

NORWOOD WATER COMMISSION
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What is the History of Chloramination in Drinking Water?

Chloramines has been used for disinfection in the United States since the early 1900s. Both chlorine and chloramines are known disinfectants with a considerable body of experience from research and application points of view. Chlorine and chloramines are approved disinfectants, in addition to chlorine dioxide, ozone, and most recently ultraviolet light (UV). Each of the approved disinfectants has advantages and disadvantages in terms of : (1) disinfecting effectiveness toward various groups of microorganisms, (2) reactivity with natural organic matter and associated formation of organic Disinfection-by-Products (DBPs) (3) formation of inorganic DBPs, and (4) disinfectant persistence to provide lasting protection in the pipes and water storage reservoirs of the distribution system. The extent of chloramines used in water treatment has varied. By 1936, 16% of all U.S. water treatment facilities were using chloramines. Due to the scarcity of ammonia during World War II use of chloramines declined until 1960s. After the enactment of the Safe Drinking Water Act (SDWA) in 1974 and its subsequent amendments, a renewed interest in the use of chloramines occurred due to increasing focus on microbiological safety and reduction of DBP formation. About 20% of treatment facilities used chloramination in 1990. It is estimated that the use of chloramination will rise to 60% to meet the stringent regulatory requirements set by Stage 1 and 2 of the Disinfectant By-Product rule.

Why is Norwood Water Commission changing to chloramines?

Norwood Water Commission is making the change to chloramination first quarter 2010, to reduce the level of certain by-products of chlorination. These disinfection by-products, called trihalomethanes (TTHMs) and haloacetic acids (HAA5s), result from reactions of chlorine with small amounts of naturally occurring organic substances in filtered drinking water. Both TTHMs and HAA5s are suspected carcinogens (cancer-causing substances) when present at elevated levels and consumed over long periods of time. By using chloramines as a disinfection method, water supplied to customers will

- Reduce the levels of TTHMs and HAA5s
- Remain in compliance with Federal Safe Drinking Water Act
- Continue to be safe and aesthetically pleasing water

What effect will this have on my drinking water?

The new chloraminated water is totally safe for daily use such as drinking, cooking, bathing, watering plants and lawns. It will not effect home water filtration and softening equipment or septic systems. The only customers that will need to take special note of this change are owners of fish aquariums and kidney dialysis patients.

Will there be any noticeable difference in water due to the switch to chloramines?

Some temporary impacts may be noticed in isolated areas as the chloraminated water in introduced into the distribution system. Some customers may notice a temporary variation in water color as well as possible sediment in the water. These temporary impacts to water quality are similar to those experienced when a water main is replaced or routine maintenance is performed on the water distribution system and will cease as the system stabilizes.

I have a fish aquarium in my home. Am I going to have to do anything different to the water?

Yes. Since fish take chloramines directly from the water into their bloodstream, the chloramines must be removed from the water used in your tanks for fish and other aquatic animals. This process is similar to what you may already be doing to remove the chlorine from your aquarium water. Some people, however, in the past, have simply let the water sit out before use so chlorine will dissipate; **chloramines will not dissipate**. Water conditioner specifically designed for removing both chlorine and chloramines are commercially available. Pet stores or pet suppliers should be able to provide information on de-chloramination products and instructions. For the convenience of our customers with aquariums, the Norwood Water Commission has the additive available at the Norwood Town Hall 1670 Naturita Street.

Will the use of chloramines affect kidney dialysis centers and patients?

Yes. Kidney dialysis providers must remove chloramines from the water they use in **dialysis machines**. Depending on the method of chlorine removal a providers now uses, some modifications to this process may be necessary to remove chloramines. There are no dialysis centers on our water system and there are no known home dialysis patients but, if you are a home kidney dialysis patient, you should contact your dialysis service company and inform them of this change as soon as possible.

Will I have to change the way I treat my swimming pool water?

No additional treatment should be necessary. However, you might find that there is a slight increase in chlorine demand. That means that you may have to add a little more chlorine than usual to get to the level you typically maintain in the pool after you top it off with chloraminated tap water.

Will my home filtration system be affected in any way?

You may find that you have to replace filters (particularly activated charcoal filters) more often than usual. The difference should be negligible. Be sure to follow manufacturer's recommendations.

Will chloraminated water be safe for my dog or cat?

Yes.

How about washing an open wound with chloraminated water?

Even large amounts of chloraminated water used in cleaning a cut to flush your eyes would have no effect because virtually no water actually enters the blood stream that way.

Do home water softener remove chloramines?

Most water softeners are **not** designated to remove chloramines.