

**ENVIRONMENTAL ASSESSMENT AMENDMENT
DRINKING WATER STATE REVOLVING FUND
CITY OF EAST LANSING – INGHAM COUNTY
DRINKING WATER TREATMENT PLANT IMPROVEMENTS**

January 2021

PROJECT IDENTIFICATION

Applicant: City of East Lansing, Ingham County

Address: 2470 Burcham Drive
East Lansing, Michigan 48823

Authorized Representative: Mr. Clyde Dugan, Manager

Project Number: 7442-01

PROJECT OVERVIEW

This Environmental Assessment Amendment is written to reflect project and user cost changes to the Fiscal Year (FY) 2021 Drinking Water State Revolving Fund (DWSRF) project covered by the February 2019 Environmental Assessment. The City of East Lansing (City) and Meridian Township formed the East Lansing - Meridian Township Water and Sewer Authority (ELMWSA) that owns and operates a water treatment plant (WTP) and distribution system to provide drinking water to the City and Meridian Township. The ELMWSA submitted a five-year plan to address deficiencies at the WTP, water distribution, storage and water supply systems. This Environmental Assessment Amendment covers cost changes related to water filter improvements. The estimated project cost increased from \$2,900,000 to \$4,560,000. This is due to an increase in equipment costs from the original 2019 estimate.

As a result of this project, the average East Lansing water user rate will increase by \$2.00 per month or \$24.00 per year and the Meridian Township average water user rate will increase by \$1.39 per month or \$16.68 per year.

PROJECT BACKGROUND

The ELMWSA WTP is located at 2470 Burcham Drive in Meridian Township (Figure 1). It was constructed in 1973 and upgraded in 1993. The facility serves a customer base of over 75,000 residences and businesses in the City of East Lansing and Meridian Township. The ELMWSA WTP has a firm capacity of 15 million gallons per day (MGD). The total current capacity for the water supply wells is 19.6 MGD and the firm capacity is 15.0 MGD.

The existing system consists of 29 water supply wells, and a two-million-gallon ground storage tank which serves as the treated water primary holding tank. East Lansing has three elevated water storage tanks and one ground storage tank. Meridian Township has two additional ground storage tanks and one ground storage tank jointly owned by the Township and the Lansing Board of Water and Light (LBWL).

The ELMWSA distribution system consists of approximately 68,317 linear feet of raw water main, and 17,762 linear feet of water distribution system pipes that convey treated water to

customers. There are three holding ponds in the system. The ELMWSA retains the right to purchase up to 1.32 MGD of finished water from the LBWL.

PROJECT NEED

The water plant filter control panels are severely deteriorated and corroded due to age and have reached the end of their useful life. The water filter controls need to be replaced for reliability.

The ELMWSA operates with four water filters. All four must operate to meet the current 15 MGD capacity. Two additional water filters are needed to increase reliability and functionality of the water works system, and will allow two filters to be down for cleaning and flushing while allowing four filter units to continue operation.

ALTERNATIVES CONSIDERED

The alternatives considered to address the deficiencies with the water filters and controls were discussed in the February 2019 Environmental Assessment (attached) and remain unchanged.

Based on cost, minimizing environmental impact, and meeting WTP reliability needs the Water Filter Capital Improvement Alternative is the cost-effective alternative. Below is the annual present worth cost for the water filter upgrade alternative.

Table 1- Present Worth Cost

	Water Filter Alternative
Capital Cost	\$4,560,000
Annual OM&R	\$10,000
Present Worth of 20-year Salvage Value	\$1,877,700
Net Present Worth	\$2,529,000
Equivalent Annual Cost of Annual Present Worth	\$147,300

USER COST AND PROJECT SCHEDULE

The project will be funded by a DWSRF low interest loan obtained 2021. The interest rate for the 2021 loan is 1.875 percent. The estimated cost to complete the project is \$4,560,000, which includes construction, contingencies, engineering, administration, and legal services. As noted previously, the average East Lansing user rate will increase by \$2.00 per month or \$24.00 per year. The average Meridian Township user rate will increase by \$1.39 per month or \$16.68 per year. Construction is expected to begin in the summer of 2021 and be completed by December 2022.

ENVIRONMENTAL IMPACTS

Beneficial impacts resulting from the project include more reliable system controls and efficient water filter operation, leading to an improved water supply.

Construction impacts associated with the proposed project are expected to be short-term. These impacts include construction vehicle traffic, noise, dust, emissions, and construction personnel. There should be minimal traffic interruptions since all the construction work will be confined to the WTP (Figure 2). The water plant will continue to operate at full capacity during the upgrades and all upgrades will be completed in accordance with all applicable laws and regulations. The water filter installation will require an Act 399 permit, which will be obtained prior to construction.

EGLE, Water Resources Division, determined that based on Michigan's Floodplain Regulatory Authority found in Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, the ELMWSA WTP is located in a floodplain, but it is not regulated by EGLE because the drainage area of the tributary to Pine Lake Outlet Drain is less than two square miles at this location.

A rare species review was completed through the Michigan Natural Features Inventory (MNFI). The MNFI determined that the Blanding's turtle has been known to occur near the project site. Since the WTP is adjacent to a wetland area, construction could impact the Blanding's turtle. The proposed construction will not encroach on the wetlands and little to no tree clearing is expected. No transport, encroachment, or storage of construction materials will be allowed in or near the wetland. Land will not be disturbed unless necessary. If a Blanding's turtle is seen, construction will cease until the animal has left the area.

Based on a preliminary analysis, the United States Fish and Wildlife Service (USFWS) identified four federally endangered or threatened species within the project areas. Four species which have been identified by the USFWS that occur in Clinton and Ingham Counties are the Indiana bat, Northern long-ear bat, Eastern prairie fringed orchid, and Eastern Massasauga rattlesnake. It has been determined that suitable habitat is not present, and the project activities will not disturb the listed species or their habitat.

The State Historic Preservation Officer determined that there would be no adverse effect on historic properties within the project area. The Tribal Historic Preservation Officers that may have historical, religious, or culturally significant resources in the area were contacted and none expressed concerns.

PUBLIC PARTICIPATION

A public hearing to discuss the proposed project was advertised, held, and recorded according to DWSRF guidelines. The hearing was advertised on March 16, 2018, in the *Lansing State Journal*, and the hearing was held on April 16, 2018, at the East Lansing - Meridian Water and Sewer Authority Water Treatment Plant Board Room. There were no questions from the public.

REASONS FOR CONCLUDING NO SIGNIFICANT IMPACTS

No long-term significant impacts are associated with this project. Long term positive impacts include increased efficiency and reliability of the WTP filter operations. The benefits of the proposed project are anticipated to outweigh the short-term construction impacts.

Questions regarding this Environmental Assessment should be directed to:

Mr. Clarence Jones, Project Manager
Water Infrastructure Financing Section
Finance Division
Michigan Department of Environment, Great Lakes, and Energy
P.O. Box 30457
Lansing, Michigan 48909-4957
Telephone: 517-599-4553
E-Mail: Jonesc13@michigan.gov