



## HANNIBAL BOARD OF PUBLIC WORKS

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### ELECTRIC, WATER AND WASTEWATER

3 INDUSTRIAL LOOP DRIVE  
PO BOX 1589  
HANNIBAL, MISSOURI 63401-1589  
573-221-8050  
[www.hannibalbpw.org](http://www.hannibalbpw.org)



**DATE:** October 9, 2017  
**TO:** Hannibal Board of Public Works  
**FROM:** Robert W. Stevenson, P.E.  
**Re:** Chloramine Replacement Project

I last reported the status of this project to the City Council on Sept 19, 2017.

Since that last report Black and Veatch accomplished the following:

1. Black and Veatch is continuing to perform bench scale testing to determine the most effective solution to replacing chloramines.
2. Within the last month Black and Veatch has conducted additional ozone testing, distribution water age testing, and collected and sent a 55 gallon water sample to another GAC manufacturer to conduct a lifecycle simulation. The simulation will help to estimate how long the GAC will last.
3. Note the GAC simulation testing is only a snapshot of the water – the data can prove not to be reliable so the results from the ongoing pilot test at the Treatment Plant may ultimately be what determines the lifecycle costs for GAC.
4. The last round of test results should be back within the next 4-6 weeks. The data will then have to be analyzed along with development of construction and O&M cost estimates for each alternative.
5. How long the GAC pilot runs is dependent on how long the GAC last. It is at real time. Therefore, if the test lasts 6 months the GAC life is 6 months. We are continuing to monitor and analyze the data.

Our own staff is responsible to collect data from the test columns and log the data in spreadsheets provided by Black and Veatch. Periodically the data collected is transmitted to Black & Veatch electronically for their review and analysis. Part of the data we are collecting involves the weekly shipping of samples to a certified lab for analysis. Samples have been delivered weekly since we started testing.

Also our staff is responsible to maintain the test column equipment, ensure the water feed pumps continue to operate properly, watch for leaks or spills, and report any malfunctions to Black & Veatch.

Staff is carrying out their responsibilities daily and plan to continue to do so until the testing phase ends.

Attached is a graph prepared by Black & Veatch of preliminary TOC data collected from the pilot study. As the TOC of the Column 4 effluent approaches the TOC of water in the Clearwell, changing of the carbon would be indicated. It is too soon to tell, at this point, exactly when that point will be reached. Data will continue to be collected and analyzed.

MoDNR is being kept updated on progress but at this time has nothing to review or comment on.

***“The mission of the Hannibal Board of Public Works is to provide safe, reliable utility products with excellent customer service at reasonable prices.”***