Kennebunk, Kennebunkport and Wells Water District

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IMPORTANT PUBLIC NOTICE

Beginning on April 10, 2017, the Water District will re-introduce using chloramines as a drinking water disinfectant.

Chloramines are a widely used form of disinfectant produced by combining trace amounts of chlorine with ammonia and are used to destroy potentially harmful bacteria should they enter the potable water system. Chloramines have been used safely in the United States since the early 1900s and more than one in five Americans currently use water treated with chloramines, including those from many water communities in Maine.

Chloramines are a preferred disinfectant, as they are long lasting and improve aesthetic water quality by minimizing chlorine taste and odor.

The Water District used chloramines from 2004 to 2010, but reverted back to the use of "free chlorine" due to the occurrence of mineral precipitation (scaling) in some commercial customers' hot water systems. As the District began using more ground water in 2007, the higher mineral content of that water caused this precipitation issue. Upon further research and testing, the Water District has since determined that the mineral precipitation will not occur when chloramines are generated by using liquid ammonia instead of gaseous ammonia.

Chloramines are also effective at reducing the formation of disinfection byproducts such as trihalomethanes (THMs) and haloacetic acids (HAAs), which can result from the reaction of free chlorine with natural organics found in the water supply. Switching back to chloramines will also allow for greater compatibility when buying or selling water to our neighboring utilities (Biddeford & Saco Water Co. and the York Water District), who also use chloramines for disinfection.

We hope the following information will help you understand chloramines and the associated changes that may affect you. If you have any questions after reading through this, please contact us at 207-985-3385.

Who will be affected by this change? All KK&W Water District customers.

Are chloramines safe? Yes. The U.S. Environmental Protection Agency (EPA) accepts chloramines as a safe and effective drinking water disinfectant. Water disinfected with chloramines is safe for bathing, drinking, cooking and all uses we have for potable water every day. However, there are several groups of people that could be affected by chloramines including **kidney dialysis patients, aquarium/pond owners** (fish, crustaceans and amphibians), **bakers/brewers** (yeast and enzyme), **hydroponic applications** and some people and businesses requiring highly treated water.

What special precautions should kidney dialysis patients take? Kidney dialysis patients can safely drink, cook and bathe with chloraminated water. However, chloramines must be removed from the water used in kidney dialysis machines. All medical providers and facilities that perform kidney dialysis have been notified directly of the change to chloramination. According to the End Stage Renal Disease regulations, these facilities are responsible for purifying water used in dialysis.

What special precautions should aquarium/pond owners take? Chloramines must be removed from any water to be used in aquariums or ponds. Chloramines are toxic to freshwater and saltwater fish and other aquatic organisms. This includes lobster tanks at grocery stores and restaurants and holding tanks at bait shops. Consult your local pet store or other professional to determine what treatment method is best for you.

If chloramines are harmful to fish, how can people safely drink the water? The digestive process in mammals neutralizes the chloramines before they reach the bloodstream. However fish (and many other aquatic animals) absorb chloramines directly into their bloodstreams as they "breath" the water, which can be fatal.

How do we remove chloramines from the water? Unlike chlorine, chloramines **are not** removed by boiling, distillation, reverse osmosis or letting the water stand for a day or two. However, chloramines can be removed by several methods, including:

- Home Water Purifiers, if they contain granular activated carbon (GAC). Most faucet-mounted and under-the-counter mounted filters that are designed to remove lead, copper and chlorine contain GAC. The following website may be helpful in choosing filters: http://www.nsf.org/consumer-resources/what-is-nsf-certification/water-filters-treatment-certification/selecting-a-water-treatment-system
- Campden tablets – brewers use reducing agents such as potassium metabisulfite (proprietarily sold as Campden tablets) to remove chloramines.
- Other commercially available methods include the use of ultraviolet light, and the addition of ascorbic acid (vitamin C) or sodium thiosulfate.

Can pregnant women, infants and people with suppressed immune systems or other diseases drink chloraminated water? Yes. Everyone can drink water that contains chloramines. There is no evidence that chloramines are excreted in the milk of nursing mothers. The Centers for Disease Control and Prevention (CDC) reports that using or drinking water with chloramine levels of less than 50 ppm (parts per million) does not cause harmful health effects. The normal chloramine level for our drinking water disinfection will be in the range of 2 to 3 ppm. Chloramines have also been determined to have no connection or interaction with diseases such as asthma, acid reflux, heart disease, skin rashes, hepatitis, etc.

Can you safely wash an open wound with chloraminated water? Yes. It is safe to use chloraminated water in cleaning an open wound.

Will chloramines affect my swimming pool? No. You will still need a free chlorine residual to retard algae and bacteria growths. Contact your local pool supply store for specific information.

Please visit our website at www.KKW.org for additional information and links.