

**Summary of City of Flint (City) Actions  
In Response to the  
EPA Emergency Administrative Order  
Updated: September 8, 2016**

Chapters 52, 57, 59a & 59b: Weekly Conference Call Regarding Flint Water Plant Operations September 8, 2016.

EPA Order Due Date: Weekly

MDEQ and the Flint Water Treatment Plant staff held the weekly call on September 9<sup>th</sup> to review and discuss the summary of water quality and corrosion control parameters reported on the City's September operation report completed to date, a summary of water quality parameters collected the week of September 4<sup>th</sup> in the distribution system, and some other matters pertaining to operation of the City's water supply.

The following observations were noted:

- The supplemental phosphate dosage was consistent and ranged between 2.19 and 2.27 milligrams per liter (mg/l). The phosphate residuals measured at the plant tap ranged from 3.19 to 3.46 mg/l entering the distribution system.
- All of the established weekly distribution system sites reported a phosphate residual at or above 3.1 mg/l, ranging between 3.1 and 3.2 mg/l of phosphate.
- All pH measurements were greater than 7.0 at the Enhanced Water Quality Monitoring (EWQM) sites and the Point of Entry (Control Station #2) to the system. The pH levels ranged from 7.33 to 7.49 in the water received from Great Lakes Water Authority (GLWA) and from 7.31 to 7.43 at the 10 distribution system sites.
- Guidance in the form of standard operating procedures is being developed by Flint WTP and DEQ staff to establish response protocols when the phosphate residual or pH level is unacceptable at any of the EWQM sites that will include resampling and other remedial actions.
- Iron levels at EWQM sites ranged from 0.01 to 0.10 mg/l. Plant tap iron concentrations were measured at 0.01 to 0.02 mg/l in the last week.
- Lead samples taken at the EWQM sites during the week of August 30<sup>th</sup> all reported no lead detected.
- The supplemental chlorine feed at Control Station #2 ranged from 0.77 to 0.86 mg/l and the plant tap free chlorine residuals ranged from 1.3 to 1.5 mg/l.
- The free chlorine residuals at the 10 EWQM sites in the distribution system ranged from 0.34 to 1.62 mg/l. The low residuals are always at site #6. The lowest free chlorine residual at the other 9 EWQM sites during the past week was 0.73 mg/l.
- WTP staff continues to work with DEQ staff to improve data evaluation and inform operational decisions.

The following information was provided through daily operation summary reports prepared by DEQ staff during the week of September 4<sup>th</sup> and in discussions with Flint staff.

- On September 8<sup>th</sup>, the free chlorine residual at the plant tap has been very consistent at around 1.55 mg/l. Plant management has agreed to immediately implement a target free chlorine residual of 1.60 mg/l at the plant tap.
- On September 7<sup>th</sup>, the City had problems maintaining chlorine residuals leaving the Westside Reservoir. The City ceased pumping from the reservoir when the residual dropped to 1.31 mg/l. Plant tap residuals were consistently maintained ~1.55 mg/l.
- Due to the chlorine residuals leaving City reservoirs being below target values, the water plant operations staff has started a daily routine of checking the strength of the sodium hypochlorite solution used at each reservoir.
- Flint WTP laboratory staff was advised to prepare a summary of their historical monitoring for Heterotrophic Plate Counts (HPC) in the distribution system. Essentially, almost all HPC distribution system results have been zero (0) cfu/ml.
- DEQ and the City of Flint discussed minor modifications to the proposed permanent chemical feed system at CS-2. The necessary equipment will be ordered within the next few days. The new system will be tied into the SCADA system and use pulse pacing.
- Staff from the City, EPA, DEQ and Arcadis held a project kickoff meeting at the plant on September 8<sup>th</sup>. The meeting's intent was to discuss the distribution system optimization plan. Detailed minutes of the meeting will be available later (+/- 2 days) from Arcadis.
- 90% completed plans for the 36-inch raw water line bringing KWA raw water to the Flint WTP were received from Genesee County. Final plans are due September 16<sup>th</sup>.
- The City is developing a revision chain of custody form for all water samples submitted to the lab. Initial revisions have been made to the forms and some final polishing will be done over the next couple of days.
- The lab staff is investigating methodologies to monitor the sulfate concentration. Also, there were discussions on the pros and cons for the approved methods for monitoring fluoride.