

**Summary of City of Flint (City) Actions
In Response to the
EPA Emergency Administrative Order
Updated: August 25, 2016**

Chapters 52, 57, 59a & 59b: Weekly Conference Call Regarding Flint Water Plant Operations August 25, 2016.

EPA Order Due Date: Weekly

MDEQ and the Flint Water Treatment Plant staff held the weekly call on August 25th to review and discuss the summary of water quality and corrosion control parameters reported on the City's August operation report completed to date, a summary of water quality parameters collected the week of August 21st 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 2.26 and 2.29 milligrams per liter (mg/l). The phosphate residuals measured at the plant tap ranged from 3.27 to 3.56 mg/l entering the distribution system.
- All but one of the established weekly distribution system sites reported a phosphate residual above 3.1 mg/l, ranging between 3.1 and 3.2 mg/l of phosphate. The one site (#6) below 3.1 was 2.9 mg/l.
- 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 7.45 to 7.52 in the water received from Great Lakes Water Authority (GLWA) and from 7.35 to 7.44 at the 10 distribution system sites.
- The need for appropriate response actions when water quality parameters are not within acceptable ranges, such as low pH values or low phosphate residuals, were discussed both during this call and during the weekly call with EPA, DEQ and the City of Flint. Guidance in the form of standard operating procedures needs to be developed with input from all involved parties that will establish appropriate response protocols that include resampling and other possible remedial actions.
- Iron levels at EWQM sites ranged from 0.01 to 0.06 mg/l. Plant tap iron concentrations were all measured at 0.01 mg/l in the last week.
- Lead samples taken at the EWQM sites during the week of August 16th all reported no lead detected.
- The supplemental chlorine feed at Control Station #2 ranged from 0.87 to 0.94 mg/l and the plant tap free chlorine residuals ranged from 1.2 to 1.5 mg/l.
- The free chlorine residuals at the 10 EWQM sites in the distribution system ranged from 0.17 to 1.44 mg/l. The low residuals are always at site #6, Salem Housing. The free chlorine levels at the other 9 EWQM sites range from 0.74 to 1.44 mg/l.
- The Flint WTP is assessing the laboratory equipment and staff training necessary to initiate additional corrosion control monitoring as recommended by DEQ staff.
- 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 August 22nd and in discussions with Flint staff.

- The residuals from GLWA were higher (August 24th) than they have been for the past month. Incoming residuals were between 0.91 to 0.92 mg/l. During the period, the incoming pressures from GLWA fluctuated from 95 to 105 psi.
- Based on reports that the chlorine residuals had fallen to 0.2 mg/l or less at approximately half of the 24 sentinel monitoring stations on August 24th, it was recommend to the Water Treatment Plant foreman that it may be prudent to raise the amount of applied chlorine at the plant tap and both reservoirs. The plant tap residual has been fairly constant at or near 1.50 mg/l. The residuals leaving the reservoirs have been highly variable between 1.27 and 1.53 mg/l. The foreman contacted and received the superintendent for permission to make an upward adjustment to the feed rates at the reservoirs.
- The chemical injection quills were received on August 25th. Maintenance staff was able to install the quill at the West Side Reservoir. Maintenance staff was called back to the water treatment plant to address another issue and was not able to install the (injection) quill at Cedar Street Reservoir this day.
- The *Constant Chlor* feed system at Cedar Street Reservoir operated overnight on August 24th, but was only able to augment the incoming water by 0.13 mg/l (calculated) for the 1.8 million gallons added to the tank.
- The draft NPDES Certificate of Coverage for the Flint WTP will be placed on the DEQ website for a 2-week period for public comment soon.