

***Notice to Gloucester County Public Water Customers
Change of Water Disinfection Process to Chloramines***

Dear Customer,

Gloucester County remains committed to improving the way we sample, test and treat for all water quality parameters including Disinfection Byproducts (DBPs). During the month of October, 2017 we will finalize and implement an improvement project targeted at reducing DBPs.

Historically, we have used chlorine to disinfect the drinking water. However, chlorine also readily reacts with naturally occurring organic matter in the water to form disinfection by-products regulated by the EPA.

The County will continue to use chlorine as a primary disinfectant at the treatment plant. After primary disinfection, we will also add a small amount of ammonia (less than one part per million) to the water. The ammonia will react with chlorine to form chloramines. This process, called chloramination, is designed to significantly reduce disinfection by-product formation in your drinking water.

Richmond, Norfolk, Chesapeake, Virginia Beach and hundreds of other localities safely and effectively use chloramines.

Please note that this change in disinfection affects all Gloucester County Utilities customers.

A list of Frequently Asked Question(s) is included with this Notice.

If you have any questions about the conversion to chloramines, please contact:
Gloucester County Department of Public Utilities at (804) 693-4044.

This notice is being sent to you by Gloucester County Department of Public Utilities

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Background and Frequently Asked Questions about Chloramination

For years, the Gloucester County Department of Public Utilities has been using chlorine to disinfect drinking water. Disinfection kills microbes that can make you sick. In order to continue to meet drinking water regulations governed by the National Safe Drinking Water Act, the County is changing the way water is disinfected. The County will continue to use chlorine to disinfect water but will also add ammonia to the water to form chloramines. This process is called chloramination.

Chloramines effectively disinfect water but do not react as readily as chlorine with naturally occurring organic matter in the water, which forms "disinfection byproducts." Chloraminated water is safe for drinking, cooking, and other everyday use. Most people in the community will not need to change anything they do now. However, if you use dialysis or have an aquarium, you should read the additional information below.

- **Is chloramine disinfection new?**

No. Chloramine disinfection has been used in Virginia for over 25 years and the U.S. Environmental Protection Agency reports that some utilities have used chloramines since the 1930s. Today, the EPA estimates more than one in five Americans uses drinking water treated with chloramines.

- **Are chloramines safe?**

Yes. Chloraminated water is safe for bathing, drinking, cooking, washing, and other everyday uses. However, there are two groups of people who need to be especially aware of chloraminated water: kidney dialysis patients and fish owners.

- **What is the drinking water standard for chloramines?**

EPA sets the standards for public drinking water, known as Maximum Contaminant Levels or MCLs. EPA's MCL and Maximum Residual Disinfectant Levels (MRDL) for chloramines in drinking water is 4 mg/l. A Reference Dose (RFD) for adults is 1 mg/kg/day.

- **What you need to know if you use dialysis?**

Like chlorine, chloramines must be removed from water used in kidney dialysis machines. The County is working with representatives of local health care centers to educate them about this change. If you are a dialysis patient or have questions, call your physician or the dialysis center nearest you.

- **Why do kidney dialysis patients have to take special precautions?**

Like chlorine, chloramines in water used for dialysis would be toxic and must be removed. Medical centers performing dialysis are responsible for preparing the water that enters the dialysis machines. Like you, they are being notified of this change.

Kidney dialysis patients can safely drink, cook and bathe in chloraminated water. Chloramines are only harmful if they directly enter the bloodstream. Since water comes in contact with the bloodstream during hemodialysis, very strict water purification standards are already being followed by the kidney dialysis industry.

Water purification techniques used for kidney dialysis are already designed to remove both chlorine and chloramines. Industry standards require that a nurse, technician or trained caregiver test for both chlorine and chloramines after the purification process to ensure that these chemicals have been removed from the water before it can be used in a dialysis machine.

- **What you need to know if you have an aquarium?**

Chloramines must be removed from water before it is used in aquariums or ponds. Before treating for aquarium use, ensure the conditioner treats chloramines (not just chlorine). Most pet stores sell water conditioners for chloraminated water. If you have questions, contact your local pet store for information and detailed instructions.

- **How do chloramines affect fish?**

Like chlorine, chloramines are toxic to fish and must be removed from their water. Two methods are generally used to remove chloramines from water: 1) Add specific agents to remove chloramines and ammonia, or 2) Use a high grade of granular activated carbon to remove chloramines. See your pet store for details.

Since fish and other aquatic animals take chloramines directly from the water into their bloodstreams through their gills, chloramines, just like chlorine, must be removed from water used for keeping live freshwater and saltwater fish and other aquatic life including Koi fish, lobster, shrimp, frogs, turtles, snails, clams and live coral.

The de-chloramination process is similar to what you may already be doing to remove chlorine from your aquarium water. Some people, however, may simply let water sit for a period of time to allow chlorine to dissipate. Chloramines will not dissipate in this manner. A water-conditioning agent or activated carbon filter specifically designed to remove chloramines must be used according to product instructions. Area pet stores have been notified of the change and should be able to provide information on dechloramination products and instruction.

- **What will my water smell or taste like with chloramines?**

If you notice any change, the water may have less of a chlorine odor or taste.

- **Will there be any noticeable difference in my water?**

You may notice a temporary variation in water color or sediment in the water for a few days following the conversion process. Any observed variations in the water will cease when the system stabilizes.

- **Can children and pregnant women drink chloraminated water?**

Yes. Everyone can drink water that contains chloramines.

- **Will chloramines affect swimming pools?**

No. You will still need to add chlorine to prevent algae and bacterial growth. Contact your pool supply store for details.

- **Where can my physician or I get more information?**

If you need further information regarding the health effects of chloramine, please contact the Virginia Department of Health, Division of Environmental Epidemiology, 109 Governor Street, 4th Floor, Richmond, VA 23219, or call (804) 864-8182.

- **Where can I find more information regarding *chloramine disinfection*?**

Visit the United States Environmental Protection Agency's website at:

http://water.epa.gov/lawsregs/rulesregs/sdwa/mdbp/chloramines_index.cfm