MOUNT PLEASANT
EST. 1859
NORTH CAROLINA

February 24, 2025

Dear Water Customer,

This notification is required by the North Carolina Administrative Code, under the oversight of the North Carolina Department of Environmental Quality (NCDEQ), regarding the water disinfection byproducts **Haloacetic Acids (HAA5) and Trihalomethanes (TTHMs),** as measured at sampling points within the Town of Mount Pleasant Water System. It is required that this notification be provided to the public until the locational running annual average (LRAA) for the disinfection byproducts (DBPs) of HAAs and THMs are in compliance.

The following violations have been noted at a sampling site for the January 1, 2025 (Locational Running Annual Average):

- HAA5 level of 0.109 mg/L, which exceeds the established MCL of 0.060mg/L
- TTHM level of 0.162 mg/L which exceeds the established MCL of 0.080 mg/L

Standards Comparison Chart

Criteria	Acceptable Level	Mount Pleasant Locational Running Annual Average (LRAA)	Mount Pleasant 1st Quarter 2025 Levels at both sample stations
Haloacetic Acids (HAAs)	0.060 mg/L	0.109 mg/L (12-month average)	Western Sample Site: 0.0718 mg/L (still elevated)
			Eastern Sample Site: 0.0582 mg/L (in compliance)
Trihalomethanes (THMs)	0.080 mg/L	0.162 mg/L (12-month average)	Western Sample Site: 0.0801 mg/L (slightly elevated)
			Eastern Sample Site: 0.0611 mg/L (in compliance)

The Town appreciates water customers' continued patience as it works diligently with engineers and NCDEQ to make incremental corrections in the safest and most cost-effective manner possible. The Town of Mount Pleasant will host two informational meetings for water customers about corrective actions being taken for the following dates and locations:

1. **Monday, March 17 at 6pm at the Community Church of Mount Pleasant (CCMP), 400 N. Main St.**
2. **Monday, March 31 at 6pm at the Mount Pleasant Methodist Church, 1260 N. College St.**

Visit www.mpncfuture.com for updates on all Town infrastructure projects.

The Town has been working closely with the North Carolina Department of Environmental Quality (NCDEQ) to bring disinfection byproduct (DBP) levels back into compliance since receiving the first noncompliant annual average in July of 2023. In an effort to provide as much information to water customers as possible, the following is timeline summary of actions taken since the first notification of noncompliance:

- July 2023: First time quarterly test non-compliant for elevated running annual average of disinfection byproducts (HAA5) received at Walker Road sampling site. Notice mailed to water customers within 30 days as required by NCDEQ.
- July 2023-Oct. 2023: Since the Walker Road water line is a dead-end 12-inch line and only serves the High School and Middle School, it was recommended that routine flushing of the line be conducted to avoid stagnation, especially when the schools are out of session and less water is being used. New sampling stations and hydrant flushers were installed and routine flushing began.
- October 2023: Second time quarterly test non-compliant for elevated running annual average of disinfection byproducts (HAA5 & TTHM). Notice mailed to water customers within 30 days as required by NCDEQ.
- October 2023-Jan. 2024: Continued line flushing as advised.
- January 2024: Third time quarterly test non-compliant for elevated running annual average of disinfection byproducts (HAA5 & TTHM). Notice mailed to water customers within 30 days as required by NCDEQ.
- January-March 2024: The Town requested NCDEQ to conduct a site visit and provide recommendations to achieve compliance.
- March 2024: Quarterly test non-compliant for elevated running annual average of disinfection byproducts (HAA5 & TTHM). Notice mailed to water customers within 30 days as required by NCDEQ.
- March-July 2024: NCDEQ conducted a sanitary survey on March 8, 2024 and found no deficiencies. On June 11, 2024, NCDEQ conducted a site visit and made several recommendations including the following:
    1. Contract professional engineering services to develop strategies to reduce disinfection byproduct level and evaluate pre-treatment system, including sample analysis of the filter effluent Total Organic Carbon (TOC) and Dissolved Organic Carbon (DOC), iron and manganese concentration.
    2. Contract professional engineering services to inspect conventional treatment units to ensure proper operation and filter media condition, inspect the clearwell, storage tanks, and other system components.
    3. Move the chlorine injections points from the top of the filters to the filter effluent pipe.
    4. Install new turbidimeters to benchmark and record turbidity weekly. Turbidity is the measurement of suspended particles typically caused by soil erosion in the vicinity of the water source.
    5. Conduct jar testing of coagulants to determine best media for carbon removal.
    6. Implement cross-connection ordinance compliance monitoring and enforcement.
    7. Update the monitoring plan.
    8. Contract a structural engineer for repairs to raw water intake building.
    9. Conduct a bathymetric survey on the off-stream storage reservoir to evaluate depth of build-up (minimal build-up found).

    To date, all recommendations from NCDEQ are being followed, and the Town continues to communicate with NCDEQ on progress.

- July 2024: Quarterly test non-compliant for elevated running annual average of disinfection byproducts (HAA5 & TTHM). Notice mailed to water customers within 30 days as required by NCDEQ.
- July-October 2024: The Town engaged the services of three experienced engineering firms to complete extensive water testing system-wide, evaluate the current system, and make recommendations for improvements. The Town also requested that $1 million of American Rescue Plan Act (ARPA) funds allocated in the state budget be shifted from the S. Skyland Drive area water line to make improvements to the water treatment system.
- October 2024: Quarterly test non-compliant for elevated running annual average of disinfection byproducts (HAA5 & TTHM). Notice mailed to water customers within 30 days as required by NCDEQ.
- October 2024-January 2025: The Town received preliminary recommendations from the contracted engineers to rehabilitate the internal components and filter media of the water plant. The Town reached out to Clearwater Inc. out of Hickory, NC since this company acquired the original manufacturer of the Town's water plant constructed in the early 1980s (Neptune International). Clearwater Inc. consults with WesTech/Swire Water out of Utah to engineer and manufacture the replacement components for these systems. WesTech immediately began evaluating the original plans of the plant to provide a proposal.
- January 2025: Quarterly test non-compliant for elevated running annual average of disinfection byproducts (HAA5 & TTHM). Notice mailed to water customers within 30 days as required by NCDEQ.
- February 2025: The Town Board of Commissioners approved a contract at its February 11, 2025 meeting with WesTech/Swire Water (through Clearwater Inc.) to replace the internal components (including flocculators and tube settlers) and filter media of the water treatment plant at a cost of $611,136.00. The components are specific to the Town's plant, and fabrication will take 12 to 14 weeks. Installation is expected to take place in late spring of 2025.

  After evaluating all additional potential treatment options, including ultraviolet treatment, active carbon filtration, use of chloramine instead of chlorine, tank aeration, and other methods of reducing disinfection byproducts, the following additional engineering recommendations were made specific to the Town of Mount Pleasant's system, and the Town is currently working on implementing these recommendations:

  1. Relocate the chlorination injection point to a location farther along in the system (i.e. the ground storage tank). This will reduce the amount of time that chlorine is in contact with total organic carbon, while still providing adequate water disinfection.
  2. Complete additional testing for total organic carbon (TOC) and dissolved organic carbon (DOC) on each side of Dutch Buffalo Creek at the raw water intake to determine if one side of the creek has lower carbon levels than the other. Consider extending the intake pipe farther into the creek flow.
  3. Obtain permit from NCDEQ to utilize groundwater well to supplement Dutch Buffalo Creek as water resource.
  4. Coordinate regionally with other jurisdictions to advocate for water sampling and lab equipment within Cabarrus County for jar testing and coagulant evaluation.
  5. After all other improvements are complete, and compliance testing has been conducted for at least two quarters, consider installation of an active carbon filtration system.

What is disinfection byproduct and what are the risks?

Chlorine disinfection of drinking water is one of the major public health advances in the 20th century. Disinfectants are added to water systems to kill potentially dangerous microorganisms, preventing typhoid and cholera epidemics that were common in American cities more than 100 years ago. However, **disinfectants can react with naturally occurring organic material in the water to form disinfection byproducts (DBPs), which may pose health risks if consumed at high levels over a lifetime.** The levels of these byproducts are averaged over a rolling four consecutive 3-month intervals in the compliance calculation for drinking water. Total Organic Carbon (TOC) has no health effects, however, it provides a medium for the formation of disinfection byproducts. These byproducts include Trihalomethanes (THMs) and Haloacetic Acids (HAA5). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increase risk of getting cancer. Because long-term exposures to these byproducts in water may result in adverse health effects, the Environmental Protection Agency (EPA) has established, maximum contaminant levels (MCLs). When tests exceed their respective MCLs in drinking water, your provider is required to notify customers. Notification is not intended to suggest that you or your family members will be harmed by the detected levels, but instead is meant to keep you informed. Exceedance of MCLs also informs the water supplier that action is warranted to reduce the concentrations of those byproducts in the water system. When EPA establishes the MCL for a chemical that is known or suspected to cause adverse health effects from long-term exposures, it assumes that the people who drink that water consume two liters (about half a gallon) of it every day for seventy years or roughly one lifetime. For chemicals that may cause cancer, EPA also considers what amount of the chemical would cause an increased risk of one (1) case in one million (1,000,000) people who are exposed over their lifetime. It is highly unlikely that the short amount of time (relative to seventy years) that customers will drink the water with elevated HAAs or THMs should cause any adverse effect on their health. The EPA has identified HAAs and THMs as a long-term health risk, not a short-term health risk. It would be much riskier to drink water that did not have enough chlorine than to drink water that has high levels of disinfection byproduct.

With this information, there is no imminent risk to the health of customers. There is nothing you need to do. You do not need to boil your water or take other corrective actions. However, if you have specific health concerns, consult your doctor. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

If you have additional questions, please call Town Hall at 704-436-9800. Visit www.mpncfuture.com for updates on all Town infrastructure projects.