

**Summary of City of Flint (City) Actions  
In Response to the  
EPA Emergency Administrative Order  
Updated: March 11, 2016**

Chapters 52, 57, 59a & 59b: Weekly Conference Call Regarding Flint Water Plant Operations March 11, 2016.

EPA Order Due Date: Weekly

MDEQ and the Flint Water Treatment Plant staff held the weekly conference call to review and discuss the weekly summary of water quality and corrosion control parameters that are reported on both the city's March operation report completed to date, and a summary of water quality parameters collected in the distribution system during the week of March 6<sup>th</sup>. These reports are being used to monitor the city's corrosion control treatment.

The following observations were noted:

- The supplemental phosphate dosage was consistent and ranged between 2.62 and 2.73 milligrams per liter.
- All of the phosphate residuals in the distribution system were at or above the minimum of 3.1 milligrams per liter to be maintained at all distribution monitoring locations, ranging between 3.10 and 3.70 milligrams per liter.
- The city of Flint began parallel testing of phosphate residuals in the distribution system to compare a field kit with the laboratory analytical procedure. Results look comparable. The field kit takes 10 to 15 minutes while the lab procedure takes 90 minutes to report a result after the sample is transported to the lab.
- One pH measurement at 3742 Davison Road was below 7.0, at a value of 6.94. This site is also the one that has periodically reported unexpectedly low chlorine residuals. An investigation has revealed that the owners installed point of use treatment, including a charcoal filter, which reduces or removes the chlorine residual and may impact pH. The city is moving their monitoring station (#1) to an adjacent site.
- All other pH measurements were greater than 7.0 at the remaining Enhanced Water Quality Monitoring sites and the Point of Entry to the system. The pH levels ranged from 7.07 to 7.31.
- MDEQ will assist the city of Flint in contacting the GLWA Lake Huron WTP to discuss their pH leaving the plant to discuss the recent trend of lower pH being delivered to the city and to determine if GLWA may be able to increase pH levels.
- The magnesium concentration reported in the plant tap on March 6<sup>th</sup> was unusually low, at 0.5 milligrams per liter. The average concentration in March thus far is 3.5, and the range other than this result is 2.4 to 5.3. The city indicated that magnesium concentrations are calculated based on the calcium level measured by use of an analytical procedure (titration) in the laboratory. The

low magnesium level is thought to be the result of an “over-titration” for calcium that should have triggered repeated titrations to verify the abnormal results.

- Iron levels ranged between 0.01 and 0.05 milligrams per liter at all Enhanced Water Quality Monitoring sites. Plant tap iron concentrations ranged from 0.01 to 0.04 in the last week.
- Free chlorine residuals reported at monitoring stations ranged from 0.3 to 1.15 milligrams per liter in the distribution system.
- All of the lead samples collected from the EQWP sites this week reported no lead detected.

Overall, the corrosion control treatment is meeting expectations as demonstrated from the water quality monitoring submitted this week.