

Division of Water**Request for Legislation**

An ordinance authorizing the Division of Water (CWD) to enter into one or more Public Improvement contracts to construct improvements to the Nottingham Water Treatment Plant's intake crib.

Background/Purpose:

Algae loading in Lake Erie has been increasing in recent years. As the algae decomposes, it consumes much of the oxygen in the bottom of the lake, resulting in "hypoxic," or low oxygen, water, usually occurring in late August / early September. It is anticipated these events will continue to occur and may worsen in future years. Hypoxic lake water stays close to the lake bottom, as it is colder and denser than normal lake water. As the pH of this water drops, it will uptake metals from the lake sediment, especially iron and manganese. Manganese in raw water can be especially difficult to treat, resulting in discolored water being sent to several communities. Because of its location in the lake, Nottingham's intake is particularly susceptible to these events. Because hypoxic water hugs the bottom of the lake, CWD intends to raise the top of Nottingham's crib such that only higher elevation, non-hypoxic, water enters the crib.

Scope of Work/Commodities/Services:

Using one of its new water quality buoys and sensing equipment, CWD has determined that raising the top of the Nottingham crib eight feet will keep hypoxic water out of the intake. CWD intends to install a steel ring, approximately 8 feet tall by 75 feet in diameter, on top of the existing Nottingham crib structure. The ring will be designed to be modular, allowing for further raising of the top of the crib if necessary. Design is underway.

Justification/Urgency:

Lake Erie hypoxic water events have negatively affected water quality at CWD treatment plants, especially the Nottingham Water Treatment Plant, in recent years. These events have resulted in public notifications of discolored water. The most recent event occurred in late August / early September, 2021.

Anticipated Costs and funding source:

The project is valued at \$2,000,000. The funding sources shall be Fund 52, SF 001, the fund or sub-fund to which are credited the proceeds of current and future bonds, if issued for this purpose, and/or that the Director of Public Utilities and/or the Director of Finance is authorized to apply for and accept one or more Water Supply Revolving Loan Account ("WSRLA") loans from the Ohio Water Development Authority to provide partial financing for the improvement.

Schedule or Term of Contract:

CWD hopes to accomplish the construction work of these Public Improvements contracts during the summer of 2023.

Current Contract(s):

N/A

Previous Contract(s):

N/A