



Flint River testing in light of Flint’s drinking water crisis

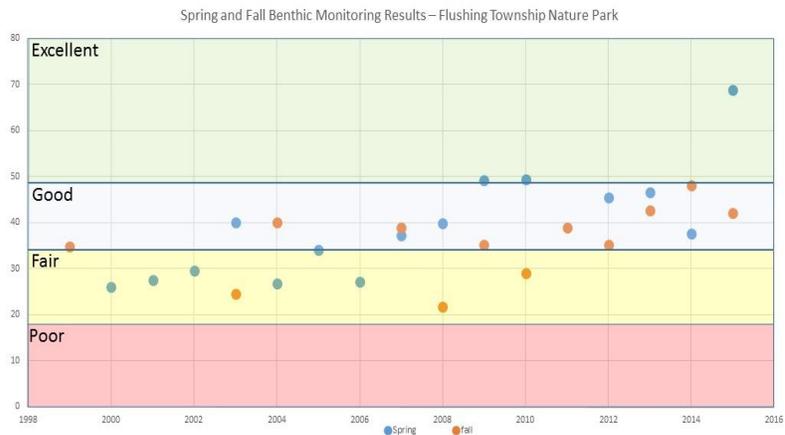
This is a time of significant hardship for Flint residents. Lead contamination in the City’s drinking water supply has many questioning the quality and health of the Flint River. The Flint River Watershed Coalition is appalled at the condition of the City’s drinking water, and dismayed that the local, state, and federal agencies that are meant to protect our citizens and our drinking water failed so completely. Our message to the world is simple:

It’s not the river.

The Flint River is a vibrant ecosystem that supports a growing population of species such as eagles and ospreys, who live along and hunt in the Flint River. Recreational opportunities in and along the Flint River are abundant, and we’re seeing higher numbers of users every year. Local support for the protection, preservation, and improvement of the river has never been stronger.

Unfortunately, news reports are erroneously making statements such as “the highly corrosive Flint River” or “the river serves as an industrial sewer.” These reports simply are not accurate.

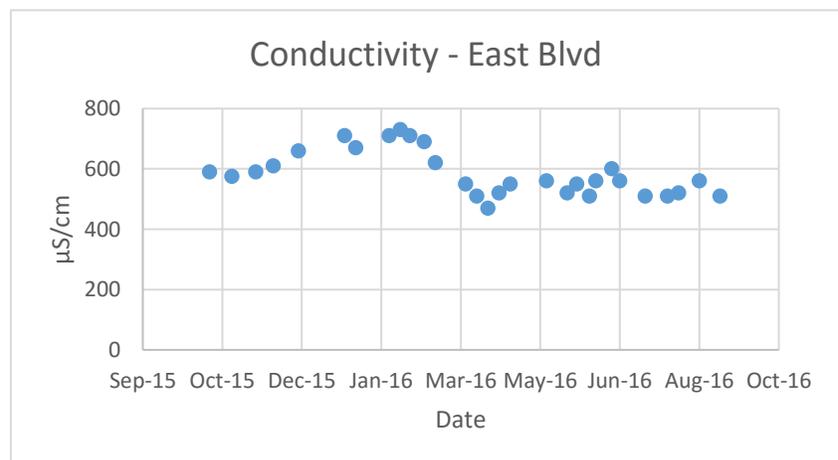
- **Long-term benthic monitoring data** show an ecosystem with data scores that strongly trend from “fair” toward “excellent.” Our data show a wide array of animals that live and thrive in the river across the entire 1,400 square mile watershed. The graph below shows the compilation of results from one monitoring site on the **Flint River at Flushing Township Nature Park**, which is downstream of Flint and the drinking water plant.



- **Benthic testing** also show that 20 of our 35 monitoring sites consistently have at least two, and typically 3-5, of the ‘pollution intolerant’ species of macroinvertebrates. These indicators of good-excellent water quality would not live in these streams were it not for consistently high water quality coupled with excellent aquatic habitat.

- **Conductivity.** Testing of untreated river water (i.e. raw water taken directly from the river) by FRWC staff shows **conductivity measurements** (as a surrogate for corrosiveness) very near the recommendation for *treated* drinking water – **50-500 $\mu\text{S}/\text{cm}$.**

For comparison, sea water is typically 50,000 $\mu\text{S}/\text{cm}$.



- **Lead Testing.** FRWC staff also tested for lead over the same time frame as above. Each test showed **no indication of lead** in the river itself. Staff tested in three locations, including downstream of the waste water treatment plant. Results indicate that so far the lead from the City’s water supply is not being found in the Flint River in detectable amounts.
- **Certified Lab Testing.** To confirm our results, FRWC staff collected samples in accordance to standard lab procedures for Merit Labs in East Lansing, MI.

Merit Lab Test Results

Chloride: Federal Secondary Drinking Water Standard for chloride is **250 mg/L**.

February:	Irish Rd: 49 mg/L	East Blvd: 52 mg/L	Francisco Rd: 86 mg/L
April:	28 mg/L	30 mg/L	39 mg/L
May:	40 mg/L	35 mg/L	66 mg/L
July:	no value	36 mg/L	40 mg/L

Lead:

February:	Irish Rd: 0 mg/L	East Blvd: 0 mg/L	Francisco Rd: 0 mg/L
April:	Irish Rd: 0 mg/L	East Blvd: 0 mg/L	Francisco Rd: 0 mg/L
May:	Irish Rd: 0 mg/L	East Blvd: 0.001 mg/L	Francisco Rd: 0 mg/L
July:	Irish Rd: 0 mg/L	East Blvd: 0 mg/L	Francisco Rd: 0 mg/L

Federal Primary Drinking Water Standard for lead is **zero mg/L**.

Interpreting Chloride Results

Secondary Drinking Water Regulations set non-mandatory water quality standards for 15 contaminants. EPA does not enforce these “secondary maximum contaminant levels” (SMCLs). They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health. The SMCL for chloride is currently 250 mg/L.

EPA Recommended Water Quality Criteria for Aquatic Life

- EPA acute concentration for chloride = 860 mg/L
- EPA chronic concentration for chloride= 230 mg/L.

Treating river water for drinking water is very different from treating water from large, continuous bodies of surface freshwater, such as Lake Huron. Rivers generally contain a greater — and often varying — concentration of organic materials, such as decaying leaves and fish waste. These are naturally-occurring materials found in healthy aquatic ecosystems. Our data show the Flint River is indeed a strong aquatic ecosystem. It was not the quality of the Flint River that caused the high bacterial levels, violations of the Safe Drinking Water Act for TTHM, the lead crisis and possible link to the Legionnaires outbreak.

It was improper treatment of the water, rather than the health of the river itself, that sparked the suite of issues with Flint’s drinking water.

This failure to properly treat the water, coupled with the failure for local, state, and federal agencies to take action, has harmed our citizens and this invaluable freshwater resource. This is unacceptable.

We will continue in all of our efforts to protect, preserve, and improve our beautiful Flint River. We hope you can join us. In the near term, we will continue testing the river on a regular basis to definitively demonstrate the river’s water quality, particularly in regard to chloride/conductivity and lead. In addition, we have made a donation to the Community Foundation of Greater Flint’s **Child Health & Development Fund** to support their important work to protect our city’s most vulnerable citizens.

What can YOU do? Join us in our benthic monitoring program this spring, donate to help us run additional lab tests, be vocal about your support of the river on social media. And when speaking about this crisis with friends and family (and the press!) remember to use the hashtag:

#itsnottheriver