

Timeline for the Boil Order

Monday

Regular testing procedures using our standard sampling procedures.

Tuesday

One house comes back coliform positive and that triggers testing the original house and those houses that were upstream and downstream plus one additional house across the street.

Wednesday

Marty notified me of an E. Coli positive test on the house that was coliform positive the day before around 11:00 a.m. This put into motion an investigation of the area to best determine the extent of the issue.

Public Works went into action to begin flushing the area and search for potential cross connections.

Marty started putting together information to talk to the State about the next steps.

City Council was notified that staff would start putting together the boil order as well as the press release.

Marty has a discussion with the State around 2:00 p.m. and was able to successfully have them consider only having those in the Battle Creek Service Area go on the boil order, not the whole City. This is because we have a valve that isolates our two main zones. That valve was closed so the other zone wasn't threatened with E. Coli. Our business district is spared from having to participate in the boil order.

Scott works with staff to prepare for the public notification. This includes Everbridge, texts to utility customers, social media, and preparing individuals to man the phones to answer any questions.

Scott has personal phone calls with ASD plus all charter schools in the affected area.

The key component was Kyler creating a map that was interactive and allowed residents the ability to zoom in or key in the address to see if they were in the boil order zone.

The State approves our boil order release and we have all staff situated for the public notification.

The public notification goes out at 5:30 p.m. The phones were manned by many individuals until 8:00 p.m. that night to answer questions. Lisa and Cyd manned social media and we were able to answer the questions that were asked.

We have a local company Eneive offer free filtered water to any resident who shows up. Any size container was allowed. This turned out to be a big help.

Marty and water crew meanwhile are doing extensive testing of chlorine residuals in numerous houses around the area to try to determine the source until midnight.

Thursday

We get back the test results from Tuesday on the original 4 homes and they all test positive for E. Coli.

Testing is extended a couple blocks prior to flushing and additional chlorination in trying to determine the extent of the spread of E. Coli.

In order to get more chlorination in the area, Public Works opens a PRV that malfunctions and ends up blowing up a water line. It takes hours to fix the line, but after that we were able to flush the system and get water with higher chlorine residual in the area. Tests were taken around 7:00 p.m. and sent to a company that can turn around the results in 18 hours. We think with the additional flushing and chlorine that we should get clean results.

Friday

The samples that were collected Thursday morning within a couple blocks of the original 4 homes come back E. Coli positive. These were taken before we had done the additional flushing and chlorination.

We get back test results from the tests taken the evening before after the flushing and chlorination had taken place. They show that the original four homes plus those around it come back clean. Gibson Well comes back coliform positive from ChemTech. The next day Richards Lab had the same sample come back E. Coli positive. We had done a side by side test. It just takes Richards an additional day to do the E. Coli test.

We do extensive flushing in the entire zone and we retest the initial four homes plus numerous other tests in the whole zone just to see if the E. Coli had spread. With the Gibson Well testing positive for coliform we wanted to be sure that it wasn't the source of the E. Coli. Overall we have 26 tests taken.

Saturday

We have a potential cross contamination that came to light, but after further investigation we determine that it wasn't the source.

All 26 tests came back clean including the Gibson Well.

We retest all homes that had previously shown positive for E. Coli, but had tested clean the day before including the Gibson Well.

Sunday

We receive test results that show that all tests were clean except the Gibson Well was coliform positive but no E. Coli. The Gibson Well had been offline for a few days with the exception of turning it on to collect a sample. The State wants the well to stay offline for the next few days for further investigation and extends the boil order to another day. Tests are taken again including additional homes directly around the Gibson Well.

Scott wrongly identifies the Gibson Well as the source of the E. Coli. Marty later corrects him that water from the system flows back into the well in order to lubricate the bearings before the well is turned on. This could have been how the well tested positive for coliform and E. Coli. It didn't make a whole lot of sense that the Gibson Well was the source as the well casing is a 1000 feet deep and that we didn't have other E. Coli positive tests further out in the zone.

Monday

All samples come back clean and with the Gibson Well offline the State allows us to release the boil order.

We're currently working with the State to bring the Gibson Well back online. It has a chlorinator installed and we've had clean tests without any chlorination the last three days.

Prevailing theory on the source is that it was introduced during construction and chlorine residual in that particular area wasn't robust enough to kill the E. Coli.

FAQ

How often and where do we test?

What's a cross connection?

Why did this happen twice?

What is a water zone?

How many wells and springs do we have? Which ones are chlorinated?

What went right

Public communication was a strength

Internal communication worked well

Employees worked hard almost around the clock to get the boil order lifted

What we can improve

Additional chlorination in our system both short term and long term

Better monitoring of the chlorine residuals