LPRW to Begin Using Chloramines in Disinfection Process

Please Note: You are receiving this letter because there may be changes occurring to the water provided at this service connection.

By the end of October, Lincoln-Pipestone Rural Water (LPRW) System will begin using chloramines as a disinfecting agent instead of free chlorine. This process change will allow LPRW to match the type of disinfectant residual we will receive from Lewis & Clark Regional Water System.

Customers who have home aquariums and customers who are on kidney dialysis will need to take special precautions.

Precaution for Home Aquariums – Chloramines are toxic to fish, so special chemicals will need to be added to the water before the water is added to the aquarium. Local pet stores can provide details on the chemicals that should be used.

Precautions for Dialysis Patients – Water disinfected with chloramines should not be used for dialysis treatments without special filters to remove the chloramines. Please speak to your doctor if you have questions about your treatment. Water treated with chloramines is safe for drinking, bathing and other household uses.

FAQs – Below is a list of frequently asked questions regarding chloramine disinfection.

Why is LPRW making the change to chloramines? LPRW currently provides water using free-chlorine as its primary disinfectant. Another disinfectant regularly utilized by public water suppliers is chloramines. The primary reason for the conversion is to match the type of disinfection residual that we will receive from Lewis & Clark Regional Water. A secondary benefit will be to provide water to our customers with the lowest possible levels of trihalomethanes (THMs).

What is chloramine? Chloramine is a disinfectant used to treat drinking water. It is formed by mixing chlorine with ammonia. It is a more stable form of disinfectant and extends the disinfectant benefits throughout the water distribution system. Chloramine has been used by water systems for almost 90 years and its use is closely regulated.

What are trihalomethanes (THMs)? THMs are chemical compounds that are formed when chlorine mixes with naturally occurring organics in water. The US Environmental Protection Agency (EPA) conducted tests which determined that chloroform (one of the THMs) is carcinogenic when consumed by laboratory animals in large quantities over a prolonged period of time, and is a suspected carcinogen for people. EPA set a standard of 80 parts per billion (ppb) as the maximum level of THMs in drinking water.

Are chloramines new? No. Many cities and public water systems in the US and Canada have used chloramines for decades. Customers receiving chloraminated water from Lewis & Clark Regional Water system include Rock County Rural Water and the City of Luverne in Minnesota; and several rural water systems and cities in South Dakota, including the City of Sioux Falls.

Are Chloramines Safe? Yes. Chloramines have been used safely in the US and Canada for many years. EPA accepts chloramines as a disinfectant and as a way to avoid THM formations. Without the use of some kind of disinfectant, disease causing organisms could be spread through drinking water. Chloraminated water is safe for bathing, drinking, cooking and all of the uses we have for water each day. However, there are two groups of people who need to take special care with chloraminated water: **kidney dialysis patients and fish owners.**

Why do kidney dialysis patients have to take special precautions? In the dialysis process, water comes in contact with the blood across a permeable membrane. Chloramines in that water would be toxic, just as chlorine is toxic, and must be removed from water used in kidney dialysis machines. Medical centers that perform dialysis are responsible for purifying the water that enters the dialysis machines.

What should people with home dialysis machines do to remove chloramines? You should first check with your physician, who can recommend the appropriate type of water treatment. Often home dialysis service companies can make the needed modifications but you should check with your physicians to be certain.

If chloramines are toxic, won't they harm people and pets? Chloramines are harmful when they go directly into the bloodstream as happens in kidney dialysis. Fish also take chloramines directly into their bloodstream. That's why chloramines must be removed from water that goes into kidney dialysis machines or is used in fish tanks and ponds.

If chloramines shouldn't mix with blood, is it safe to drink water containing them? Yes. Everyone can drink water that is chloraminated because the digestive process neutralizes the chloramines before they reach the bloodstream. Even kidney dialysis patients can drink, cook and bathe in chloraminated water. It's only when water interacts directly with the bloodstream as in dialysis or in a fish's gill structure that chloramines must be removed.

How about washing an open wound, such as a cut, with chloraminated water? Certainly. Even large amounts of water used in cleaning a cut would have no effect because virtually no water actually enters the bloodstream that way.

Will chloramines change the pH of water? No. It will remain the same (pH = 8.6 to 8.9).

What will water taste like with chloramines? If you notice any change at all, you may find the water has less of a chlorine odor or taste.

Do home water softeners remove chloramines? Most water softeners are not designed to remove chloramines.

If chloramines are such effective disinfectants, why haven't they been used more? Given enough contact time, chloramines are just as effective as chlorine at doing their job - killing bacteria. While chlorine works more quickly, it doesn't last as long as chloramines. Both disinfectants have advantages and disadvantages. The choice of disinfectant depends on local water conditions. .

How do chloramines affect fish? Chloramines are toxic to fish and must be removed from water, just as chlorine is toxic and must be removed. You may not have had to remove chlorine from your aquarium water because it disappears rapidly on its own. This is ***not*** the case with chloramines and steps should be taken to remove chloramines. Most pet stores sell dechloraminating agents.

Won't letting water sit for a few days remove chloramines from tank or pond water? No. Unlike chlorine, which dissipates when water sits for a few days, chloramines may take weeks to disappear. If you don't want to use a dechloraminating chemical, the next best solution is to install a granular activated carbon filter and allow sufficient contact time.

Will chloraminated water affect the toilet mechanisms? Chloramines may wear out the rubber inner workings of the toilet more quickly, especially mechanisms like the toilet flapper. It is advisable to inspect your toilet flapper once or twice a year to ensure that it is functioning properly.

When will this conversion take place? We plan to make the change by the end of October.

If you have questions about the change to our disinfection system, information can be found on our website at www.lprw.com, or by contacting our office at 507-368-4248.