



**September 21, 2023**

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

**Village of Versailles – Darke and Shelby Counties  
Reed Road Well Field Transmission Line  
Loan Number: FS390946-0006**

The attached Environmental Assessment (EA) is for a raw water well field transmission line and water main extension project in Versailles which the Ohio Environmental Protection Agency intends to finance through its Water Supply Revolving Loan Account (WSRLA 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 WSRLA 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 Versailles can then proceed with its application for the WSRLA loan.

Sincerely,

A handwritten signature in black ink that reads "Kathleen Courtright".

Kathleen Courtright, Assistant Chief  
Division of Environmental & Financial Assistance

Attachment

# ENVIRONMENTAL ASSESSMENT

## Project Identification

Project: Reed Road Wellfield Transmission Line

Applicant: Village of Versailles  
PO Box 288  
Versailles, Ohio 45380

Loan Number: FS390946-0006

## Project Summary

The Village of Versailles (in Darke and Shelby counties) has requested \$2.5 million in financial assistance from Ohio EPA's Water Supply Revolving Loan Account (WSRLA) to install a new transmission line that will convey raw water from the new wellfield to the water treatment plant (WTP). See Figure 1 for project location. Altogether, this proposed water line extension is needed to bring finished water to the village's existing and expected new water customers.

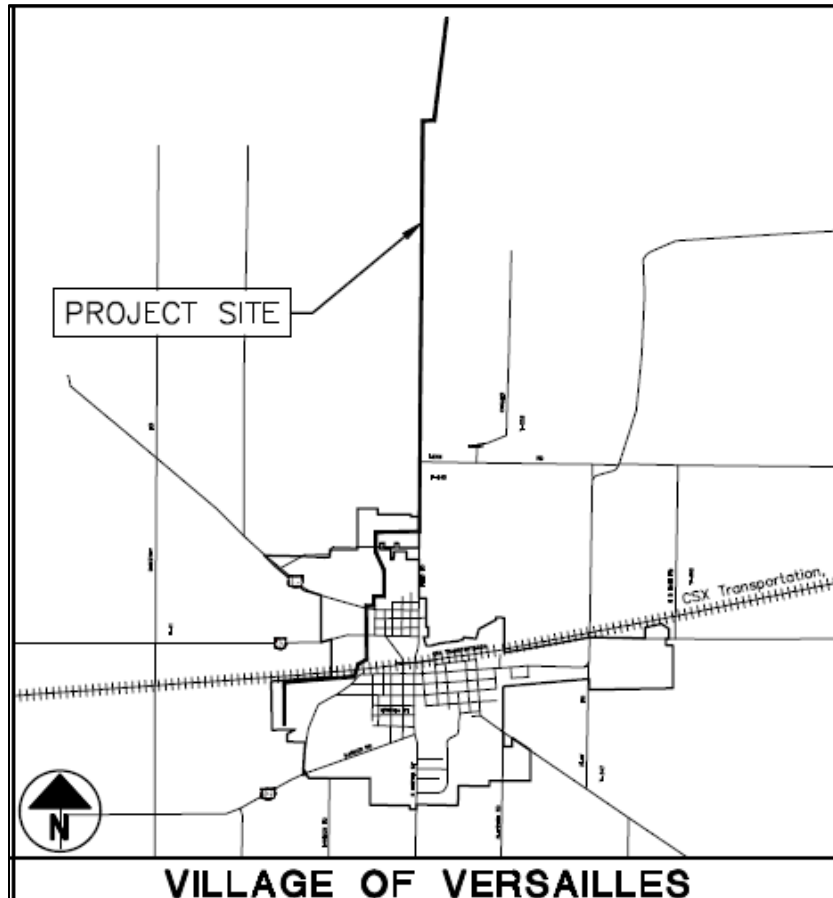


Figure 1. Project location

In 2023, a 62% rate increase was implemented, and the village plans an annual 3% increase.

Three creek crossings will be included with the construction of this project, but all will be completed using directional drilling and will therefore not impact the streams.

### **History & Existing Conditions**

The Village of Versailles owns and operates a public water system consisting of three wellfields, a water treatment plant (WTP), and a distribution system. More specifically, there currently are about 12 existing wells (numbered 1 through 10 and the newer 12 and 13). These wells are located in the Swamp Creek Watershed.

The current Village of Versailles WTP is located at 350 Grand Avenue, went online in 2006, and is rated at 1.5 million gallons per day (MGD). Versailles utilizes groundwater from the production wells that supply raw water to the treatment plant.

The clearwell at the WTP has the capacity to store 225,000 gallons of finished water. As the village water system requires water, the water flows into the high service pump wells where it is pumped to the distribution system by the high service pumps. The village also utilizes two 500,000-gallon water towers to store water and provide stable pressure for the distribution system. The WJ Bohman tower is located on the east side of the village and the Terry Street tower located on the north side.

Groundwater resources capable of supporting municipal production wells in the vicinity of the village include both bedrock and sand and gravel aquifers. The highest well yields to be expected are likely to be 100 to 200 gallons per minute (gpm). Other municipalities in the region located in similar hydrogeologic settings have found it necessary to spread out groundwater pumpage and obtain groundwater from several small wellfields in order to obtain sufficient capacity. The current wellfield will likely not be able to provide the capacity necessary to satisfy future growth from new industry and residential development.

### **Population and Flow Projections**

The existing service area is the Village of Versailles with a population of around 2,700 people. The water system has approximately 1,265 service connections; 1,104 residential, 153 commercial, and eight industrial accounts. On average, 29% of the usage is residential, 14% commercial and 57% industrial. Total peak demand from the wellfields varies year to year, and ranges from 0.3 to 0.5 million gallons per day (MGD). Currently the village utilizes all ten of the production wells to meet daily peak demand. The village's water treatment plant has a capacity of 1.5 MGD.

There has been minimal population growth to the village in the past 20 years. The population in 2000 was 2,571 and 2,739 in 2020. This shows an average growth of about 6.13% over the 20-year period. This minimal population growth is expected to continue for the life of the project. The project service area is not expected to expand outside of a quarter mile of the village limits. The projected population to be served over the next 20 years is as follows:

| <u>Year</u> | <u>Projected Population</u> |
|-------------|-----------------------------|
| 2020        | 2739                        |
| 2030        | 2876                        |
| 2040        | 3020                        |
| 2050        | 3171                        |

The projected water demands are expected to increase at a rate higher than the population increases mentioned above. To allow a factor of safety, the residential water demand increase will be factored at 1.0% per year. The commercial/industrial water demand will be calculated at an increase of 2.0% per year. Peak demands for residential will be calculated at 2.67 times the residential average daily demand and 1.5 times for commercial/industrial.

Because of potential development in the vicinity of the project area, Ohio EPA has considered their possible impact in this document. Two potential development sites are shown below in the following photographs to enable readers to better understand this information.



**Figure 2. Baker Road development site**

This is the proposed Baker Road Development Site shown in Figure 2. Encompassing 18 acres, this site includes a wooded area and farmland.

The other available site is shown below in Figure 3. Known as the Marker Road Site it is 1.16 acres in size and zoned for business. Given its proximity to other existing business and commercial developments, it appears not to be environmentally sensitive. More information on how

development of this location shown in grey can be found in environmental impacts section of this document.



**Figure 3. Marker Road site**

### **Project Alternatives**

The village has consulted with an engineering firm to consider two options for the wellfield addition and transmission line project as follows and more specifically described below.

The first option is to develop a new wellfield and transmission line to provide water to the village's current WTP. This option would develop a new wellfield with two new wells beyond the village boundaries and an eight-inch transmission line to convey the raw water to the current WTP.

The second option is to develop new wells within the current wellfield to supplement and/or replace existing wells. Pumping rates and specific capacities have declined in many of the wells over time, especially in the eastern wells (1, 2, 3, 4, and 5). Rehabilitation will not likely return the wells to their original pumping rates. This option would develop new wells to replace wells 1, 2, and 4. No additional wells would be installed near wells 1 through 5 due to limited space, aquifer mineralization, thinner sand and gravel thickness, and current low production rates.

### **Selected Alternative**

The selected option is to develop a new wellfield and transmission line to provide water to the village's current WTP. This option is the most feasible in meeting future demand due to the current wellfield's limited space and low production rates. Two new raw water wells have already been developed by the village at a location approximately five miles north of the village's existing wellfield and WTP facility. New well #12 is capable of 330 gpm or 475,200 gpd; new well #13 is capable of 400 gpm or 576,000 gpd. The village plans on running these wells in an alternating basis and continuing to use the wells at the existing wellfield located near the WTP. This plan is easily capable of producing the projected peak daily demands of the system. There is also room for additional wells to be developed at this location when needed.

More specifically, the project involves the installation of 26,300 linear feet of eight-inch raw water line from a newly developed wellfield north of the village to the village's WTP. The project will parallel Reed Road and involve a stream crossing of Swamp Creek via directional drilling near the intersection of Day Road. From this point, an eight-inch raw water line will be installed to the new well #13. In addition to this proposed water line, an additional water main will need to be extended further north to reach new well #12. Finally, as part of this project, an eight-inch water main will be installed all the way from the village's WTP to a point near to where a raw water line to well #12 will be constructed. To accomplish this water line installation, it will require two additional creek crossings. The first crossing (of Indian Creek and a railroad) is located northeast of the village's WTP and is expected to be performed using horizontal directional drilling. After this first creek crossing, the next creek crossing will be of Owl Creek north of the village, and it too will be performed by directional drilling. See Figure 4 for project area.

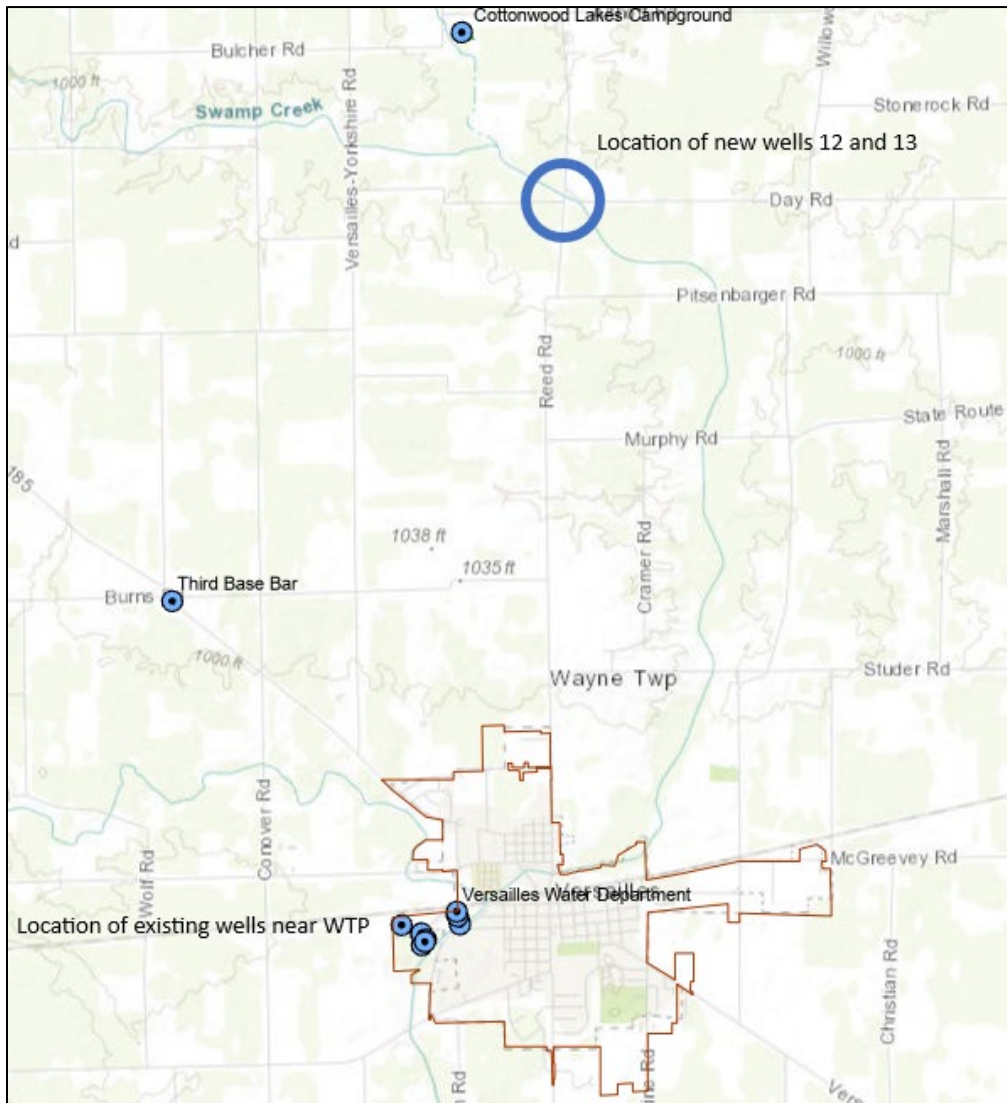


Figure 4. Project area

## **Implementation**

Versailles will borrow approximately \$2.5 million from the WSRLA at the small-community interest rate (currently 2.58%; the rate is set monthly and may change before loan award). Compared to market-rate financing at 4.38%, Versailles will save approximately \$918,952 over the 30-year life of the loan by using WSRLA funding. As a percentage of the village's annual median household income of \$53,525, this annualized current sewer service charge of \$554 is about 1.03% of this value. Construction will start after loan award and be completed in approximately 12 months.

## **Public Participation**

The project has been discussed in open session at the village council meetings. The dates for the most recent of these meetings from this summer include the following: June 28th, July 12th, July 26th, August 9th, and September 13<sup>th</sup>. Furthermore, the public was informed of the need to expand the production capacity of the existing wellfield.

Ohio EPA will make a copy of this document available to the public on its web page: <https://epa.ohio.gov/divisions-and-offices/environmental-financial-assistance/announcements> for review and comment during a 30-day comment period) and will provide it upon request. A copy may also be posted at the village's offices, and on its web site.

## **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.

### **Archaeological and Historical Resources**

All of the proposed wellfield transmission lines and related water main extensions will be completed within road rights-of-way or prior disturbed areas. Based on the alignment and the current conditions of the project area, only minor trench backfilling, site grading and appropriate restoration activities will be necessary. While there is one known archaeological site and a few historic structures in this area of Versailles, the chosen alignment is not near these sites and will therefore not affect known archaeological and historical resources.

### **Aquatic Habitat and Surface Water Resources, including Wetlands**

The village's proposed project involves crossings of two streams and their associated habitats. In terms of potential impacts on the streams where the proposed crossing will occur, the village's consultant proposes to use horizontal directional drilling of Swamp Creek near the intersection of Day Road with Reed Road. Because the proposed project will parallel Reed Road for most of its distance, no direct, indirect, and cumulative impacts on aquatic habitats, surface waters, and wetlands are expected.

Regarding the water main extension component of this overall proposed project, it will be necessary to complete at least two additional creek crossings. The first crossing of Indian Creek and a railroad is located northeast of the village's WTP and is expected to also be performed using horizontal directional drilling. After this first creek crossing, the next creek crossing by the proposed eight-inch water line extension will be of Owl Creek north of the village and it too will be performed by directional drilling. By providing a contingency plan to handle any accidental and

inadvertent releases of bentonite clay material used to ease the drilling and installation of the proposed water lines at all three locations, Ohio EPA has concluded that no direct, indirect, and cumulative impacts on aquatic habitats, surface waters, and wetlands will occur.

Furthermore, no temporary or permanent disposal of fill material in wetlands and streams will occur outside of the work rights-of-way. Finally, because contours in the project area will be restored, no permanent impacts of this proposed project on area surface water resources will occur.

### Endangered Species and Fish and Wildlife Resources

This project was reviewed for impacts on federally listed endangered and threatened species. Based on this review, three species of bats (Indiana, northern long eared, and tricolored), one species of bird (whooping crane) and one insect species (Monarch butterfly) were identified.

No trees should need to be removed for this project. But if tree removal is needed, it should occur between October 1<sup>st</sup> and March 31<sup>st</sup> to avoid adverse effects on the federally listed Indiana bat, northern long-eared bat, and the tricolored bat.

In terms of the habitat needs of whooping cranes (such as wetlands for nesting and farm fields adjacent to area streams and wetlands), none of this species habitat needs appear to be present in the project area. Finally, regarding the monarch butterfly which requires milkweed plants for its life cycle, there does not appear to be any suitable habitat present in the immediate project area.

### Floodplains

As noted above, temporary disturbances to the three streams and their adjacent floodplains will occur are necessary to complete the construction of this proposed project.

By limiting construction to road rights-of-way areas, as well as prior disturbed areas between road rights-of-way, as well as prohibiting any temporary or permanent disposal of fill material in floodplains without a permit, Ohio EPA expects that no significant, adverse long-term impacts will occur. This will be accomplished by the contractor restoring contour elevations in the project area. On this basis, direct, short-term impacts of this proposed project on area floodplains will occur, but are not expected to result in significant, adverse environmental impacts on these surface water features.

### Prime Farmland, Land Use and Zoning, Terrestrial Habitat

These resource attributes were considered during planning for the proposed project. Based on the results of these reviews, Ohio EPA has concluded that no adverse impacts on prime farmland, land use and zoning, and terrestrial habitat will occur. Because nearly all of Versailles and the surrounding county is prime farmland (if drained), there is ample prime farmland to address any potential concerns with direct impacts (e.g., temporary loss) on this resource. On this basis, Ohio EPA has concluded that, although a small area of farmland will be crossed by the proposed raw water main and water line extensions, there will be no significant, direct, adverse impacts on this attribute.

In terms of indirect and cumulative impacts, the village has identified two locations that it would like to encourage property owners to develop. Of the two, only one (Baker Development Site)



appears to include land with prime farmland and trees. Since this area only occupies about eighteen acres, Ohio EPA has concluded that conversion of this relatively small amount of land from agricultural and open space use to land use other than agricultural production should not be a significant concern. Next, the proposal is to expand the land known as the Marker Site for continued use as a business. At only 1.16 acres in size, and given its proximity to other existing business and commercial developments, it appears not to be environmentally sensitive. For the reasons cited above, the conversion of the Baker Development Site to non-agricultural land uses and continued use of the Marker Site is consistent with proposed and existing land uses (see Figure 5).

In regard to terrestrial habitat, Ohio EPA has concluded that there should be no adverse direct, indirect, or cumulative adverse impacts on this resource attribute. This conclusion was reached primarily because the majority of the land in the project area has been prior converted to uses other than supporting trees and other native vegetation (such as prairies and wetlands that likely formerly occupied the land prior to the arrival of Europeans). Less than 20 acres total will be converted to uses other than growing crops, trees, or native vegetation. Overall, the direct and indirect impacts on these resource attributes have been shown to be relatively insignificant. Further support for this conclusion is based on the fact that no street trees will need to be cut down and removed from the project area for it to be constructed.

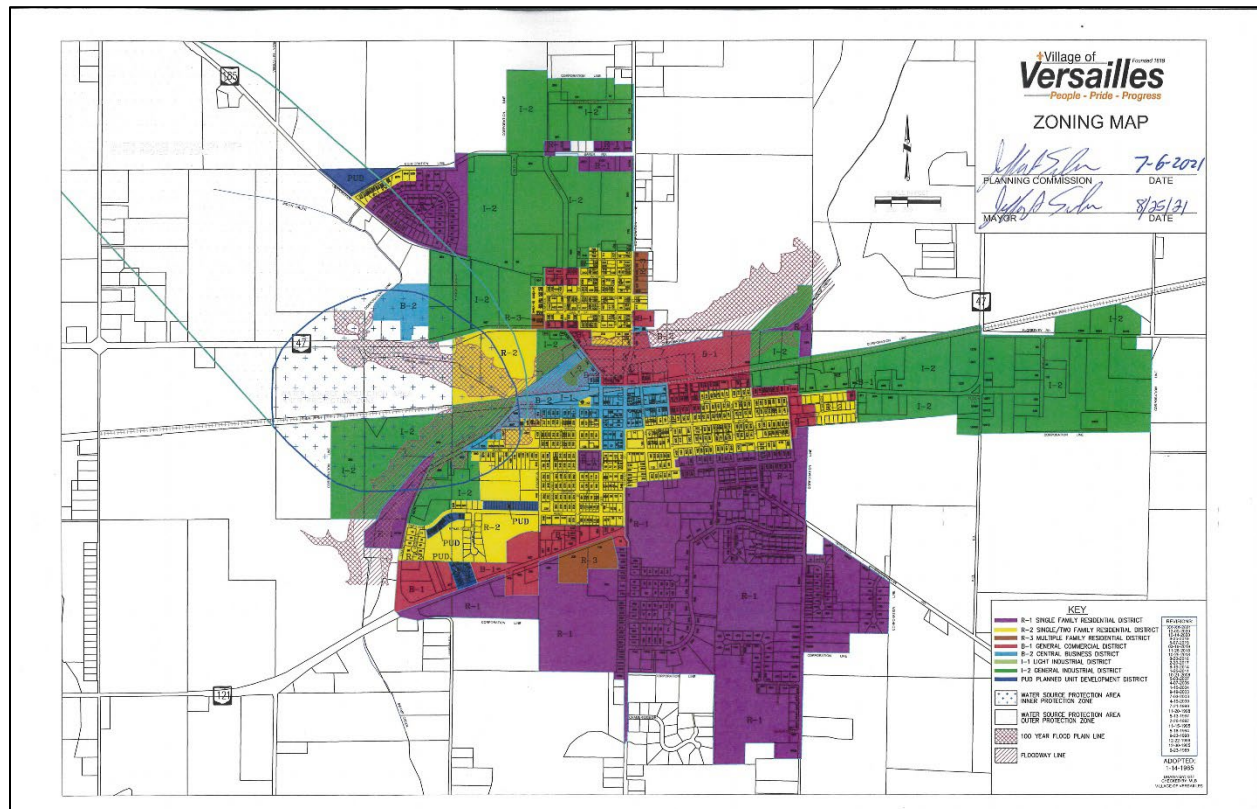


Figure 5. Village of Versailles zoning map

### Ground Water Resources and the Safe Drinking Water Act (including wellhead protection areas)

Based on the geology and hydrology of the area, Ohio EPA has found that the area is potentially vulnerable to ground water contamination. The project area has a ground water vulnerability index score of between 109 and 160. This means that project area's vulnerability rating ranges from moderate to high. Even though this vulnerability rating based on the above scores indicates a relatively high potential for ground water contamination, the proposed project is not expected to result in any significant, adverse direct, indirect, or cumulative impacts.

In this context, while Versailles and most of the developed areas adjacent to it are currently served by the village's numerous public wells and resulting wellhead protection (aka time of travel zones) areas, public water treatment, storage, and distribution systems, these ground water resources will not be adversely affected by the proposed project. The reasons for this are that they are either sufficiently isolated from the proposed project as to not be threatened by any spills (should they occur) and because the village has included language in its contract documents to control spills if they do in fact occur.

### Air Pollution, Noise, Traffic, Safety, and Local Aesthetics

Temporary construction impacts on air quality, noise, dust, traffic, will be minimized. In particular, the detail plans and specifications indicate that air pollution, noise will be reduced, for example, by providing construction equipment with proper intake silencers and mufflers and limiting construction activities to daytime hours. Further, air emissions will be limited by making sure that all construction equipment has proper emission control devices and that they are properly maintained. Any unpaved areas will be wet down (as necessary) during construction to minimize dust generation. Finally, traffic control and safety of the public will be accomplished by requiring that one-lane of traffic must be maintained, that emergency vehicles have access to the construction sites, and that other traffic control practices in the detail plans are followed. Overall, by completing the village's proposed project, local aesthetics are expected to be maintained, if not improved.

### Unaffected features

Based on the project's scope and location, the village's proposed project will have no effect on coastal areas and wild and scenic rivers. These environmental attributes are not in the immediate 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, the proposed project is expected to result in improved drinking water quality for the village and its existing and potentially new customers by installing a new transmission line that will convey raw water from the new wellfields to the water treatment plant, and by extending water lines to the undeveloped land areas in the project area to allow for growth.

In terms of indirect and cumulative impacts, Ohio EPA has noted two important things to consider. First, the village has bid a water main project for the North Central Area Waterline Improvement Project, and second that it has two parcels that it would like to be developed which are within the village or nearby. These potential development sites are shown in Figures 2 and 3 above.

**Contact Information**

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