



Mike DeWine, Governor  
Jon Husted, Lt. Governor  
Laurie A. Stevenson, Director

March 24, 2022

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

**Village of Madison – Lake County  
Sanitary Sewer Trunk Interconnection  
Loan Number: CS390556-0010**

The attached Environmental Assessment (EA) is for a sanitary sewer infrastructure improvement project in Madison 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.

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 the email address of the contact named at the end of the EA. We will not act on this project for 30 calendar days from the date of this notice. In the absence of substantive comments during this period, our preliminary decision will become final. After that, the Village of Madison can then proceed with its application for the WPCLF loan.

Sincerely,

*Kathleen Courtright*

Kathleen Courtright, Assistant Chief  
Division of Environmental & Financial Assistance

Attachment

## ENVIRONMENTAL ASSESSMENT

### Project Identification

Project: Sanitary Sewer Trunk Interconnection

Applicant: Village of Madison  
33 East Main Street  
Madison, OH 44057

Loan Number: CS390556-0010

### Project Summary

The Village of Madison is located in Lake County and currently relies on its own wastewater collection system and wastewater treatment plant (WWTP) to provide its residents and other customers with wastewater services. To address the wet weather conditions that affect the performance of its wastewater infrastructure, Madison has determined that the cost-effective solution is construction of a thirty-inch diameter gravity sanitary sewer between the Village of Madison and Lake County, as well as the purchase of capacity within Lake County's sanitary sewer and wastewater treatment systems. To pay for its wastewater project, including a share of the county's prior investments in its wastewater infrastructure, the Village of Madison expects to borrow \$9.24 million from Ohio EPA's Water Pollution Control Loan Fund (WPCLF) and repay it over twenty years.

In terms of potential environmental impacts, Ohio EPA has reviewed the village's proposed sanitary sewer trunk interconnection project and determined there will be no significant adverse environmental impacts, as discussed in the conclusion.

### History & Existing Conditions

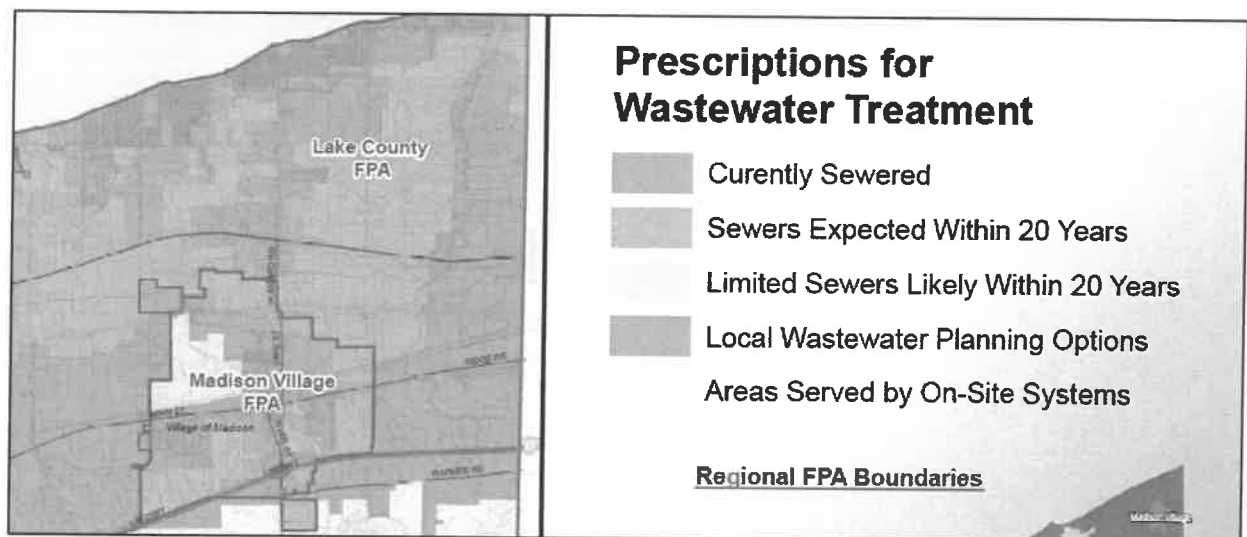
Madison initially constructed its collection system and WWTP in 1966. Subsequently, the village constructed a major upgrade to its WWTP in 1994.

Currently, the village has two sanitary sewers along Middle Ridge Road. The smaller of the two, a twelve-inch diameter gravity sewer, serves about six homes before connecting into the larger (thirty-inch diameter) sewer that directs flows north to Madison's existing WWTP.

Madison's wastewater collection and treatment systems are hydraulically overloaded as a result of excessive amounts of extraneous flows getting into its sanitary sewers. As a result, Madison's 500,000-gallon-per-day (gpd) WWTP on the north side of the village has been unable to maintain compliance with its National Pollutant Discharge Elimination System (NPDES) permit. This situation has been reflected in the levels of pollutants in Arcola Creek, the receiving stream for the effluent from Madison's WWTP.

In 2021, the Northeast Ohio Areawide Coordinating Agency (NOACA) reviewed and approved the village's proposed project to decommission its WWTP and to convey its wastewater flows via a pump station on Hubbard Road to Lake County's Madison Township WWTP. Accordingly, the project

discussed in more detail below is consistent with the Clean Water Act Section 208 water quality management plan for Lake County and Madison in particular. Figure 1 below shows the general location of the village's and Lake County's existing wastewater infrastructure.



**Figure 1. Facilities planning areas (FPAs) for the Village of Madison and Lake County**

### **Population and Flow Projections**

According to the village, its wastewater flows currently average about 600,000 gpd, or about 100,000 gpd over the rated capacity of its WWTP. Peak hourly flows representative of wet weather conditions are currently the equivalent of about 5.0 million gallons per day (mgd). Based on projected development, Madison's average daily wastewater flows are expected to reach 1.0 mgd in the project's design-year with a corresponding peak flow of 6.0 mgd. A thirty-inch diameter gravity sewer such as proposed for this project has a hydraulic capacity of 9.6 mgd. For comparison purposes, the Lake County Madison Township WWTP is rated at 5.0 mgd and is treating roughly half that much on an average daily basis. Accordingly, Lake County's sanitary sewers and treatment facility have the capacity to handle Madison's wastewater flows originating from about 2,300 homes and a population of about 3,200 people.

In terms of population projections, NOACA estimates that Madison's population is expected to grow by about 800 people and reach almost 4,000 people by 2040. In terms of land use changes, this increase could mean as much as 200 acres of development. Based on how the village's existing sanitary sewers were designed and over-sized to accommodate expected future subdivision development, an estimated 200-300 acres of future land use conversion will be used in the rest of this document. Available information suggests that three developments started circa 2007 have the potential to expand further in the next decades and require this amount of land, as shown in green in Figure 1 above.

### **Alternatives**

During facilities planning, the village evaluated a no-action alternative and multiple sanitary sewer alignments to convey the village's wastewater to Lake County's wastewater infrastructure for handling and treatment. The no-action option was eliminated from consideration early on because

it would not address the problems within the Madison wastewater collection and treatment systems. Expansion of the village's WWTP to 1.0 mgd on an average daily flow basis was also rejected because it would not enable the village to eliminate its WWTP's discharge and achieve the expected water quality benefits for Arcola Creek and its tributaries. Consequently, the village considered seven sanitary sewer alignments for further evaluation during a two-step process.

In Step 1, four options were eliminated from consideration and three were retained for further analysis. The main reasons for rejecting these four options were inability to acquire easements and dewatering concerns (three options fit this category) and costs (one option). In Step 2, the three options carried forward were evaluated further, along with an added alternative. Of these four alignments kept for further consideration, only two proved to be feasible from a constructability standpoint (ability to acquire easements). Option 1 would utilize all road rights-of-way along Middle Ridge Road and Hubbard Road and costs about \$4.85 million. Option 3 would use a mixture of road rights-of-way and cross-country alignments to arrive at the location of the county's Hubbard Road pump station and cost about \$4.55 million. As described below, Option 3 was chosen for this project because of its lower estimated total project costs.

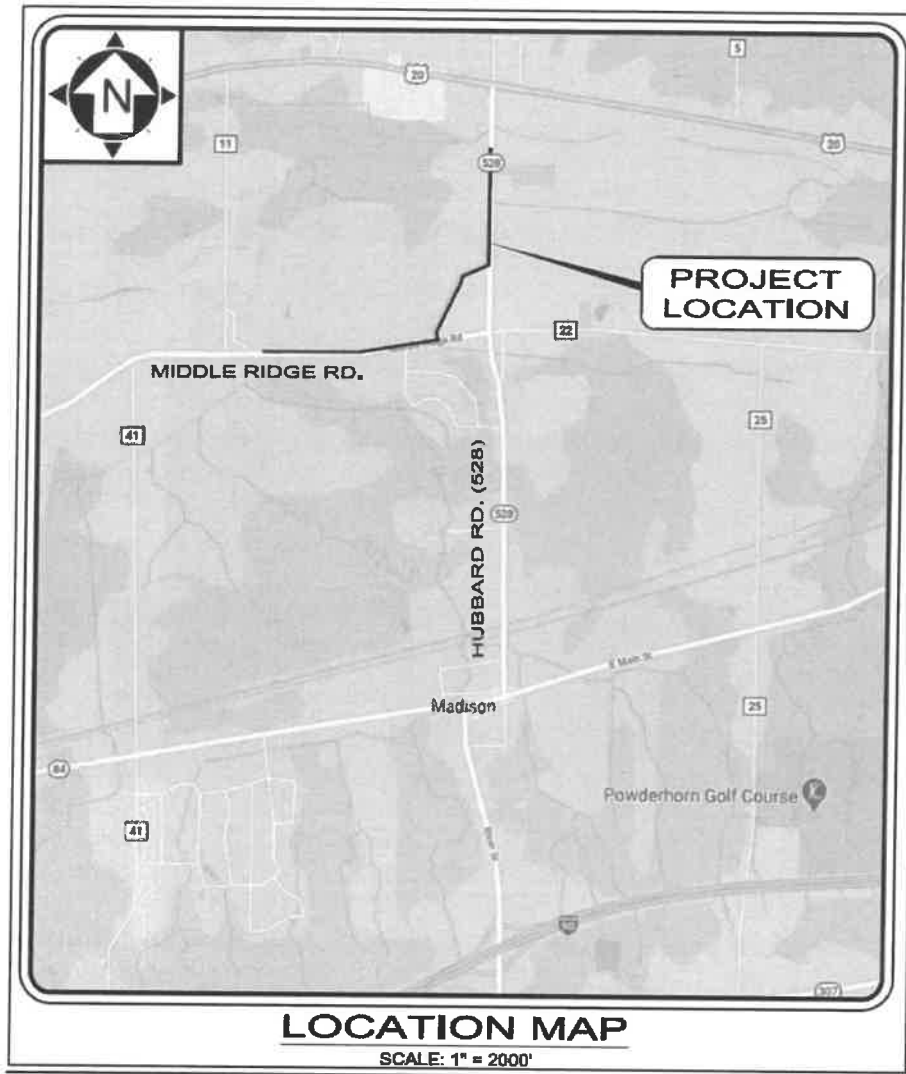
### **Selected Alternative**

Originally estimated at 5,300 linear feet of 30-inch gravity sanitary sewer in the planning process, this project's selected alternative expanded to about 7,350 feet of gravity sanitary sewers during the design phase. The sizing of the proposed sanitary sewer trunk interconnection to Lake County's wastewater system is based on the principle of consistent pipe sizing, including not making the existing 30-inch sanitary sewer on Middle Ridge Road a stranded asset by creating a bottleneck. Importantly, the existing 30-inch trunk sewer was intended to serve all of Madison, including expected development.

During construction of the village's project, the residents on Middle Ridge Road who rely on the existing 12-inch sanitary sewer will continue to have sanitary sewer service. This temporary service is needed because the existing 12-inch sanitary needs to be removed for construction of the new 30-inch sanitary trunk sewer to occur.

Through this approach, the village's wastewater flows will be brought to a Lake County Department of Utilities wastewater pump station on Hubbard Road as shown in Figure 2. The estimated cost of this project is \$4.55 million, not including the village's costs of acquiring a share of the county's wastewater infrastructure (collection and treatment systems). Including these costs would bring the total project costs and the loan amount to just over \$9.2 million.

By constructing this proposed project, the village plans to decommission and demolish its existing WWTP, and so not need to make costly nutrient treatment upgrades to its WWTP to comply with NPDES permit requirements. An added benefit is that the village expects that its residents will experience lower sewer bills than currently is the case once the county provides service and takes over ownership, operation, and maintenance of the village's sanitary sewers consistent with agreements previously reached in 2018 between Madison and Lake County.



**Figure 2. Selected Alternative/Alignment**

**Implementation**

The total estimated cost of the regionalization project is \$9.241 million. All but \$4.7 million of this amount is for construction. Madison is eligible for a 0%, 20-year interest rate loan for this proposed regionalization project. Utilizing an estimated \$9.2 million in WPCLF funding will save Madison up to \$2.1 million over the 20-year loan term compared to the current market rate of 2.11%.

Currently, an average village residential customer pays \$457.20 per year. Given the village’s proposed low-interest loan funding of this project and the proposed transfer of all wastewater assets to Lake County, a residential customer can expect to pay the equivalent of about \$353 annually through an assessed surcharge to service the debt for this proposed project. As a percentage of the village’s median household income (MHI) of \$59,511, this wastewater fee is about 0.59%. Given the financial information presented above, no significant adverse economic impacts on the roughly 2300 residential users of Madison’s wastewater infrastructure system are anticipated.

Under the village's proposed project schedule, WPCLF funds are expected to be awarded summer of 2022, so that construction can commence soon thereafter. The village estimates that construction can be completed in about twenty months.

The Village of Madison and the Board of Lake County Commissioners entered into an agreement on February 7, 2018, to facilitate transfer of wastewater service and all related assets from the village to the county. Lake County Commissioners executed Resolution 2018-Resolution/2018027 to enter into said agreement upon recommendation of the Sanitary Engineer of the Lake County Department of Utilities. The Village of Madison executed Ordinance No. 33-2017 to enter into the Transfer Agreement.

### **Public Participation**

Madison's village council met in 2017 and on other dates to discuss the options available to address the problems in its wastewater infrastructure system. In particular, legislation authorizing the transfer agreement between Madison and Lake County was passed during open public meetings of both entities. The transfer was discussed during numerous public meetings and was reported in two News-Herald articles in January and February 2018. On this basis, the village appears to have adequately provided for public involvement during the planning for this project. Project information is available from the Ohio EPA contact named below.

Further, as a result of the village's previously held council meetings and outreach to property owners living along the proposed sanitary sewer alignment, Ohio EPA has determined that no additional public review and comment on the proposed project is necessary. Accordingly, all potentially interested parties have been given adequate opportunity to review and comment on this project and its costs.

Ohio EPA will make a copy of this document available to the public on its announcements web page (<https://epa.ohio.gov/wps/portal/gov/epa/divisions-and-offices/environmental-financial-assistance/announcements>) and will provide it upon request. A copy may also be posted at the village's municipal building and on its web site (if available).

### **Environmental Impacts**

The project has the potential to affect the following features, but the effects will be reduced or mitigated to acceptable levels as explained below. In particular, Ohio EPA focused primarily on air quality, aquatic habitat (streams and wetlands), cultural resources, land uses (particularly farmland and conversion to urban uses with resulting increases in impervious surface area), floodplains, terrestrial habitat, and consistency with regional water quality planning during its review of the village's proposed project.

#### **Air Quality**

Lake County is currently in full attainment for five of the six priority air pollutants regulated under the Clean Air Act. Reflective of regional air quality, the county is currently in non-attainment for ozone. In addition, the county is a maintenance area for sulfur dioxide. From a direct impact perspective, the village's proposed sanitary sewer trunk interconnection project is not expected to result directly in significant increases in ozone or sulfur dioxide levels during the estimated 20 month construction period. Ohio EPA reached this conclusion primarily because any increases in construction traffic and resulting air pollution are expected to be short in duration and intermittent.

Further, the detail plans and specifications include the mitigative measures necessary to control dust that may be generated during construction.

In terms of indirect impacts on air quality, additional ozone can be expected to be associated with the expected growth in Madison's population and transportation activity. This point is based on the additional 400,000 gpd of wastewater flow expected over the design life of the proposed sanitary sewer. However, with Lake County's total population not expected to grow during this same interval as reported by NOACA, the overall air quality is expected to not change significantly. On this basis, Ohio EPA has concluded that no significant, indirect or cumulative impacts on regional air quality near Madison will result from the proposed project or population growth that it could facilitate.

### Archaeological and Historical Resources

Together, archaeological and historical resources comprise the cultural resources of a project area. In this project's case, the potential for direct construction impacts on cultural resources was deemed possible since a portion of the proposed sanitary sewer alignment will go cross country between Middle Ridge and Hubbard Roads as shown in Figure 2. Upon completion of a cultural resources survey of this prior undisturbed area, it was determined that no archaeological or historical resources were present and that no further survey work is needed unless the scope of the project changes. Should any cultural resources be found during construction, however, contact with the State Historic Preservation Office should be made and appropriate coordination steps completed as noted in Ohio law. On this basis, Ohio EPA has concluded that no significant adverse direct impacts on cultural resources are expected during the village's proposed project. Based on cultural resources survey work previously completed for a development area along Middle Ridge Road that reached a similar conclusion, no indirect effects from this project are expected.

### Aquatic Habitat

In the project area shown in Figure 2, floodplains, streams, and wetlands have been found. Together they represent the aquatic habitat in and around Madison.

Floodplains: Based on available maps, parts of the project area are floodplains that do not have known base flood elevations. However, as the village's sanitary sewer trunk interconnection project will be constructed below grade and contours will be restored, no significant, adverse floodplain and floodway effects are expected during construction. Furthermore, any spoil disposal will occur outside of area floodplains consistent with the list of prohibited construction activities in the detail plans.

Streams and wetlands along Hubbard Road: The village has committed to following all Army Corps of Engineers Section 404 wetlands permit requirements during this project, including re-assessment of the original wetland boundaries established over five years ago. Upon completion of this reevaluation and delineation of wetland limits, the wetlands will be cordoned off to prevent any temporary or permanent disturbance during construction. If the wetlands cannot be avoided during conventional open cut construction, the sanitary sewer will be bored beneath the wetland to eliminate potential impacts. Use of clay trench dams is also proposed as part of this mitigative approach to prevent subsurface flows from following trench bedding material and dewatering the wetlands.

In terms of any indirect or cumulative impacts on wetlands and the associated ecologically sensitive riparian corridors found in the project area, Ohio EPA has reviewed the areas shown in Figure 1 that

are projected to develop within Madison and vicinity in the future. As noted above, these areas are expected to be no more than 200-300 acres in size. Based on this review, no adverse indirect or cumulative impacts from this activity are expected partly because the village's zoning code addresses setback from ditches.

#### Endangered Species and Fish and Wildlife

Seven federally listed species and one critical habitat are present in Lake County as a whole. Of these species, three are federally endangered (Indiana bat, piping plover, and snuffbox mussel); three are federally threatened (northern long-eared bat, red knot, and eastern massasauga rattlesnake), and one is a candidate species (monarch butterfly). Ohio EPA determined that these seven species will not be adversely affected by the proposed project's construction for the following reasons. First, there is no suitable habitat for the two shorebird species (piping plover and red knot) and the snuffbox mussel. Most importantly, the designated critical habitat (lake shore) for the endangered piping plover is outside the project area. Second, while potentially suitable floodplain habitat for the eastern massasauga rattlesnake is found in the project area, the available records indicate that this species is not found in the part of Lake County near Madison. Finally, for the two terrestrial bat species, the wooded areas along the proposed sanitary sewer alignment lack the types of trees these species prefer. Many of the trees along Middle Ridge Road were planted to screen the residential homes from traffic and are conifers. As such, they are not suitable habitat for these bats. The dominant native woody vegetation in the rest of the alignment, in particular at the westernmost point and along the farm-field between Middle Ridge Road and Hubbard Road, also are not suitable habitat. By limiting tree clearing to the time of year when the bats are absent, any focused tree removal is not expected to have any effect on these species. For these same reasons, direct impacts on terrestrial habitat are expected to be limited in scope. Any indirect impacts on these resources are discussed in the following section on farmland and land use.

#### Farmland Protection, Land Use, and Terrestrial Habitat

As noted earlier, the proposed project's alignment crosses through areas with different land uses and vegetation. These include a small area of native terrestrial vegetation near the westernmost part of the project, a residential area along Middle Ridge Road, a section of farmland between Middle Ridge Road and Hubbard Road, and a wetland area near a small tributary of Arcola Creek.

While some direct construction impacts on farmland are expected to occur, these will be temporary as it is expected that the area affected could be returned to crop production upon project completion. In addition, during the planning for this project, specific concerns related to farming were considered and affected the choice of the selected alternative's alignment. Finally, no significant indirect and cumulative adverse impacts on farmland are expected for two main reasons. First, as shown in blue in Figure 1, the areas of most important agricultural use are not expected to develop in Madison. Second, the 200-300 acres of potential future development are associated with expansions of existing subdivisions along River Street and Dayton Road. On this basis, the village considered farmland and land use during planning of this proposed project shown in Figure 2.

To conclude, indirect effects on terrestrial habitat within the context of the village as a whole are not expected to be significant because the location of the potential future development areas are consistent with what is shown in Figure 1.



### Energy, Noise, Traffic, and Aesthetics

During the expected construction period of about 20 months, it is unavoidable that energy use, noise levels, and traffic patterns will undergo change if the village's objective of regionalizing its wastewater treatment with Lake County's system is to occur. While this is recognized, the detail plans and specifications for the project include the mitigative measures needed to reduce noise levels and traffic pattern changes to acceptable levels. Through proper maintenance of equipment, energy consumption should be consistent with normal activities and not be excessive. Overall, the proposed project, with the mitigation strategy for protecting such sensitive resources as streams and wetlands and ultimately eliminating a WWTP discharge in Madison, is expected to result in a net improvement in local aesthetics. For these reasons, no significant adverse impacts on these four attributes are expected to result from the project's construction.

Based on the project's scope and location (see Figure 2), the village's proposed project is expected to have no effect on coastal areas, safe drinking water, sole source aquifers, and wild and scenic rivers. These environmental attributes are not in the project area.

### Conclusion

Based upon Ohio EPA's review of the planning information and the materials presented in this Environmental Assessment, we have concluded that there will be no significant adverse impacts from the proposed project as it relates to the environmental features discussed previously. This is because these features do not exist in the project area, the features exist but will not be adversely affected, or the impacts will be temporary and mitigated. Overall, a net improvement in water quality is expected to result from the proposed project's construction and consolidation of wastewater treatment in the area near Madison at Lake County's Madison Township WWTP discharging to Lake Erie.

### Contact information

Kevin Hinkle  
Ohio EPA, Division of Environmental and Financial Assistance  
Office of Financial Assistance, Technical Review Section, Environmental Planning Unit  
P.O. Box 1049  
Columbus, Ohio 43216-1049

e-mail: [kevin.hinkle@epa.ohio.gov](mailto:kevin.hinkle@epa.ohio.gov)