



John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Craig W. Butler, Director


**August 29, 2017**  
**Limited Environmental Review and Finding of No Significant Impact**  
**City of Columbus – Hap Cremean Water Plant UV Disinfection**  
**Franklin County**  
**WSRLA No. FS390274-0239**

The attached Limited Environmental Review (LER) is for a water supply project in your area 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 LER describes the project, its costs, and expected environmental benefits. Making available this LER 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. This project's relatively narrow scope and lack of environmental impacts qualifies it for the LER rather than a more comprehensive Environmental Assessment. More information can be obtained by calling or writing the person named at the end of the document.

Loan award will proceed without further environmental review or public comment unless new information shows that environmental conditions of the proposed project have changed significantly.

Sincerely,

  
for Jerry Rouch, Assistant Chief

Division of Environmental and Financial Assistance  
Office of Financial Assistance

JR/JS

attachment

# LIMITED ENVIRONMENTAL REVIEW

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## A. PROJECT IDENTIFICATION

**Project Name:** Columbus – Hap Cremean Water Plant UV Disinfection, CIP No. 690536-100000

**WSRLA No.:** FS390274-0239

**Project Contact** Tracie Davies, Director  
Columbus Department of Public Utilities  
910 Dublin Road, 4<sup>th</sup> Floor  
Columbus, Ohio 43215

## B. HISTORY and EXISTING CONDITIONS

The City of Columbus Division of Water operates three water plants to provide residents of the City of Columbus and a large part of Franklin County with a reliable supply of water for potable use and fire protection needs. Two of these plants, the Dublin Road Water Plant (DRWP) and the Hap Cremean Water Plant (HCWP) (see Figures 1 and 2), obtain their raw water from surface water sources which can contain microbial contaminants such as *Cryptosporidium*. The source water for the HCWP, the City's largest treatment plant, is Big Walnut Creek. The existing HCWP is a conventional treatment and lime softening plant with a rated capacity of 125 million gallons per day (MGD), with the annual average day distribution system demand at approximately 70 MGD.

Disinfection and maintaining a chlorine residual in the distribution system are required parts of Ohio's drinking water treatment process. The DRWP uses sodium hypochlorite and the HCWP uses chlorine gas for disinfection and residual. Both plants currently meet or exceed all finished water quality regulatory requirements. Although not currently required, the City proposes to install ultraviolet (UV) disinfection at both plants in order to provide additional treatment for *Cryptosporidium* and other potential microbial contaminants.

The City has requested \$21 million from the Ohio Water Supply Revolving Loan Account (WSRLA) to help pay for this \$24 million project at the HCWP. Local funds will supply the remaining balance.

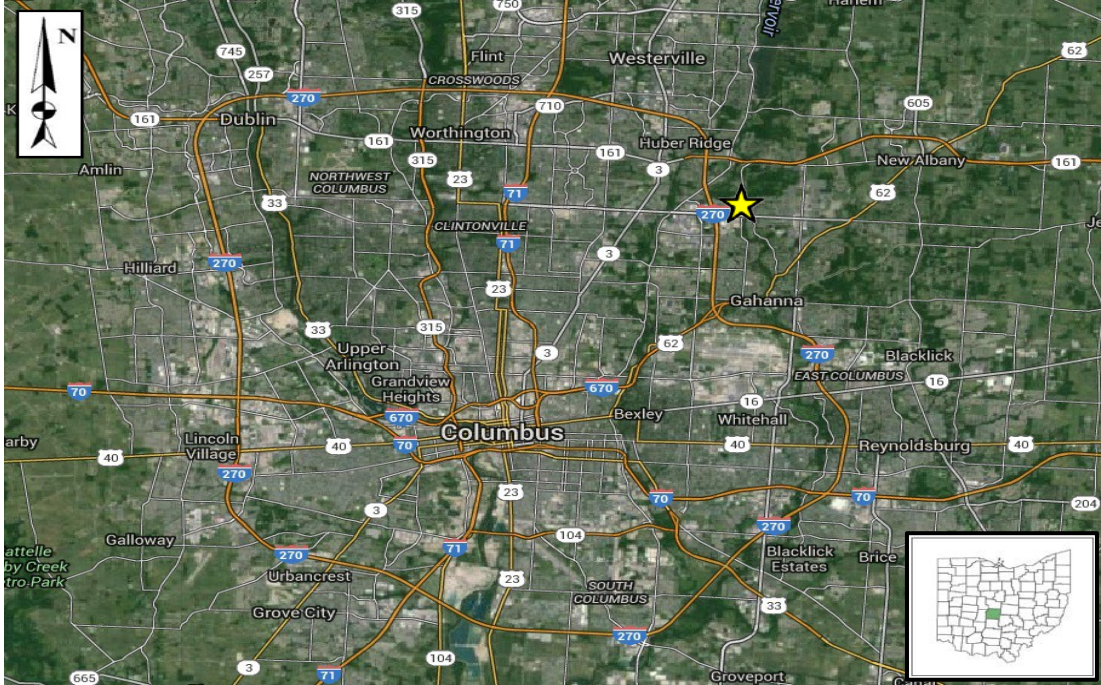
## C. PROJECT DESCRIPTION

The project at the HCWP will replace existing filter effluent piping and adjacent piping and backwash valves, install UV units on all 24 individual filter effluents and install associated operation and maintenance equipment.

All work will occur entirely within the HCWP filter building and adjacent areas, previously disturbed, developed areas lacking important environmental features, and requiring no new easements for construction.

The UV process uses ultraviolet light to inactivate a range of microorganisms. By upgrading the

plants with UV disinfection, the City will significantly enhance public health protection and position itself to meet future regulatory requirements and/or changes in water quality.



**Figure 1. Project location map**



**Figure 2. UV location**

#### **D. ESTIMATED PROJECT COSTS**

The City of Columbus will borrow approximately \$21 million from the WSRLA at the Standard interest rate (now 1.89%; the rate is set monthly and may change before loan award). During the 20-year loan period, the City will save approximately \$5.25 million by using WSRLA dollars at this rate, compared to the market rate of 3.14%.

#### **E. PROJECT SCHEDULE**

The anticipated loan award will occur in January 2018, and the work is estimated to be completed in 2021.

#### **F. PUBLIC NOTIFICATION**

This project is included in the city's capital improvement plan, which is accessible to the public. The design phase funding went through the city's legislation process, which provides public notice of the project and funding amounts. Based on the limited environmental and economic impacts, this is considered an appropriate level of public participation.

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.

#### **G. PLANNING INFORMATION**

The proposed project was reviewed by the Ohio EPA Division of Drinking and Ground Waters and Division of Environmental and Financial Assistance. No review agency opposes the project.

#### **H. CONCLUSION**

The proposed installation of UV disinfection is a minor upgrading of an existing public water system that qualifies for an LER and meets the following additional LER criteria:

*It has no significant environmental effect, no effect on high value environmental resources, and does not require extensive specific impact mitigation.* The project is installing UV units and associated equipment in previously-disturbed, developed areas within the confines of the HCWP, an area lacking important environmental features. The type of construction involved (i.e., excavating previously-disturbed areas and constructing new ancillary facilities adjacent or appurtenant to or existing facilities) is typical for such work and creates relatively few impacts. The project is within the filter building, so noise, dust and storm water runoff will not be an issue to the adjacent neighborhood.

*It is cost effective and not controversial.* The proposed addition of UV disinfection strengthens Columbus's ability to provide a safe, reliable supply of water to customers. A typical Columbus household's average annual water bill is approximately \$440, which is 0.98% of local median household income (MHI = \$44,744). These numbers compare favorably to the Ohio average water bill of \$592 and 1.2% of Ohio MHI. Water bills below 1.8% of MHI are generally considered affordable. Ohio EPA is unaware of controversy about or opposition to this project.

*This project does not create a new, or relocate an existing discharge to surface or ground waters; will not create a new source of water withdrawals from either surface or ground waters; will not significantly increase the amount of water withdrawn from an existing water source; will not 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; and, will not provide capacity to serve a population substantially greater than the existing population.* This project involves installation of UV units and associated equipment, adding another barrier to remove contaminants from the City's drinking water, and does not otherwise alter Columbus's public water system (withdrawal, treatment, distribution or usage of potable water).

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). The project will help Columbus to improve the overall reliability of its public drinking water system.

## **I. CONTACT PERSON**

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