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Quality Water Matters

Brought to you by the City of Ann Arbor
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During the past few months, I have taken time to discuss how the city's water utility is confronting the challenges caused by COVID-19 and have provided guidance for businesses that may have been shut down about how to properly flush their pipes to ensure water is safe for all uses. For those still seeking

this guidance, please visit www.QualityWaterMatters.org.

This month, I want to share some of the important water research initiatives the city is undertaking. All of us are familiar with the rapid changes in the technology sector. It seems like the day after we purchase a new phone or a computer, they are out of date and new models are being advertised. Such advances in technology also are occurring in the water sector.



New analytical techniques are being developed that allow us to detect contaminants in drinking water at unprecedented low levels. It is not that long ago that a limit of one part per million (ppm) seemed unfathomable. One ppm would be equivalent to one second in 11.5 days. Today, technology allows us to detect

at parts per billion (ppb), and some contaminants at parts per trillion (ppt). One ppt would be the equivalent of detecting the quantity of one drop of a substance in a volume equal to 20 Olympic-size swimming pools.

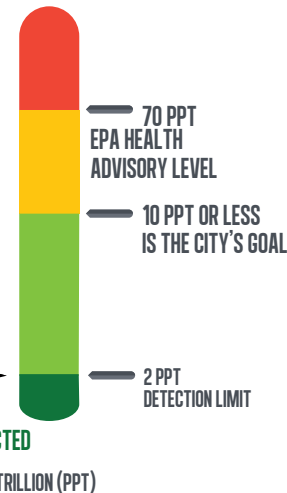
These advances in analytical capabilities put pressure on water utilities, whose job it is to remove things from water. Now, contaminants previously undetectable are showing up in water systems. However, the City of Ann Arbor has risen to the challenge. Rather than wait for others to develop technology to address these

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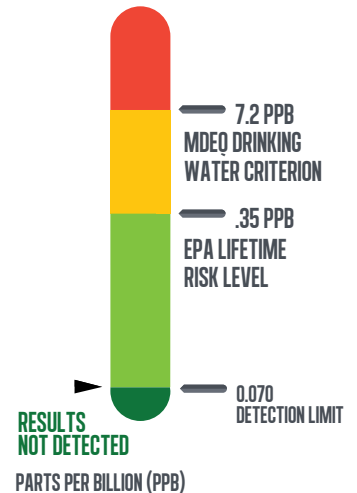
MONTHLY WATER QUALITY DASHBOARD



PFOS/PFOA



1,4-DIOXANE



Emergency Alerts

Your safety is our top concern – that's why the City of Ann Arbor wants to make sure you know about emergencies and incidents as they happen, including emergency water notifications. Beginning in August, the City of Ann Arbor will begin to use Washtenaw County's emergency notification system powered by Everbridge to make sure you know about issues that may affect your safety.



This system allows the City of Ann Arbor and Washtenaw County to contact thousands of residents in seconds via phone, email or text. The success of this service relies on YOU. Having your latest contact information is the only way to ensure that we can contact you in an emergency. Please sign up for emergency notifications from the City of Ann Arbor at www.washtenaw.org/alerts. It only takes a minute to enroll!

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contaminants, we are partnering with several universities to explore opportunities to improve treatment processes and finished water quality.

In partnership with North Carolina State University, one of our projects involves optimizing treatment processes to remove per- and polyfluoroalkyl substances (PFAS) from source waters. As City of Ann Arbor water customers are aware, PFAS waste from upstream industrial and municipal sources has contaminated the Huron River, which provides more than 80% of the city's source water. Treatment modifications at the primary source, Tribar Industries, has reduced but not eliminated some of the PFAS, including some of those that are regulated in Michigan. However, there are thousands of PFAS chemicals in circulation, and only 24 are part of the State of Michigan's testing protocol. The City of Ann Arbor is interested in removing all PFAS from its source waters, not just those that are regulated or are part of the current testing protocol.

Current research at the city's water treatment plant involve evaluating different types of treatment that may be effective at removing a larger suite of PFAS chemicals, specifically those that are more difficult to remove, using conventional treatment processes. The city currently uses granular activated carbon to remove PFAS, but there are many different types of carbon, some more effective than others. Using a pilot filter system, the city has been able to evaluate six different types of carbon for their effectiveness and is also piloting four different ion exchange resins. Data from these studies will help to inform future decisions on how best to treat the city's water supply to achieve the best water quality possible for our customers.

Next month, I will share information about another research effort in which the city is working with the University of Michigan to evaluate methods to reduce microbial pathogens in drinking water.

I hope you are well and enjoy the rest of your summer.

Brian Steglitz

Brian Steglitz, P.E., Drinking Water License F-1, Water Treatment Plant Manager, Ann Arbor resident

AUGUST WATER CHAMPIONS

Our August Water Champions are **Bob Herrst** from Public Works, and **Julia Ranases** and **Matt Vedrin**, students from the University of Michigan interning with the water treatment plant. This summer, Bob, Matt, and Julia have been working to enhance the city's weekly flushing program and to better monitor water quality across the city. Every week, they flush 15 to 20 hydrants throughout the city and monitor for water quality changes while the hydrant is running. This data enables the city to ensure high water quality throughout our more than 500 miles of water pipes across the city.

Matt says, "I have really enjoyed getting out around the city with Bob, Julia and other city staff to work on this project and to interact with residents who come outside wondering what we are doing! While this work is also for my graduate research, I am grateful to have this hands-on learning experience about drinking water infrastructure and how the city of Ann Arbor maintains it to keep people safe and satisfied with their water."



Matt Vedrin pictured above.

Adds Julia, "I've always wanted to work with water because it has such a big impact on everyday life and I'm glad that I can be a part of making sure it is safe and high quality. I like working with the city because it's been a great way to apply what I've studied in the classroom in a practical setting, and I love all that I'm learning about Ann Arbor and the water treatment process."

Thank you Bob, Julia and Matt for helping to make the City of Ann Arbor's water quality the best that it can be.