NORTH TEXAS MUNICIPAL WATER DISTRICT

Facts About Chlorine Maintenance

FOR IMMEDIATE RELEASE
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Frequently Asked Questions about Free Chlorine Maintenance

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What is NTMWD doing to ensure Water Quality?

Ensuring water quality is a collaborative effort between the North Texas Municipal Water District (NTMWD) and our Member Cities and customers. Providing safe and reliable drinking water is a top priority, and hundreds of samples are monitored and tested each day to ensure that drinking water meets regulatory, health, and aesthetic standards set by the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA).

NTMWD utilizes a multi-barrier approach to treat our surface water. The NTMWD water treatment process is considered state of the art, and is optimized to reduce organic material and the use of chlorine. In fact, the NTMWD has been recognized by the TCEQ's Texas Optimization Program (TOP) for the superior performance of its treatment facilities in exceeding state and federal drinking water standards. More information on the TOP program can be found here: https://www.tceq.texas.gov/drinkingwater/swmor/top

The NTMWD disinfection process is designed to eliminate bacteria and viruses in the water and distribution system. The most commonly used disinfectants for water treatment are chlorine, chloramine (chlorine + ammonia) and ozone. NTMWD uses all three, and is one of the largest fully ozonated water treatment facilities in the world. By using ozone, the amount of chlorine needed during the treatment process is greatly reduced. As a result, the amount of disinfection by-products is also greatly reduced. However, ozone is not long-lasting disinfectant. The only disinfectants that are able to provide long-lasting disinfection in the distribution are chlorine and chloramine. There are no other alternatives. Chloramines are longer-lasting than chlorine, and allow water to remain disinfected to the far reaches of the distribution system. Also, the use of chloramines has been scientifically proven to reduce the formation of disinfection by-products. Therefore, the NTMWD uses chloramines to facilitate disinfection throughout the distribution system.

Why is this maintenance procedure necessary?

Studies by the Water Research Foundation have found that a periodic chlorine maintenance period is a preventative measure to reduce the potential of nitrification occurring in the distribution system during warmer temperatures. The chlorine maintenance, in conjunction with system flushing, is designed to remove any biofilm that may have formed since the last maintenance period. Chlorine must be used for this preventative maintenance because it is a stronger disinfectant than chloramine.

The temporary use of chlorine is a standard industry practice that is used to maintain water quality in the distribution system. This practice is considered safe and is utilized by water utilities that serve almost half of the U.S. population.

Is testing done during this period?

Routine monitoring of bacteria, disinfectant residuals, nitrate, nitrite and many other parameters occurs during the maintenance period at the treatment plant and in the distribution systems. Samples are collected by TCEQ licensed water operators and analyzed in appropriately accredited laboratories. NTMWD has performed process control monitoring at our treatment plant for trihalomethanes (THMs). The results for multiple samples have been less than 28 parts per billion (ppb) which is significantly lower than the EPA Maximum Contaminant Level of 80 ppb. The results of all testing are within federal and state guidelines. Our water remains safe to drink.

Where can I find more information?

More information about water treatment and the use of chlorine as a disinfectant, including free chlorine maintenance, can be found on the following websites:

TCEQ - https://www.tceq.texas.gov/drinkingwater/disinfection/nitrification.html
EPA - https://www.epa.gov/dwreginfo/chloramines-drinking-water
WRF - https://www.awwa.org/portals/0/files/resources/publicaffairs/pdfs/monocommkit.pdf
CDC - https://www.cdc.gov/healthywater/drinking/public/chloramine-disinfection.html
CDC - https://www.cdc.gov/healthywater/drinking/public/chlorine-disinfection.html

More information about NTMWD water quality, including test results is available on the NTMWD website at: https://www.ntmwd.com/water-quality-reports/

How does this affect my water?

Although users may experience a stronger smell of chlorine during the maintenance period, the water is safe to consume. During the maintenance period, the amount of chlorine in the water has not actually increased. However, because ammonia is not being used, the chlorine odor is more noticeable. Disinfectant residuals during the maintenance period remain below the EPA Maximum Allowable Level of 4 mg/L.