusive and costly actions related to the full open-cut excavation and replacement of all sewer pipe and laterals.

**Is not a controversial action** because no local rate increase will be associated with the debt repayment. It will have no effect on population, nor will it have significant adverse environmental effects that could raise public concern. The rates that NWWSD applies to its general service area are affordable.

**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 the loading of pollutants from an existing source or from new facilities to receiving waters** because the project does not require the expansion of Toledo’s wastewater treatment facility beyond its current design capacity, the installation of a satellite treatment facility, or other action that could increase discharges or add or relocate discharge points.

**Will not provide capacity to serve a population substantially greater than the existing population** because increases in pipe capacity or service extensions into undeveloped areas have not been included in the projects. Thus, the projects will not result in adverse secondary (development-related) environmental impacts, such as farmland or wetland conversion for building purposes.
Contact info

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Figure 1: General project location (in red).
Figure 2: Project location of sewer repairs.