

**November 16, 2016**

**Issuance of A Limited Environmental Review  
To All Interested Citizens, Organizations, and  
Government Agencies**

**Northwestern Water and Sewer District  
Wood County**

**Millbury Area Sanitary Sewer Rehabilitation Project  
Loan Number CS391432-0084**

The purpose of this notice is to advise the public that Ohio EPA has reviewed the referenced project and finds neither a Supplemental Study (SS) nor an Environmental Assessment (EA) is required to implement the project as discussed in the attached Limited Environmental Review (LER). Consequently, a Finding of No Significant Impact is being issued for this project.

The Water Pollution Control Loan Fund program requires the inclusion of environmental factors in the decision-making process for project approval. Ohio EPA has done this by incorporating a detailed analysis of the environmental effects of the proposed actions 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. A subsequent review by this Agency has found that the proposed actions do not require the preparation of either an EA or an SS.

Our environmental review concluded that because the proposed project is limited in scope and meets all applicable criteria, an LER is warranted. Specifically:

- The proposed project will have no significant adverse environmental effect, nor will it adversely affect any specific resource type.
- It will not require extensive general or specific direct impact mitigation.
- It will not affect current design flow value or the existing service area.
- It is clearly cost effective.
- It is not controversial.
- It will not result in an increase in the volume of discharge or loading of pollutants

to receiving water or increase the withdrawal of additional water supplies.

The LER presents additional information on the proposed project, costs and the basis for our decision. Further information can be obtained by calling or writing the contact person listed on the back of the LER.

Upon issuance of this determination, loan award may proceed without being subject to further environmental review or public comment, unless information is provided which determines that environmental conditions on the proposed projects have changed significantly.

Sincerely,



Jerry Rouch, Assistant Chief  
Division of Environmental & Financial Assistance

Attachment

**LIMITED ENVIRONMENTAL REVIEW  
For  
Northwestern Water and Sewer District  
Wood County**

**Millbury Area Sanitary Sewer Rehabilitation Project  
Loan Number CS391432-0084**

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

## **Project Overview**

The Northwestern Water and Sewer District (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. NWWSD Sanitary Sewer 200 (SS-200) Area is located in northern Wood County, Ohio and provides separate sanitary sewer service to approximately 2,800 homes and businesses in the political subdivisions of Millbury, Northwood, Walbridge and Lake Township. Wastewater flow from this area is collected and conveyed through sewer infrastructure to the City of Oregon Wastewater Treatment Plant (WWTP) for treatment.

Infiltration and inflow (I/I)<sup>1</sup> increases flows beyond the hydraulic capacity of Millbury's and Oregon's systems, causing the bypassing of untreated wastewater at Oregon's WWTP, sanitary sewer overflows (SSO), and basement flooding, and raising a public health risk from potential human contact with raw sewage. During wet weather events, SS-200 Area contributes peak flows as high as 12 million gallons per day (mgd), well beyond the maximum flow of 5 mgd allowed under NWWSD's contract with Oregon. Ohio EPA issued the City of Oregon administrative orders (Director's Final Findings and Orders, or DFFO) to address SSOs occurring within the city's collection system. The City prepared a "No Feasible Alternatives Analysis (NFA) Final Report" and "Sanitary Sewer System Evaluation and Capacity Assurance Plan" (SSECAP), both submitted to Ohio EPA in March 2012, which outlined a plan for eliminating these SSOs. The need for a 5 mgd flow limitation for the SS-200 Area is noted in the city's NFA Final Report and SSECAP. The Millbury Area Sanitary Sewer Rehabilitation project (here forward referred to as the "Millbury project"), which will be undertaken by NWWSD, is the latest of several projects to address the management of I/I in the SS-200 area, thus helping reduce wet weather flows to Oregon. The project cost is \$1,004,450. Debt for the project will be repaid from monthly service charges. The project is scheduled to begin in January, 2017 and be completed by August, 2017.

## **Existing Conditions**

Millbury's original sewer system, constructed in 1968, included the primary 12- and 15-inch diameter concrete and vitrified clay pipe trunk sewers, laterals and two pump stations. Additional sewer construction took place in 1974 to expand the system to unserved areas of Millbury, and was constructed with vitrified clay pipe and truss pipe. Millbury's sanitary sewer system now consists of approximately 41,100-linear feet of pipe. Effluent is conveyed by gravity to the Hille Drive Pump Station and the Cherry Street

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<sup>1</sup> 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.

Pump Station, then to the SS-200 and SS-200B trunk sewers respectively. These trunk sewers connect to Oregon's sanitary sewers at the intersection of Lallendorf Road and Brown Road, which convey the wastewater to Oregon's WWTP for treatment.

Millbury has experienced extensive wet weather flow issues related to I/I. These have contributed to basement flooding, sanitary sewer overflows within Millbury, bypass pumping at both pump stations, and the excessive flow to Oregon's WWTP. Numerous inspections, monitoring and modeling have been performed on this system by NWWSD and its contractors, the results of which were used in this project's alternatives analysis. Projects have taken place with the goal of reducing wet weather flows, including: spot repairs, installation of T-liners at lateral sewers, pipe joint grouting, manhole grouting, internal manhole joint seals and casting replacement. These efforts have reduced the volume of I/I and the need for bypass pumping at the Hille Drive pump station. However, based on recent sanitary sewer inspections, extensive I/I still exists. The inspections found cracks, separated joints and broken pipe sections within the sewer mains, I/I entering manholes through various defects, defective and poorly constructed sewer laterals, and clean water connections. A factor contributing to I/I is that significant portions of the sanitary sewer lie below the normal ground water table.

### **Future Needs**

Millbury and the SS-200 sewer service area are expected to see approximately 0.6-percent annual growth. The Millbury Area Sanitary Sewer Rehabilitation project is expected to free up sewer capacity for some expected growth in Millbury, as are other I/I projects in the SS-200 area. These actions are expected to meet the sanitary sewer needs related to growth in the SS-200 area. If growth beyond this level were to occur, grows, NWWSD and Oregon may need to revisit the contract flow limitation of 5 mgd to determine if that requirement is still appropriate.

### **Alternatives Analysis**

To address sanitary sewer improvement needs, NWWSD considered the following alternatives.

Alternative 1, a "no-action alternative," would make no improvements to the sanitary sewer collection system. Wet weather bypassing and basement backups would continue within Millbury, and conveyance of elevated volumes of wastewater due to I/I would continue. This would continue to contribute excessive volumes to Oregon's sanitary sewer system and WWTP, contributing to WWTP bypassing, sanitary sewer overflows and basement backups in Oregon. This alternative would not address public health and environmental threats related to the exposure to untreated sewage.

Alternative 2 involves the complete replacement of sanitary sewers, manholes and laterals in Millbury. The new sanitary sewer system would be constructed using premium water-tight joint pipe with precast manhole structures, rubber boots and gaskets. This alternative would require extensive excavation, tree clearing, and restoration, and is estimated to cost \$15,733,000.

Alternative 3 involves the rehabilitation of the existing, structurally-sound sanitary sewer system, including pipe cleaning, root cutting, joint grouting, cured in place pipe (CIPP) repairs, manhole repairs and lateral repairs. The cost of this alternative is \$1,004,450.

### **Selected Alternative**

The proposed Millbury Area Sanitary Sewer Rehabilitation project will include repairs, sealing and grouting of manholes, root cutting and sewer cleaning, and rehabilitation of the existing concrete pipe, vitrified clay pipe and truss pipe by sealing or grouting defects and leaking joints. CIPP repairs may also take place as part of this project based on inspections at the time of construction. Reestablishment and sealing of lateral connections will follow repairs to the sewer mains.

The rehabilitation option of sealing, joint grouting and, potentially, CIPP repairs was selected because each of the three types of sewer pipe are structurally sound and are good candidates for sealing, grouting and relining. The joints and cracks of the various sewer pipe create infiltration sites that sealing, grouting and CIPP repairs would eliminate. Repairs by sealing, grouting and CIPP are also the most cost-effective alternative, as it will restore structural integrity to the deteriorated sections of the pipe and significantly reduce infiltration. These repairs also minimize traffic disruption, environmental and habitat degradation, site restoration and potential impacts to historic or cultural resources as opposed to sewer replacement. This option is approximately 1/16 the cost of sewer replacement.

### **Implementation**

NWWSD proposes to borrow the entire cost for the project from Ohio's Water Pollution Control Loan Fund (WPCLF). NWWSD will recover debt associated with the project from a general maintenance fund, which means that the sewer rate paid by Millbury's customers will not change to pay for the project. NWWSD qualifies for the WPCLF standard long-term construction interest rate, which for the month of December, 2016 is 1.55 percent over 20 years. The 2016 monthly residential sewer rate in Millbury is \$77.24 (\$927 annually), based on an average monthly usage of 1,037 cubic feet of water. This is 1.6 percent of the median household income of \$57,500, which is considered affordable.

The total estimated project cost is \$1,004,450. Borrowing this amount at 1.55 percent will save NWWSD \$146,618 over the life of the loan compared to borrowing the same amount at the current market rate of 2.8 percent. Construction is expected to begin in January, 2017 and be completed in August, 2017.

## Public Involvement

NWWSD 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 NWWSD Board meetings, has been detailed on NWWSD's website and has been advertised for bids. Advance notice to residents in the form of a letter will precede construction. NWWSD is aware of no controversy surrounding this project. For a project of such limited scope and impact, this is considered adequate public involvement.

## Conclusion

The Millbury Area Sanitary Sewer Rehabilitation project constitutes a general project type (sewer rehabilitation) that qualifies for a Limited Environmental Review. Specifically, it meets the following criteria.

*It will not affect any special resource type.* The construction will be limited to the interiors of sewer pipes under roads and in road rights-of-way and manholes. 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.

*It will not require 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, and 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.

*It is clearly cost-effective.* Sealing, grouting and CIPP repairs to the existing pipe are the most cost-effective alternative, as they remove the sources of I/I without the more intrusive and costly actions related to sewer pipe replacement.

*It is not controversial.* 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.

*It does not involve a new or relocated discharge to surface or ground water, involve any increase in volume of discharge or loading of pollutants from an existing source or new facilities, or provide capacity to serve a design population substantially greater (thirty percent) than the current design population.* The project does not require the expansion of Oregon'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. 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.

The planning activities for the proposed sewer rehabilitation project have identified no potentially significant short-term adverse impacts to the quality of the human environment or sensitive resources (floodplains, wetlands, surface water, endangered species or their critical habitat, cultural properties, raw water supplies, scenic or recreational rivers, air quality, farmland, or state and federal wildlife areas). Impacts related to dust, noise and odors will be temporary and well controlled during construction.

The project will yield health benefits by helping reduce public and environmental exposure to untreated sewage in basement backups, WWTP bypassing and sanitary sewer overflows.

For further information, please contact:

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Figure 1: General project location (in red).

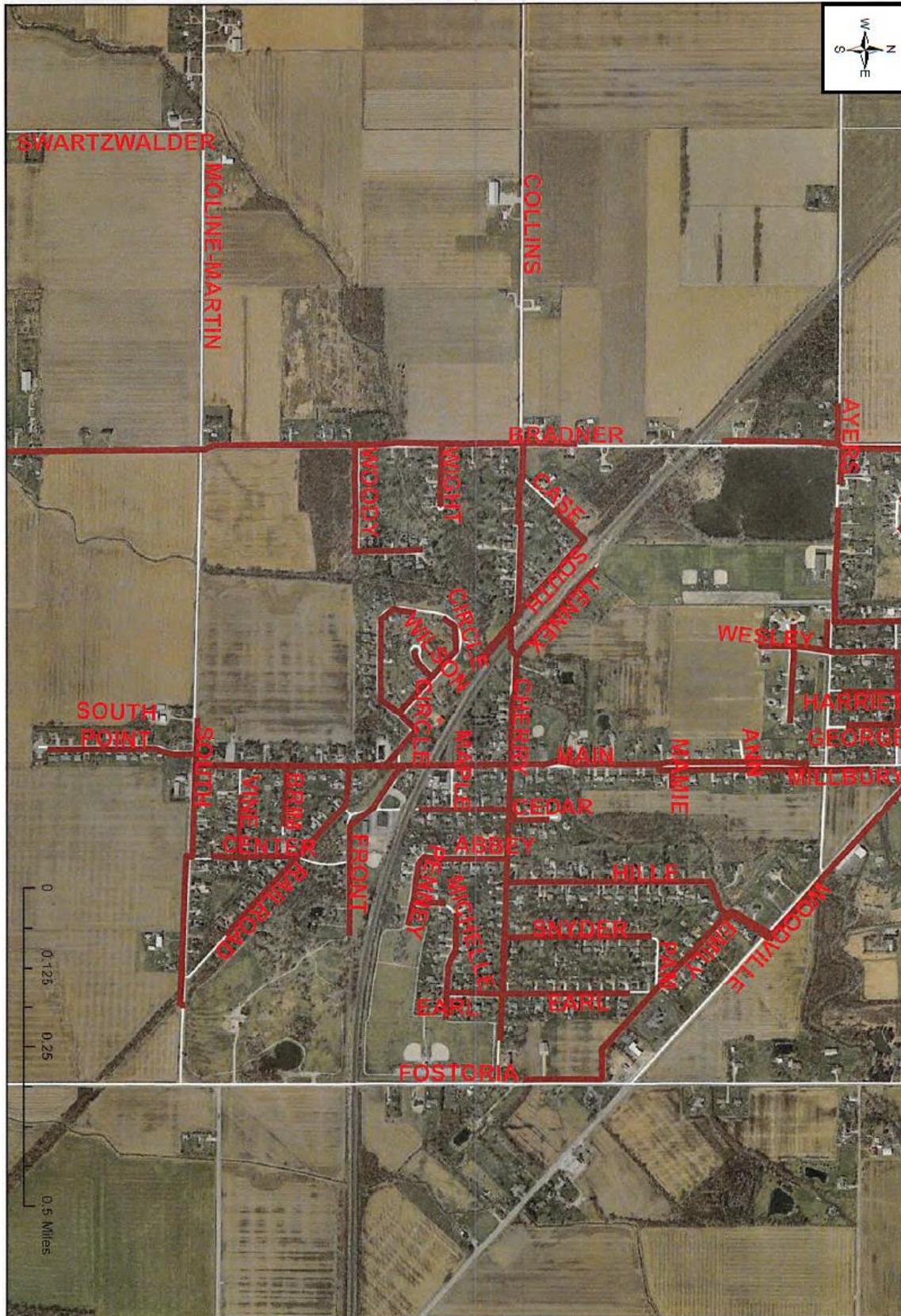


Figure 2: Project location of sewer repairs.