

## LIMITED ENVIRONMENTAL REVIEW

### **Project Identification**

Project: 2019 Waterline extensions

Address: Brad Hudson, Water Superintendent  
1050 Township Road 262  
West Liberty, OH 43357

Loan Number: FS390981-0007

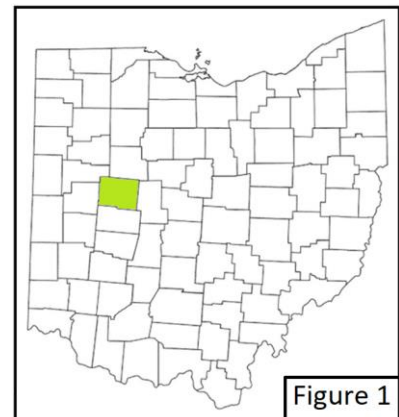
### **Project Summary**

The Village of West Liberty has applied to the Ohio EPA Division of Environmental and Financial Assistance (DEFA) for a Water Supply Revolving Loan Account (WSRLA) loan for a waterline extension project. West Liberty has requested to borrow approximately \$385,000 to pay for the construction of waterline extensions.

West Liberty is strategically constructing waterline extensions to create loops in the drinking water distribution system, where the locations are referred to in three parts. The waterline extensions are located: along Sidney Street from Bradley Street to Taylor Street (Part 1), Pickrelltown Road water plant across Lions Park and under Onion Creek to Baird Street (Part 2), and across Lions Park under the Mad River to Riverside Court (Part 3). These waterline extensions will eliminate dead-end waterlines by constructing connecting waterlines between them. Eliminating dead-end waterlines will address low-pressure and poor water quality in these areas, as well as provide redundant supply for uninterrupted service during a watermain break or maintenance on the Pickrelltown Road main.

### **History and Existing Conditions**

The Village of West Liberty is located in West-central Ohio, Logan County (See Figure 1 for orientation). The Village owns and operates a water system consisting of a water treatment plant, a water storage tank, three groundwater-fed wells, and water distribution lines throughout the Village. They serve approximately 1781 people, and a small number of local businesses. The Village recently constructed a new Water Treatment Plant (WTP) with a maximum daily flow of 300,000 gallons/day in 2016 to replace the original WTP, built in 1940. The average daily flow from the water plant is 127,000 gallons/day.

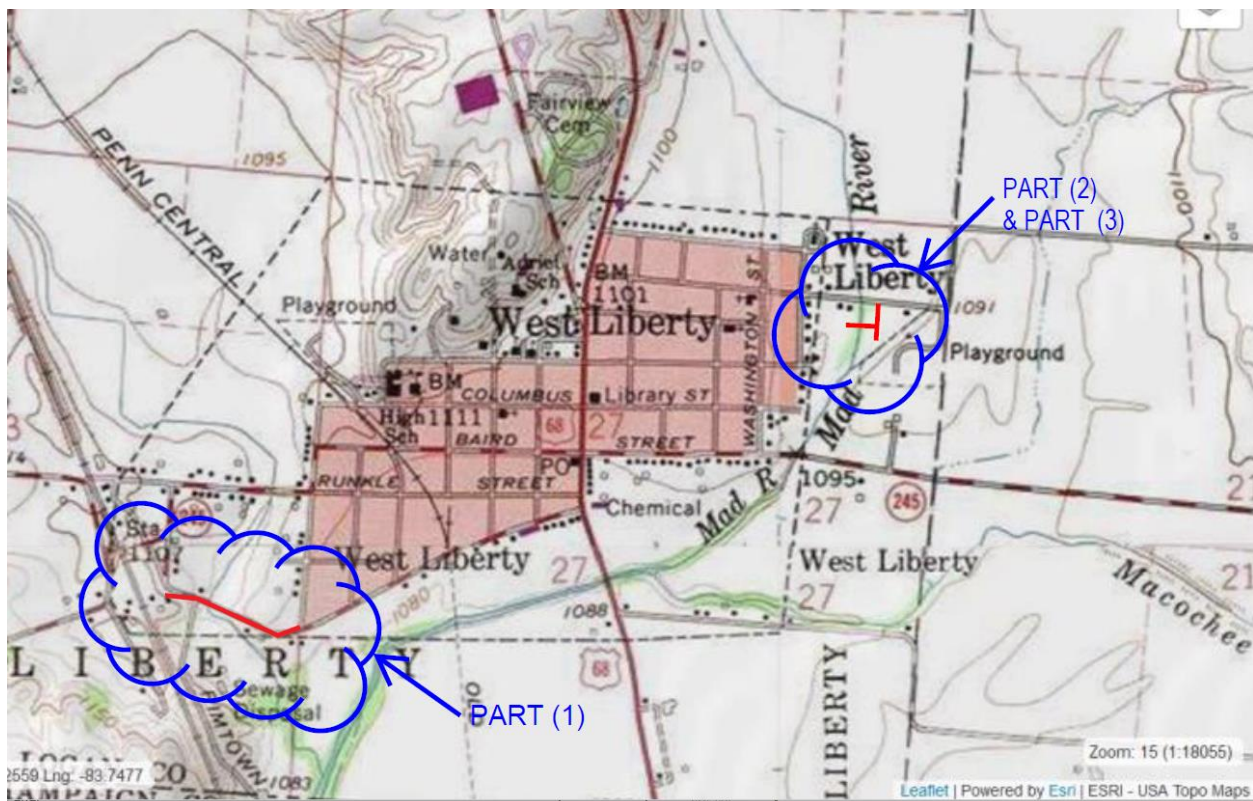


West Liberty has experienced water pressures insufficient for community needs and safety three target areas. Waterlines that extend a distance down service areas in one direction without connecting back to other waterlines in the system create dead-end waterline conditions that create low pressure and run the risk of becoming contaminated. These low-pressure areas are also not sufficient for adequate fire protection. To correct this situation,

West Liberty will construct looping waterline extensions to connect service at the end of the dead-end waterlines to the nearest existing waterline in the system. Stagnant or low-pressure dead-end water lines can allow bacteria to grow and contaminate the waterlines. Connecting dead-end waterlines to create loops ensure even high pressure throughout the system.

### **Project Description**

The 2019 Waterline extension project will extend approximately 2275 Linear feet (LF) of waterline to connect the new Water Treatment Plant to existing waterlines in three areas of West Liberty, designated by parts 1, 2 and 3 (See Figure 2). Part 1 is along Sidney Road, from Bradley Street to Taylor Street (Part 1), Pickrelltown Road water plant across Lions Park and under Onion Creek to Baird Street (Part 2), and across Lions Park under the Mad River to Riverside Court (Part 3). An additional alternate alignment to Part 2, the waterline extension to Baird Street, will include approximately 1440 linear feet of waterline looping if the bid price is low enough to include it with the main project.



**Figure 2.** Map of West Liberty with both project vicinities circled in blue.

#### *Part 1: Bradley-Taylor Extension*

Part 1 waterline extensions will be approximately 1350 LF of 8" water main installed between the existing 6" water mains at the corner of Taylor Street and Sidney Street. The waterline alignment will run along the right-of-way of Sidney street, crossing under Mud Run where it will be directionally drilled. After the stream crossing, the alignment will continue along the right-of-way of

Sidney Street until it reaches the Bradley Street water main.

#### *Part 2: Pickrelltown-Lions Park Extension*

Part 2 waterline extensions will include approximately 320 LF of 8" water main teeing into the existing 6" water main along Pickrelltown Road, across the street from the new Water Treatment Plant. The alignment will run south into Lions Park to the park pavilions, and cross under Onion Creek by directional drilling. The waterline alignment will be in the tree-lawn of Lions Park, adjacent to the Mad River but at enough distance that no negative impacts will occur from construction.

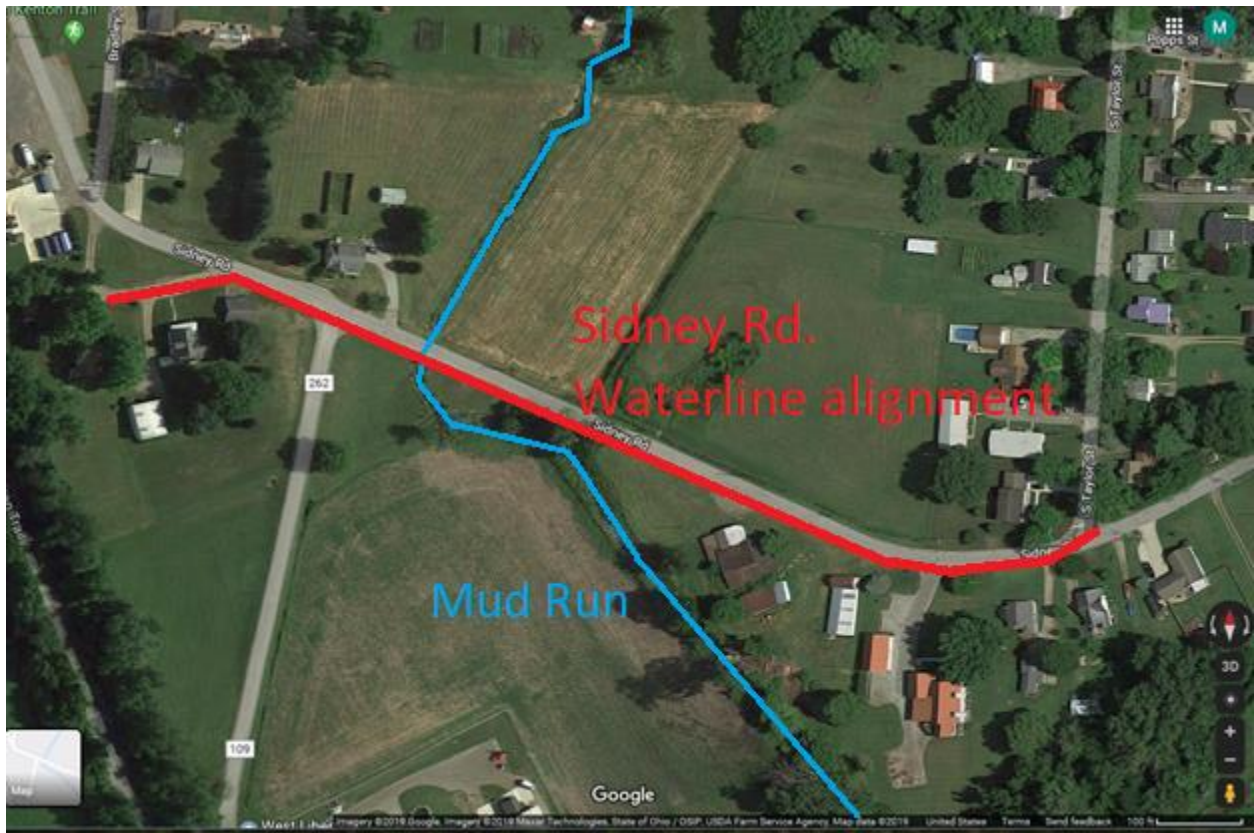
The alternative alignment associated with Part 2 involve approximately 1440 LF of 6" water main that would continue where the waterline crossed under Onion Creek and continue across Lions Park to connect to an existing water main on Baird Street (see Figure 3 for alignments of Parts 2 and 3 on a map).

#### *Part 2 Alternative Waterline Addition*

This alternative waterline extension would be an additional alignment to the three main parts of the project. It would include an additional 1400 LF of waterline to the 2275 LF of the main project. This alternative will be included as a separate bid item, and would only be constructed with this project if the main three waterline extensions do not require the full sum of the project cost estimate. This waterline extension would continue from the Part 2 alignment, south of the Onion Creek crossing, and continue south through Lions Park until it intersects Baird Street, and run west until it reaches Washington Street. The alignment will cross under the Mad River by directional drilling, approximately 5 feet below the riverbed. The alignment is shown on Figure 4.

#### *Part 3: Riverside Court/Newell Street – Lions Park Extension*

Part 3 waterline extensions consist of approximately 300 LF of 6" waterline teeing into the watermain in Part 2, and connecting to the dead-end waterline in the Riverside Court cul-de-sac. This alignment will cross under the Mad River by directional drilling underneath the riverbed. This line will run between two residential properties in Riverside Court and require easements.



**Figure 3.** Map of Part 1, Sidney Road alignment.



**Figure 4.** Map of waterline alignments part 2 and 3, crossing under the Mad River and Onion creek.

**Project Implementation**

The total approximate cost of the 2019 Waterline Extensions project is \$385,000. West Liberty plans to borrow the entire project amount from the WSRLA.

West Liberty will borrow approximately \$385,000 from the WSRLA at the standard interest rate now at 1.10%. During the 20-year loan period, West Liberty will save approximately \$54,800 by using WSRLA dollars at this rate, compared to the market rate of 2.35%. The Village will pay back the loan through user fees collected from its customers, has incrementally increased water rates

3% for the following years: 2009, 2010, 2011, and 2016, to minimize financial impact on customers. An average water bill in West Liberty is \$39 per month (\$468 per year), or 1% of the median household income of \$47,279 which is generally considered affordable. By utilizing low interest WSRLA loan funds, West Liberty will minimize economic impact on its customers.

### *Project Schedule*

Pending successful loan award on February 26, 2020, the village would begin construction in March 2020. Project completion is anticipated May 2020.

### **Public Participation**

West Liberty has held multiple council meetings over the past year mentioning the project and the benefits of extending waterlines on Sidney Road and through Lions park. The Village also prepares an Annual Water Quality & Consumer Confidence Report for its residents with open invitation for comments, an outline of the current year's water system improvements, and information about West Liberty's drinking water system. A public notice about the project construction will be sent electronically by the Village to residents before construction begins.

Ohio EPA will make a copy of this document available to the public on its web page (<http://epa.ohio.gov/defa/ofa.aspx> WSRLA Documents for Review and Comment) and will provide it to interested parties.

Information supporting the LER is available from the project contact named below.

### **Planning Information**

The proposed project was reviewed by ODNR, USFWS, and SHPO as well as by the Ohio EPA Division of Drinking and Ground Waters and Division of Environmental and Financial Assistance.

The Ohio EPA has concluded that the project is not likely to adversely affect federally endangered or threatened species, or critical habitat. The USFWS and ODNR indicate that the project is within the range of the endangered Indiana bat and threatened northern long-eared bat. The project should not require the removal of any trees, however, tree clearing and trimming will be limited to those that are necessary for the project. Other mature trees are located outside of the work area and would provide alternative habitat for bats. Tree removal will only be permitted to occur October 1 - March 31 or in coordination with USFWS, and tree removal is limited to only those trees necessary for completion of the project (e.g., trees within the excavation location or within the path of heavy equipment, etc.). These tree clearing restrictions will further ensure that any potential impacts to Indiana bats or northern long-eared bats are avoided. Fish and other aquatic species should not be impacted, as directional drilling of waterlines avoid disturbing aquatic species and habitat by drilling underneath the stream beds. Soil and erosion control plans are in place to minimize temporary construction disturbances and filter sediment-laden stormwater before it reaches streams.

The Ohio EPA has concluded that due to the routing of the waterline extensions occurring in previously-disturbed grounds, lack of records in this area, and orientation of the waterline in the low-lying area near the Mad River, that this project will not effect archaeological or historical resources.

Construction will primarily occur in previously disturbed streets, right-of-ways, grass tree-lawn,

and residential lawn areas. Directionally drilled stream crossings avoid disturbing the three streams that will be crossed. The contractor is responsible for best management practices to control dust, erosion and sedimentation, and maintaining local traffic while construction occurs.

### **Conclusion**

The proposed 2019 Waterline Extensions Project is looping waterline extension that does not create any new service along the alignment, that qualifies for a LER and meets the following additional criteria for a LER:

*It has no significant environmental effect, no effect on high value environmental resources, no effect on high value environmental resources* – Trenches for new waterlines will be dug where existing roadways and right of ways adjacent to roads exist, and trenches will be dug in previously disturbed tree lawn areas of Lions Park in the Mad River and Onion Creek vicinity. Where the waterlines must cross a stream, the waterlines will be directionally drilled underneath the streams at least 5 feet beneath the stream bed. No trees should be required to be cut down, but if necessary, tree clearing will occur within seasonal clearing dates (October 1-April 30) to protect endangered bat habitat

Standard construction best management practices will be used to address things like noise, dust, traffic disruption, and storm water runoff.

*It is cost effective and not controversial* – The proposed waterline extension is cost effective, and the overall costs and benefits of creating a looping waterline outweigh the temporary savings in cost of doing nothing. Taking no action would allow unsafe water pressure to preside, inviting possible contamination and dangerous fire safety conditions. DEFA is unaware of any specific opposition to this project.

*It does not create a new, or relocate an existing, discharge to surface or ground waters, does not create a new source of water withdrawals from either surface or ground waters, or significantly increase the amount of water withdrawn from an existing water source, or 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* - This project will involve extension of existing waterline to connect other nearby waterlines in a loop, and does not substantially alter West Liberty's public water system.

*It will not provide capacity to serve a population substantially greater than the existing population* - This project will not create any new service connections where the looping waterline extension will be built. The extensions will not increase capacity, only pressure within the existing water system.

The planning activities for the project have identified no potentially significant adverse impacts. The project is expected to have no significant short-term or long-term adverse impacts on the quality of the human environment or on sensitive resources (surface waters, coastal zones, floodplains, wetlands, state-designated scenic or recreational rivers, prime or unique agricultural lands, aquifer recharge zones, archaeologically or historically significant sites, threatened or endangered species, or state and federal wildlife areas).

For more information, please contact:

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