



Sheldon Neeley  
Mayor

## CITY OF FLINT, MICHIGAN Department of Public Works

Clyde Edwards  
City Administrator

Michael J Brown  
Director

August 2, 2021

Mr. Eric Oswald, Director  
Drinking Water and Municipal Assistance  
Michigan Department of Environment, Great Lakes and Energy  
525 West Allegan Street  
PO Box 30473  
Lansing, Michigan 48909

**Sent via Email**

Re: Response to USEPA "Performance Period" Correspondence

Dear Director Oswald:

This correspondence is in response to the June 9, 2021 letter received from USEPA – Region 5 addressing the "performance period" requirements in Paragraph 60(b)(iii)(D) of EPA's Safe Drinking Water Act 1431 Emergency Order, as amended on November 17, 2016. In this letter, EPA states that the "performance period" requirements of the Amended Order can be met if the City of Flint meets two requirements. The first requirement focuses on the quality of the water to be treated. The second requirement dictates the standard procedures and operating protocol that must be documented and implemented for the proper operation of the newly installed treatment plant infrastructure and chemical feed facilities. The City has addressed the first requirement in previous correspondence and concluded that the Great Lakes Water Authority (GLWA) and Genesee County Drainage Commission (GCDC) water characteristics are similar and compatible. This conclusion has been supported by EGLE and USEPA.

To address the second requirement in EPA's June 9 letter, the City has developed protocols for the operation of its treatment facility. These protocols need to consider that both flow rates and source water pH, phosphate and chlorine levels may fluctuate during a 24-hour period. Initially, the Plant will operate in a manual mode of operation. This mode will have the Plant monitor and control the flow rates from both the GLWA and GCDC sources. Based on the total Plant flow and GLWA/GCDC blend ratio, the three chemical feed pumps (hypochlorite, sodium hydroxide and orthophosphate) will be manually adjusted to achieve the desired feed rates. The proper feed rates at the various Plant flows and blend ratios have been calculated and presented in a spreadsheet that the Plant operators will use. The algorithms used to develop the spreadsheets can also be used to set chemical feed rates. The finished water quality will be monitored to assure that the target chlorine level, orthophosphate level and pH are achieved.

With the completion of the new Chemical Building in late 2021, the plant automation capabilities will increase with the ability to flow pace chemical feed and trim chemical feed rates based on actual finished water quality. Full plant automation will not be achieved until the mid-2022 when improvements are completed at the GLWA vault (FL-01) and control algorithms are developed to predicted the blend water quality. Extensive training will be undertaken to assure Plant operators are familiar with each step of the automation process.

Several years ago, Standard Operating Procedures (SOPs) were developed to assist Flint with the operation and maintenance of critical components of the Plant's operation. Flint has implemented the following SOPs:

- Phosphoric Acid Addition at Control Station #2
- Sodium Hydroxide Addition at Control Station #2
- Sodium Hypochlorite Addition at Control Station #2
- Sodium Hypochlorite Testing
- Control Charting of Water Quality Parameters
- Valve Inspection, Exercising and Maintenance
- Distribution Storage and Pumping Station Operation and Maintenance

These SOPs should be adequate for the initial manual operation of the Plant. However, prior to implementing more advanced automation of the facility (late 2021), a SOP will be developed addressing Instrument & Control equipment operation, calibration and maintenance. All SOPs will be periodically reviewed and revised as increased plant automation and other operational modifications are implemented.

The City believes the preceding actions are sufficient to address USEPA's and EGLE's requirements and assure the safe and reliable operation of the Flint Water Treatment Plant. The City plans to begin treating its new secondary source during the week of August 9.

Please contact me if you have any questions or concerns.

Sincerely,



Michael J. Brown  
Director, Department of Public Works