August 2, 2019

Preliminary Finding of No Significant Impact
To All Interested Citizens, Organizations, and Government Agencies

Village of Chesterhill – Morgan County
Sanitary Sewer System
Loan Number: CS390247-0002

The attached Environmental Assessment (EA) is for a sanitary sewer collection system project in Chesterhill 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 EA describes the project, its costs, and expected environmental benefits. We would appreciate receiving any comments you may have on the project. Making available this EA and seeking your comments fulfills Ohio EPA’s environmental review and public notice requirements for this loan program, as stated in the Ohio Administrative Code (OAC) 3745-150-06.

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. More information can be obtained by contacting the person named at the end of the attached EA.

Any comments on our preliminary determination should be sent to me at the letterhead address. We will not act on this project for 30 calendar days from the date of this notice to receive and consider comments. In the absence of substantive comments during this period, our preliminary decision will become final. After that, the Village of Chesterhill can then proceed with its application for the WPCLF loan.

Sincerely,

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

Attachment
ENVIRONMENTAL ASSESSMENT

Project Identification

Name: Chesterhill – Sanitary Sewer System  
Applicant: Richard Wetzel, Mayor  
Village of Chesterhill  
7380 Marion Street  
Chesterhill, OH 43728  
Loan Number: CS390247-0002

Project Summary

The Village of Chesterhill in Morgan County has requested $3,573,400 from the Ohio Water Pollution Control Loan Fund (WPCLF) to install a sanitary sewer collection system within the village with transport to Stockport for treatment. The village’s regionalization project qualified for principal forgiveness, which is principal that does not need to be repaid.

The installation of a collection system is intended to replace failing septic tanks within the community with a hybrid gravity and force main sewer system to regionalize Chesterhill’s wastewater treatment with Stockport’s wastewater treatment plant.

Disturbance will be limited to existing roadways, rights-of-way, and in previously disturbed trenches containing the village’s existing water line.

History and Existing Conditions

Background

Chesterhill currently does not have a local collection and treatment system. Each resident and business is responsible for its own on-site sewage treatment system. Many of these on-site systems are comprised of septic tanks with minimal leeching fields or even direct or indirect connections to drainage tiles. Many of these on-lot treatment systems are failing and discharging into swales which find their way into the water table and adjacent streams.

Water Quality

This project is located within the Muskingum River Watershed. Once installed, the collection system will transport wastewater to the Stockport Wastewater Treatment Plant (WWTP), which discharges to Turkey Run, a tributary to the Muskingum River. Turkey Run and the Muskingum River are currently designated as Warmwater Habitat (WWH) Aquatic Life Use in Ohio Water Quality Standards. Since the Stockport WWTP was previously designed with the capacity to accept waste transported from Chesterhill, this project will not impact the water quality status of either waterway.
Population and Flow Projections

Though the population of Morgan County has experienced a 1.1% increase since 1980, Chesterhill itself has experienced a -5.2% decrease. A 50% growth factor was used during the design process of the collection system to ensure that the new sanitary sewers are appropriately sized for the present and expected future flows.

Alternatives

- **No action:** Doing nothing, the “no-action” alternative, will continue to allow for residents’ sewage to be treated by failing septic systems which create discharge into local streams, polluting the waterways and causing a public health and safety concern. Therefore, this is not a feasible alternative.

- **Collection system alternatives:**
  - **Gravity sewer system:** This option would involve the elimination of private septic tanks and replacement with sewer pipes that connect the homes to a main sewer line. With the gravity system, no additional moving parts would be needed aside from pump stations needed to overcome elevation problems. Reliance on gravity would create minimal costs associated with this system aside from operations and maintenance or possible inflow and infiltration which would increase with age.
  - **Hybrid system – grinder (pressure):** Private septic tanks would be replaced with individual grinder systems for homes. These systems would attach to a sanitary force main that dumps into the nearest manhole, where wastewater will be transported by gravity collection system to the wastewater treatment plant. However, this system may encounter issues with power outages, is less flexible for expansion, has less range of flow capacity, and will require periodic maintenance.
  - **Decentralized system:** This alternative would utilize septic tanks to collect the solids from each home, with the effluent pumped to a treatment unit via small diameter force mains. Often in this case, multiple homes will be connected to one septic tank. While this reduces the number of tanks required, it will increase their capacity and pump out frequency. This option could also encounter issues with power outages, is less flexible for expansion, has less range of flow capacity, requires periodic maintenance, and still requires the pumping and maintenance of septic tanks.

- **Treatment system alternatives:**
  - **Extended aeration (new wastewater treatment plant):** Options for treatment of wastewater include the construction of a new wastewater treatment plant with extended aeration. This is a modified form of the activated sludge treatment process and is ideal for smaller flows (low-loaded activated sludge technology, single basin operation, simple basin construction, high-efficiency aeration chains with suspended fine-bubble diffusers). This option is effective and cost efficient. Under this scenario, Chesterhill would construct, own, operate, and maintain their own wastewater treatment plant. It would require increased power consumption and more frequent sludge handling.
  - **Decentralized packed bed media (new wastewater treatment plant):** This alternative also utilizes the construction of a new wastewater treatment plant but utilizes decentralized packed bed media. Designed to follow primary treatment, wastewater first enters an anoxic tank and then is applied over the top of the filter in small, uniform doses several times per hour. This process provides maximum holding time...
for the water within the fabric. Primary treatment is required first for this option, and regular maintenance is needed for cleaning media and the occurrence of clogging.

- **Activated sludge system (new wastewater treatment plant):** A third alternative for a treatment system is to construct a new wastewater treatment plant for Chesterhill with an activated sludge system. This offers the benefits of sequencing aeration with the reliability of continuous clarification for enhanced biological nutrient removal from wastewater. Excellent denitrification occurs resulting in low levels of effluent nitrogen. However, the system also presents difficulty in cleaning and is not flexible to expand.

- **Regionalize with adjacent community (transport wastewater to Stockport):** Instead of the construction of a new wastewater treatment plant for Chesterhill, a pump station would transport wastewater through a force main to Stockport's wastewater treatment plant. This would allow regionalization between the two communities and utilize existing resources for wastewater treatment.

**Selected Alternative**

Based on cost analysis, the best option for Chesterhill is to construct a hybrid collection system (both gravity and pressure) and pump wastewater to Stockport for treatment.

The initial capital cost of a hybrid system is much lower than an all gravity option. Due to the varying topography throughout Chesterhill, gravity lines can be utilized to save energy wherever possible, but houses in low elevations can be accommodated by installation of a force main. This would prevent the need for the more expensive and deep sewer lines in order to continue a gravity system. A force main can also be utilized to transport waste to the city of Stockport, approximately 9 miles northeast of Chesterhill.

This project will involve the installation of approximately 13,525 feet of 8-inch gravity sewer and three lift stations within Chesterhill. A 34,470-foot long force main will be installed to transport the collected wastewater to Stockport for treatment. Construction will occur within previously disturbed roadways, rights-of-way, and in previously disturbed trenches containing the village's existing water line. This work will cause some disruption due to construction along state routes 377 & 555, which are the main roads in and out of Chesterhill, though traffic maintenance plans will be in place and construction will be temporary.

Utilizing the Stockport WWTP for treatment allows Chesterhill to share services rather than duplicate what is already in existence. This will benefit both communities in the long term. Fixed expenses can be shared rather than being a burden to both communities. While Chesterhill will be giving up some control of their wastewater system, it will be to their benefit provided both communities work toward a mutually beneficial agreement.

Storm water improvements are also included in this option to repair or replace the existing failing system. The village has identified various locations where the existing system is not operating properly or needs to be extended. These areas will be improved with gravity storm sewer and catch basins. Conventional gravity storm sewers to be installed are estimated to be between 8 and 18 inches in diameter and catch basins will be concrete with a grated top.
Implementation

Project Costs
Chesterhill will receive principal forgives (principal that does not need to be repaid) from the WPCLF in the amount of $3,573,400 to address an unsewered area. Chesterhill is eligible for a 30-year, 0% loan from the WPCLF. By receiving WPCLF principal forgiveness for the full amount of the loan, Chesterhill will benefit significantly, compared to the market rate of 2.79%.

Project Schedule
The anticipated loan award will occur in October 2019. Construction is expected to begin immediately and is expected to be completed by June 2021.

Public Participation
Chesterhill has organized four public meetings to inform citizens about the project and to provide an opportunity for discussion. The project has also been discussed at numerous public council meetings. Ohio EPA is unaware of any public opposition to the project.

Reviews of the respective environmental resources were completed by Ohio EPA, Division of Environmental and Financial Assistance. The following agencies were consulted for technical input, or for conformance with legislation under their jurisdiction:

Ohio Department of Natural Resources,
State Historic Preservation Office, and the
United States Fish and Wildlife Service

No review agency opposes the project.

Ohio EPA will make a copy of this document available to the public on its web page: http://epa.ohio.gov/defa/ofa.aspx (Under the “What’s New” tab, scroll to “Documents Available for Review and Comment – WPCLF Documents for Review and Comment”) and will provide it upon request to interested parties. Information supporting this Environmental Assessment (EA) is available from the project contact named below.

Environmental Impacts
Construction of this project could affect environmental features. Because the project is designed to provide elimination of existing failing home septic systems, the project is not expected to lead to new development or associated indirect or cumulative environmental impacts.

Construction will occur in previously disturbed residential areas, within roadways, rights-of-way, and along trenches previously disturbed for waterline construction. No change to land use or topography will occur.

Air Quality
Morgan County is in attainment for all regulated criteria air pollutants applicable to this project. The contractor will prevent unnecessary creation of dust from construction activities and shall prevent dust attributable to the operations from entering the atmosphere. Dust on unsurfaced streets or
parking areas and any remaining dust on surfaced streets shall be controlled with water as needed. Because of this approach, there will be no significant adverse short-term or long-term impacts on local air quality.

Archaeological and Historical Resources
Coordination with the State Historic Preservation Office (SHPO) was completed for this project. Further review determined that a Phase 1 archaeological survey had been conducted nearby along similar topography and determined no significant findings.

In the event of archaeological finds during construction, Ohio Revised Code Section 149.53 requires contractors and subcontractors to notify SHPO of any archaeological discoveries in the project area, and to cooperate with the Office in archaeological and historic surveys and salvage efforts when appropriate. Work will not resume until a survey of the find and a determination of its value and effect has been made, and Ohio EPA authorizes work to continue.

Terrestrial Habitat and Endangered Species
Eight federally listed species occur in Morgan County: the endangered Indiana bat, the endangered American burying beetle, the endangered fanshell mussel, the endangered pink mucket pearly mussel, the endangered sheenpose mussel, the endangered snuffbox mussel, the threatened northern long-eared bat, and the species of concern bald eagle. No habitat suited to the American burying beetle, fanshell mussel, pink mucket pearly mussel, sheenpose mussel, snuffbox mussel, or bald eagle is in the project area. The Indiana and northern long-eared bats have similar summer maternity and roosting habitat preferences (trees with large crevices or loose, sloughing bark higher than ten feet above the ground). Tree and vegetation removal will occur from October 1 through March 31 when bats are presumed absent from the area. Based on this information, the project will have no significant adverse short-term or long-term effect on terrestrial habitat or endangered species.

Farmland Protection
Based on the review of the project planning and design, the project will not remove or change the use of prime farmland, so no farmland losses are expected as a result of this project.

Floodplains
According to project planning and design, no construction is scheduled to occur within designated flood hazard zones. Therefore, local floodplain development regulations were met.

Ground Water Resources
To avoid adverse impacts to ground water resources, the construction contract includes specifications for appropriate and safe dewatering of deep excavations and management of ground water.

Safety, Noise, Traffic, and Aesthetics
The contractor shall develop a traffic plan prior to commencing construction which shall include all proper warning signs and lane closures and a commitment to minimize both the extent and duration of the disruption of traffic and disturbance to the neighborhood during construction. Local aesthetics will be unchanged after construction is complete. For these reasons, the project will not adversely affect noise, traffic, public safety, or aesthetics.
Surface Water Resources
An Ohio EPA General Storm Water NPDES Permit for Construction Activities will be obtained and the contractor will minimize soil from eroding or otherwise entering onto all paved areas and into natural watercourses, ditches, and public sewer systems. Designated Wild and Scenic Rivers will be unaffected by this project as there are none located within the project’s vicinity.

Although Wolf Creek is located within the project vicinity, stream crossings will occur by horizontal directional drilling beneath the waterway.

Wetlands
According to a review of project planning and design and the Ohio Wetlands Inventory, this project will contain no in-wetland work and therefore will have no impacts to wetland areas.

Energy Use
This project will have little effect on local or regional energy supplies because the residential service area will be served by gravity sewers aside from lift stations and a force main directing wastewater to Stockport. Through utilizing the already existing wastewater treatment plant in Stockport, no additional energy from the village of Chesterhill is required.

Local Economy
Chesterhill has minimized the project cost by receiving this principal forgiveness loan. This allows a lower annual sewer bill for the new customers than otherwise would be possible. The projected residential sewer bills with the implementation of this project will be approximately $341/year. This is approximately 0.9% of the median household income (MHI) of Chesterhill, which is $39,821.

By using WPCLF financing for this project, Chesterhill has minimized the economic impact on customers.

Conclusion

Based upon the available facilities plans, detail plans, and other information for this project, Ohio EPA concludes that no significant short-term or long-term adverse direct environmental impacts will result from the project as related to the environmental features discussed in this Environmental Assessment. This is because these features do not exist in the project area, the features exist but will not be adversely affected, or the impacts of construction will be temporary and mitigated.

This project equally serves the entire affected community and no particular segment of the community will be faced with additional adverse impacts or be deprived of environmental benefits, compared to any other segment.

For these reasons, this project, alone or in combination with other projects, is not expected to result in any significant indirect or cumulative short-term or long-term adverse environmental impacts on the quality of the human environment or on sensitive resources.

The project will eliminate failing septic systems within the community, overall reducing odors, improving local water quality, and protecting public health.
Contact Information

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Exhibit 3: Project Location Map (within Chesterhill village limits)
Exhibit 4: Project Location Map (transport from Chesterhill to Stockport)