

City of **BURLINGTON** Water Resources

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June 3, 2016

City of Burlington Water Customers

The City of Burlington will be performing a free chlorine burnout beginning on Sunday, June 26 and continuing through Monday, August 1, 2016. On Monday, August 1, Burlington will resume chloramination of finished water. This system maintenance has been coordinated with the other municipal systems that receive water from the City of Burlington.

I have included some general information with this notice regarding this process.

Please do not hesitate to call us if you have questions regarding this notice.

Thank you,

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Water Quality Preventative Maintenance Program

In a continuing effort to improve water quality, the following water utilities: Archdale, Burlington, Greensboro, High Point, Jamestown, Randleman, Reidsville, and the Piedmont Triad Regional Water Authority will conduct a routine Water Quality Preventative Maintenance Program beginning on June 27, 2016 and ending July 25, 2016.

This process will involve a temporary switch from present chloramines to chlorine in order to optimize water quality in our distribution systems. The water will continue to meet Federal and State standards for drinking water and is safe for consumption and use.

Why change disinfectants?

The periodic Water Quality Preventative Maintenance Program will be performed to maintain water quality in the water system. The process change is strongly recommended by the Environmental Protection Agency (EPA) and the State to preserve water quality by ensuring persistent disinfection levels exist in the distribution system.

What should I expect?

During the switch, some users may notice temporary color, taste, and odor differences. This is a normal part of the process and customers should be reassured that water quality will not be affected. It is recommended that customers continue to remove chloramines and chlorine from water prior to use in the kidney dialysis process, fish aquariums and ponds, and with some types of manufacturing practices. Customers are advised to seek professional advice concerning the removal methods for chlorine and chloramines.

For additional information, please contact the City Contact Center at 373-CITY(2489) or visit www.greensboro-nc.gov/PreventativeMaintenance.

Overview

In a continuing effort to improve water quality, the following water utilities will conduct a routine water quality preventative maintenance program beginning on June 27, 2016 and ending July 25, 2016:

Archdale, Burlington, Greensboro, High Point, Jamestown, Randleman, Reidsville, and the Piedmont Triad Regional Water Authority

This process will involve a temporary switch from present chloramines to chlorine in order to optimize water quality in our distribution systems.

Why is drinking water disinfected?

Disinfection is critical to protect the public from disease-causing microorganisms, by lowering the exposure rates to infectious diseases. Throughout the years, chlorine has been extremely successful in protecting water from harmful bacterial and viral contamination. However, when chlorine reacts with naturally occurring materials in the water it forms new compounds known as disinfectant by-products (DBPs). There are two DBPs that are currently regulated. Trihalomethanes (THMs), and Haloacetic acids (HAAs) are suspected carcinogens when present at elevated levels and consumed over long periods of time. New drinking water regulations require utilities to maintain a lower concentration of DBPs, lower bacterial counts or coliform occurrences, and maintain better disinfectant residual throughout the distribution system. Chloramines, a combination of chlorine and ammonia, are currently being used by the water utilities mentioned to reduce the amount of DBPs produced.

Special Precautions

For most individuals, there will be no negative effects as a result of the change however, precautions must be taken to remove chlorine as well as chloramines. Both chlorinated and chloraminated water are safe for drinking, bathing, cooking, and other general uses. There are three groups that need to take precautions. Those groups include kidney dialysis patients, fish tanks and ponds owners, and some businesses that have special water quality requirements for their production process.

Similar to chloramines, chlorine can harm kidney dialysis patients during the dialysis process if not removed before water enters the bloodstream. Humans neutralize water in our digestive system before it reaches the bloodstream. Fish absorb chloramines and chlorine directly into the bloodstream through gills, which inhibits the ability of the red blood cells to carry oxygen. Businesses that use water in any manufacturing process, such as food or beverage preparation, commercial laundering operations, laboratory procedures, seafood handling or any other processes in which water characteristics must be carefully controlled and maintained by the company, may require adjustments to their current filtration and treatment systems.

Why change disinfection treatment process?

The periodic water quality preventative maintenance program will be performed to maintain water quality in the water system. The process change is strongly recommended by the Environmental Protection Agency (EPA) and the State to preserve water quality by ensuring persistent disinfection levels exist in the distribution system.

Water Quality Preventative Maintenance Program

What customers should expect during the transition?

The switch to chlorine is scheduled to start on June 27, 2016 and continue for approximately one month. The transition back to chloramine will begin on July 25 and should be complete by August 1, 2016. During this switch, some users may notice temporary taste, and odor differences. This is a normal part of the process and customers should be reassured that water quality will not be affected. If customers are currently using a product or process to aid in the removal of chloramines, those same products or processes are generally considered sufficient to remove free chlorine during this transition.

It is recommended that customers continue to remove chloramines and chlorine from water prior to use in the kidney dialysis process, fish aquariums and ponds, and with some types of manufacturing practices.

Kidney dialysis facilities and users of home dialysis machines along with fish, pond and aquarium owners and specialized business owners are advised to seek professional advice concerning the removal methods for chlorine and chloramines. The return to chlorine-only disinfection is not expected to cause any significant increases in levels of DBPs. The water will continue to meet Federal and State standards for drinking water and is safe for consumption and use. System flushing may result in minor discoloration of your water. Customers are encouraged to let the water run for a few minutes until water becomes clear.

Additional Resources

Environmental Protection Agency

<https://www.epa.gov/ground-water-and-drinking-water>

Safe Drinking Water Hotline: 1-800-426-4791

Water Quality Preventative Maintenance Program

Frequently Asked Questions

1. What is the Water Quality Preventative Maintenance Program?

It is a process that will involve a temporary switch from the present water disinfectant product, chloramines, to a chlorine water disinfectant product in order to optimize water quality in our distribution systems.

2. When will the Water Quality Preventative Maintenance Program occur?

Water utilities in Archdale, Burlington, Greensboro, High Point, Jamestown, Piedmont Triad Regional Water Authority, Randleman, Reidsville and their municipal water customers will participate in the Water Quality Preventative Maintenance Program beginning on June 27, 2016 and ending July 25, 2016.

3. What is chlorine?

Chlorine is a type of water additive used by municipal water systems to disinfect your drinking water.

4. What are chloramines?

Chloramine is a type of disinfectant used in drinking water to remove the impurities consisting of both chlorine and ammonia. In the chloramination process, ammonia is added to the water at a carefully controlled level. The chlorine and ammonia react chemically to produce chloramines. Chloramination is as effective as chlorine in killing many kinds of bacteria and other germs that may be harmful to personal health.

5. Why convert from chlorine to chloramines?

Chloramination reduces the level of certain byproducts of the chlorination process. These byproducts, called Total Trihalomethanes (TTHM) and Haloacetic Acids (HAAs), result from the reaction of chlorine with the small amounts of naturally occurring organic substances in drinking water. TTHMs and HAAs are suspected carcinogens (cancer-causing substances) when present at elevated levels and consumed over many years.

By converting to chloramines, the regional partnership:

- reduces the levels of TTHMs and HAAs in drinking water
- complies with more stringent standards implemented by the Environmental Protection Agency
- continues to supply water customers with safe and aesthetically pleasing water

In addition, during the switch, customers may notice a change in the taste and odor of their drinking water.

6. Is chlorination and chloramination safe?

Yes. Chlorinated and chloraminated drinking water is perfectly safe for drinking, cooking, bathing, and other daily water uses. There are however, some identified groups who need to take special precaution with chlorinated and chloraminated water such as customers who use drinking water for kidney dialysis machines, specialized industries and fish owners.

Water Quality Preventative Maintenance Program

Frequently Asked Questions

7. How are kidney dialysis patients affected by chlorine/chloramines and what precautions should they take?

Chlorine and chloramines are harmful when they go directly into the bloodstream. In the dialysis process, the water mixes with blood across a permeable membrane. For this reason, both chloramines and chlorine are toxic in dialysis water and must be removed from water used in dialysis machines. Medical centers that perform dialysis are responsible for purifying water used in their dialysis machines. Physicians, clinics, and medical facilities in our community have been notified and are aware of the need to remove chlorine and chloramines. Customers with home dialysis equipment should contact their physicians and check with equipment manufacturers for more information.

8. Is it safe for kidney dialysis patients to drink water containing chlorine and/or chloramines?

Yes, it is safe for kidney dialysis patients to drink chlorinated and chloraminated water. During the digestive process, chlorinated and chloraminated water is metabolized before reaching the bloodstream. All kidney dialysis facilities and users of home dialysis machines are advised to seek professional advice concerning the removal methods for chlorine and chloramines.

9. How are fish affected by chlorine/chloramines and what precautions should fish owners take?

Fish also take chlorine and chloramines directly into their bloodstream. Chlorine and chloramines should be removed from water used in aquariums, fish tanks and ponds. Individuals or businesses that keep fish or other animals in tanks, aquariums, or ponds should ask a pet supply company about removing chlorine and chloramines. Customers who use drinking water for aquaculture purposes (growing plants in water tanks or ponds) should get expert advice regarding the need and procedures to neutralize or remove chlorine and chloramines. Also, restaurants and grocery stores with lobster tanks must take special precautions to treat the water.

10. Is it safe to wash open wounds with chlorinated/chloraminated water?

Yes. Chlorinated and Chloraminated water is completely safe to use on cuts and wounds. Water cannot enter the bloodstream through an open cut.

11. Will chlorination/chloramination affect business water users?

Businesses and other establishments that use municipal drinking water for commercial laundering, laboratory procedures, and other processes that require carefully controlled water characteristics should get advice from equipment manufacturers or other suppliers regarding any changes that may be needed. These types of businesses may include but not limited to laboratories, microchip manufacturers, biotech companies, soft drink bottlers, photography labs and restaurants or seafood suppliers with fish tanks.

12. What actions do I take concerning swimming pool maintenance?

Contact your local pool suppliers for specific details concerning treatment of chlorinated and chloraminated water.

Water Quality Preventative Maintenance Program

Frequently Asked Questions

13. Do home water softeners remove chlorine/chloramines?

Most water softeners are not designed to remove chlorine or chloramines. Contact the manufacturer for specific details.

14. How can I get more information?

To find out additional information on the water quality preventative maintenance program visit - www.greensboro-nc.gov/water.