



**Mike DeWine**, Governor  
**Jon Husted**, Lt. Governor  
**Anne M. Vogel**, Director

January 12, 2023

Ann Aubry, P.E., Interim Utilities Director  
City of Columbus  
910 Dublin Road  
Columbus, OH 43215

Re: City of Columbus  
Big Walnut Trunk Extension Phase 2  
Loan Number: CS390274-0396  
Finding of No Significant Impact

Dear Ms. Aubry:

On December 12, Ohio EPA issued a draft Finding of No Significant Impact (FNSI) for the City of Columbus – Big Walnut Trunk Extension Phase 2 project for public review and comment. The thirty-day period for comments has passed and no comments have been received. Therefore, the conclusions contained in that preliminary FNSI become the basis for this final FNSI for the above referenced project.

This final Finding of No Significant Impact may be revised or rescinded at a future date based upon either changes to the proposed project, the presentation of information which significantly alters earlier conclusions, or failure of the applicant to perform the environmental mitigation prescribed in the draft Environmental Assessment.

Sincerely,

A handwritten signature in black ink that reads "Kathleen Courtright". The signature is written in a cursive, flowing style.

Kathleen Courtright, Assistant Chief  
Division of Environmental and Financial Assistance



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

**December 12, 2022**

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

**City of Columbus – Franklin County  
Big Walnut Trunk Extension Phase 2  
Loan Number: CS390274-0396**

The attached Environmental Assessment (EA) is for a sanitary sewer extension project in Columbus 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 City of Columbus can then proceed with its application for the WPCLF loan.

Sincerely,

A handwritten signature in black ink that reads "Kathleen Courtright". The signature is written in a cursive, flowing style.

Kathleen Courtright, Assistant Chief  
Division of Environmental & Financial Assistance

Attachment

## ENVIRONMENTAL ASSESSMENT

### **Project Identification**

Project: Big Walnut Trunk Extension Phase 2

Applicant: City of Columbus  
910 Dublin Road  
Columbus, Ohio 43215

Loan Number: CS390274-0396

### **Project Summary**

The City of Columbus in Franklin County has requested \$89,400,000 from the Ohio Water Pollution Control Loan Fund (WPCLF) to construct the Big Walnut Sanitary Trunk Extension Phase 2 (BWSTE 2) in order to extend sanitary sewer service further into the northeastern Franklin County service area and portions of Delaware and Licking County.

Since this project will be constructed using trenchless technology, minimal surface impacts are expected.

### **History & Existing Conditions**

The City of Columbus has requested funding from the WPCLF in recent years to replace or construct several sanitary sewer projects. These projects are intended to extend sanitary service into previously unsewered areas as well as provide larger sewers equipped to handle a greater capacity of sanitary waste to prepare for anticipated development within the city and surrounding areas.

The Big Walnut Sanitary Trunk Extension Phase 2 service area consists of approximately 18,500 acres and extends to the north into southeastern Delaware County and to the east into western Licking County. This is an extension of the existing 72-inch Big Walnut Trunk Sewer constructed during the first phase of the project.

Maps of the project area are provided in the exhibits below.

### **Population and Flow Projections**

In general, the service area is sparsely populated with a mix of agricultural land, single family dwellings, Columbus and Franklin County Metro Parks property, and a few commercial/industrial tracts. It is anticipated that major development efforts (dense single family) will immediately follow the completion of the project and associated subtrunk sewers. This project is part of Columbus' efforts to expand its sewer system to meet future service needs.

### **Alternatives**

The initial horizontal alignment route was driven by objectives of minimizing the number of easement acquisitions required and property impacts, providing service to properties north of Walnut Street, coordination with the Central College Subtrunk service area, maximizing tunneling operations within rock (near perpendicular crossings of bedrock valleys), and taking advantage of the large utility and publicly owned parcels within the corridor.

Two alignment alternatives were developed for Phase 2 of the Big Walnut Trunk Sewer to minimize additional project costs and schedule delays associated with construction and easement acquisition while avoiding impacts to the public and environment.

- 1) Alternative 1: A preliminary alignment generally followed the western property line of the Upper Albany West subdivision and then extended north along the Lee Road right-of-way to Walnut Street. Easements for this alignment were obtained, and the alignment proposed to follow and utilize the existing easements whenever possible. The Metro Parks acquired land to create a buffer from sprawl along the Walnut Street corridor.
- 2) Alternative 2: In order to avoid constructing a sewer to a relatively undeveloped area, a second alignment was developed where the trunk sewer extends north beyond Walnut Street to Smothers Road. This doubles the length of the alignment originally planned, and easements do not exist for the tunnel between Walnut Street and Smothers Road.

The vertical alignment for the trunk sewer is based on four factors: depth to service the tributary area, connection to the Big Walnut Phase 1 tunnel, the geological profile, and the hydraulic performance of the sewer. The vertical profile is also dependent on the design slope of the sewer to convey the wastewater flow by gravity. The elevation of the Big Walnut Trunk Phase 1 termination at the existing tail tunnel sets the downstream elevation for Phase 2. A consistent slope of 0.10% is to be used throughout the Phase 2 project intended to keep the tunnel in rock throughout the alignment.

The anticipated geology encountered during construction of the tunnel is also important. Tunnels are most easily constructed through one type of strata. Alternating between bedrock and soils is difficult for tunnel boring machines to handle and increases construction costs. For this reason, the vertical alignment was designed to maintain the boring machine and tunnel zone within rock to the greatest extent possible and limit the transitions between existing strata.

### **Selected Alternative**

After considering the constructability and cost effectiveness of each design, Columbus elected to move forward with the horizontal alignment detailed in Alternative 2.

The Big Walnut Phase 2 project is an extension of an existing 72-inch sewer that currently terminates near the intersection of Central College Road and Sandimark Place. It will extend this sewer approximately 12,300 linear feet, or approximately 2.5 miles, in a northeasterly path to the area just west of the intersection of Smothers Road and Harlem Road. The finished diameter for the trunk will be 72 inches. It will be constructed mainly in the Ohio shale rock formation utilizing an open-faced main-beam tunnel boring machine (TBM).

Hydrogeological and geophysical studies were performed to select the best technology for tunnel construction and to ensure the TBM is designed to operate in a manner that reduces impacts to nearby residents and wells. The tunnel will be constructed at an approximate depth of 180-200 feet.

The construction will consist of a two-pass tunneling method in which the TBM will cut a larger 108-inch to 120-inch tunnel in the rock that will then have a 72-inch fiberglass reinforced pipe installed within it and grouted into place for sewer conveyance. The first pass would involve excavation of the tunnel and installation of initial support. The second pass would involve installation of the final conveyance pipe. The initial support system was expected to be completed with the use of rock dowels/bolts and wire mesh or shotcrete, with steel ribs and lagging used for any areas of poor rock quality.

The tunnel is intended to convey the expected flows at self-cleaning velocities to prevent accumulation of debris in the sewer and avoid turbulence which leads to gas discharge. The tunnel will also include corrosion protection to extend the lifespan of the infrastructure. Since this project will be constructed using trenchless technology, the only surface disturbances will be where the bore locations are proposed which is at the property just north of Smothers Road in Harlem Township, the property just north of East Walnut Road in Westerville, and the southernmost parcel that intersects Central College Road in Westerville. Once in operation, flows will be directed to Columbus' Southerly Wastewater Treatment Plant for treatment and discharge.

### **Implementation**

#### *Project Costs*

Columbus plans to borrow \$89,400,000 from the WPCLF. During the 20-year loan period Columbus will save approximately \$14,077,583 by using WPCLF dollars at the standard rate of 3.01%, compared to the market rate of 4.26%. Interest rates are set monthly and may change for the requested month of loan award.

#### *Project Schedule*

The anticipated loan award will occur in January 2022. Construction is expected to be completed by January 2025.

### **Public Participation**

A public notice was posted on the City of Columbus' Public Utilities webpage detailing the proposed construction project. Contact information was provided for any public questions or concerns.

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> 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, but the effects will be reduced or mitigated to acceptable levels as explained below.

#### Air Quality

Franklin County is in attainment for all regulated criteria air pollutants applicable to this project. The contractor will prevent unnecessary dust from construction activities 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

A Phase 1 Cultural Resource Investigation was previously completed for the affected project area and found no archaeological sites of significance within the project area. Trenchless construction techniques will create a low probability of significant impacts.

No historic properties are present within the construction area. The planned area of construction has been previously developed and all excavation work will take place within previously disturbed roads and rights-of-way alongside other installed utilities. As no new excavations will occur, no impacts are expected to archaeological or historical resources.

In the event of archaeological finds during construction, Ohio Revised Code Section 149.53 requires contractors and subcontractors to notify the State Historical Preservation Office (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

Nine federally listed species occur in Franklin County: the endangered Indiana bat, the endangered running buffalo clover, the endangered Scioto madtom, the endangered clubshell mussel, the endangered northern riffleshell mussel, the endangered rayed bean mussel, the endangered snuffbox mussel, the threatened northern long-eared bat, and the threatened rabbitsfoot mussel.

Coordination was completed with the Ohio Department of Natural Resources (ODNR) and United States Fish & Wildlife Service (US FWS) prior to nomination of this project. ODNR and US FWS recommended minimizing disruption to any aquatic habitat and tree clearing should occur within the recommended seasonal timeframe.

No habitat suited to the species listed above is in the project area, and trenchless construction will avoid impacts to any aquatic areas. 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 and Land Use

Based on the review of project planning and design, there will be no prime farmland losses as a result of this project.

### Floodplains

According to project planning and design, no construction is scheduled to occur within designated flood hazard zones.

### 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 if encountered during project construction.

### Safety, Noise, Traffic, and Aesthetics

Existing traffic patterns will be impacted. A traffic plan has been developed by the contractor prior to commencing construction which includes all proper warning signs and lane closures. The contractor will 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

Although one intermittent stream was identified within the project area, the planned trenchless method of construction will mitigate any impacts to the stream.

The contractor will minimize soil from eroding or otherwise entering onto all paved areas and into natural watercourses and ditches. Designated Wild and Scenic Rivers will be unaffected by this project as there are none located within the project's vicinity.

#### Wetlands

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

#### Energy Use

The completed Big Walnut Trunk Sewer Phase 2 will utilize a gravity sewer system where feasible, therefore minimizing additional regional energy usage.

#### Local Economy

Projected residential sewer bills with the implementation of this and other wastewater projects are expected to be approximately \$838/year, which is 1.5% of median household income (MHI) of Columbus, or \$54,902. By using WPCLF financing for this project, Columbus has minimized the economic impact on customers.

#### Conclusion

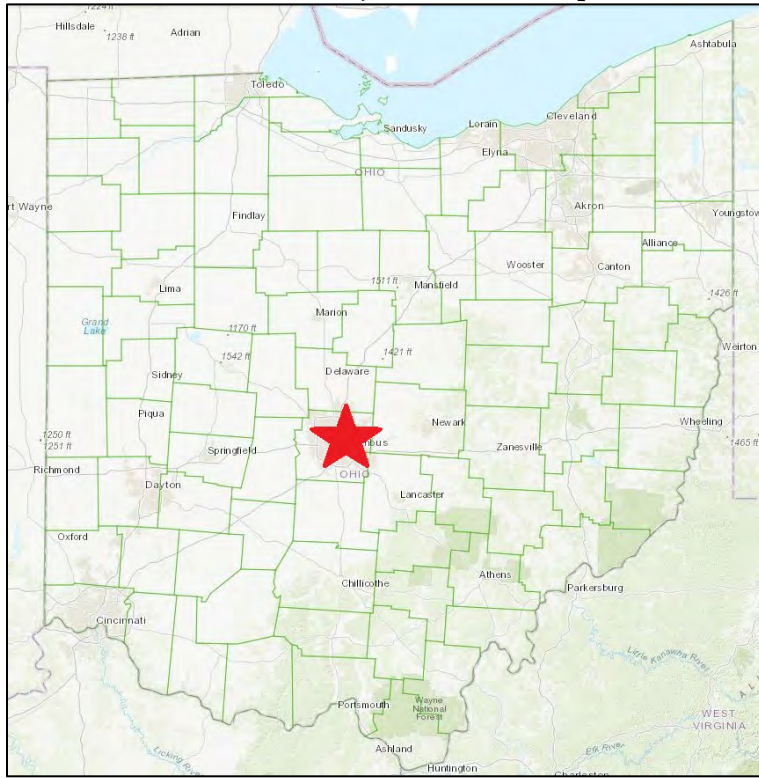
Based upon Ohio EPA's review of the planning information and the materials presented in this Environmental Assessment, we have concluded that there will be no significant adverse impacts from the proposed project as it relates to the environmental features discussed previously. This is because these 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.

#### Contact information

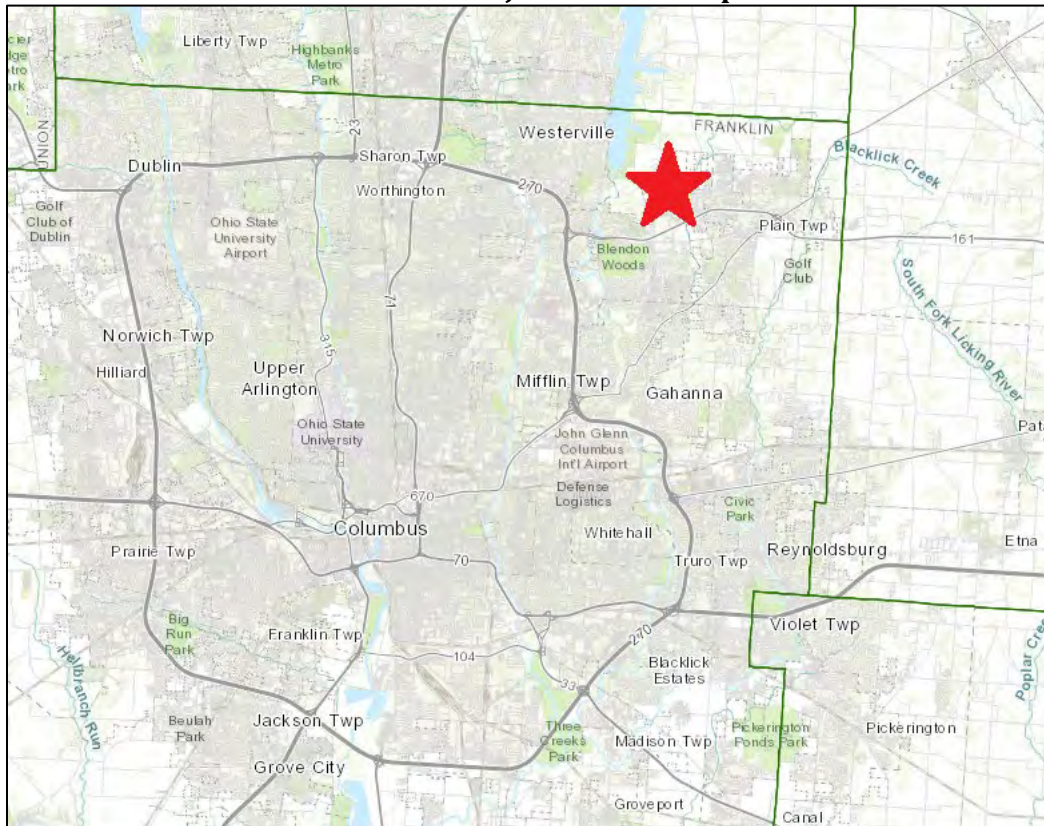
Kristin Parrish  
Ohio EPA-DEFA  
P.O. Box 1049  
Columbus, Ohio 43216-1049  
[kristin.parrish@epa.ohio.gov](mailto:kristin.parrish@epa.ohio.gov)



**Exhibit 1: Project location map**



**Exhibit 2: Project location map**





### Exhibit 3: Project location map

