

**Summary of City of Flint (City) Actions
In Response to the
EPA Emergency Administrative Order
Updated: October 6, 2016**

Chapters 52, 57, 59a & 59b: Weekly Conference Call Regarding Flint Water Plant Operations October 6, 2016.

EPA Order Due Date: Weekly

MDEQ and the Flint Water Treatment Plant staff held the weekly call on October 6th to review and discuss the summary of water quality and corrosion control parameters reported on the City's September and October operation reports completed to date and a summary of water quality parameters collected the week of October 2nd from the 10 sites monitored weekly.

The following observations were noted:

- The supplemental phosphate dosage was consistent and ranged between 2.43 and 2.46 milligrams per liter (mg/l). The phosphate residuals measured at the plant tap ranged from 3.41 to 3.69 mg/l entering the distribution system.
- All pH measurements were greater than 7.0 at all 10 of the Enhanced Water Quality Monitoring (EWQM) sites and the Point of Entry (Control Station #2) to the system. The pH levels ranged from 7.25 to 7.46 in the water received from Great Lakes Water Authority (GLWA) and from 7.37 to 7.50 at the 10 distribution system sites.
- All of the established, 10 weekly distribution system sites reported a phosphate residual at or above 3.1 mg/l, ranging between 3.2 and 3.4 mg/l of phosphate.
- Procedures for responding to phosphate residuals or pH levels that do not meet the goals established to restore the distribution system need to be developed. The Distribution System Optimization Program being conducted by Arcadis beginning next week is expected to address this matter as a priority, providing water quality goals and the associated treatment parameters necessary to meet those goals.
- Iron levels at EWQM sites ranged from 0.01 to 0.05 mg/l. Plant tap iron concentrations measured 0.01 to 0.02 mg/l in the last week.
- Lead samples taken at the EWQM sites during the week of September 27th all reported no lead detected.
- The supplemental chlorine feed at Control Station #2 ranged from 1.12 to 1.17 mg/l and the plant tap free chlorine residuals ranged from 1.6 to 1.7 mg/l.
- The free chlorine residuals at the 10 EWQM sites in the distribution system ranged from 0.62 to 1.64 mg/l. The low residual was at site #6 and the high residual was at the Cedar Street Reservoir. The lowest free chlorine residual at the other 9 EWQM sites during the past week was 1.04 mg/l.

The following information was provided through daily operation summary reports prepared by DEQ staff during the week of October 2nd and in discussions with Flint staff.

- On October 5th, the free chlorine residual leaving the plant averaged 1.70 mg/l with 0.86 mg/l received from GLWA. The phosphate feed rate varied from 2.39 to 2.51 mg/l producing a level entering the system at 3.69 mg/l. The phosphate levels from GLWA were 1.39 mg/l. The plant tap temperature decreased to 15.9° C, which is in line with the rapid fluctuations expected this time of year caused by wind directional changes. The tap pH was reported at 7.26.
- On October 4th, the plant tap chloride and sulfate concentrations are 13 and 15 mg/l, respectively. Preparations were made to give the operations staff a lab tour next week during the scheduled training sessions. Several operation staff members were given some example dosage calculation problems similar to those expected on the F-4 examination.
- On October 2nd, there were concerns about a drop in the chlorine residuals at the Cedar Street Reservoir that resulted in stopping the scheduled withdrawal from the reservoir. The plant staff plans to fill Cedar Street and boost the applied chlorine tonight. Observations by plant supervisory staff and DEQ on the coincidence of decreasing residuals at the Cedar Street Reservoir after heavy precipitation were discussed.