



Drinking Water Free Chlorine Disinfection

Frequently Asked Questions

Overview

Sault Ste. Marie Public Utilities Commission (PUC) will switch from the present chloramine disinfectant to free chlorine in the distribution system. This MOE approved method is the most widely used drinking water disinfection process in the province and across North America. The use of free chlorine offers several advantages, including elimination of aqueous ammonia in the treatment process. Free chlorine reduces the potential for nuisance biological growth in the distribution system and is also less likely to promote corrosion in the lead service lines that serve many older homes or leaching of lead from brass plumbing fixtures and taps. Most people will not notice a difference in the water.

Some Frequently Asked Questions include the following:

What is Chloramine?

Chloramine is a disinfectant used in drinking water to control bacteria and viruses. It is made up of chlorine and aqueous ammonia. This is currently the form of disinfection that is used in the PUC drinking water supply serving the City of Sault Ste. Marie and Rankin Reserve.

What is Free Chlorine?

Free Chlorine is a stronger disinfectant than Chloramine, which may be used to remove more resistant bacteria and viruses that may be found in water distribution systems.

Why are you converting from Chloramine to Free Chlorine?

The disinfectant changeover is being made to avoid significant capital costs to construct additional water treatment processes that would be necessary to continue with Chloramine under current regulatory requirements and to avoid the significant long term operating costs associated with these additional processes.

What is the difference in benefit between Chloramine and Free Chlorine?

While Chloramines have certain benefits: Odor is less noticeable to some, longer persistence in the distribution system, less likely to form disinfection by-products; Free Chlorine is a more effective disinfectant. Free chlorine reduces the potential for nuisance biological growth in the distribution system and is also less likely to promote corrosion in the lead service lines that serve many older homes or leaching of lead from brass fittings and taps. In addition, the changeover will benefit PUC workers, the general public and the environment because it eliminates handling and use of ammonia, a potentially hazardous chemical.

When will the conversion occur?

Conversion is planned to occur during the week of October 24, 2011.

Will I need to do anything differently during the conversion?

No action is necessary during the changeover. Customers may drink and use their water as normal. PUC will be flushing the distribution system to change over all the water in the pipes from chloramine to

free chlorine. As the transition in water chemistry moves through the distribution pipes, temporary changes in taste and odour may be experienced by some people.

Consumers that notice a change and find the taste or odour disagreeable should flush their house plumbing for approximately 5-10 minutes as required through the day. Should the problem persist for more than one day, please call PUC at 705-759-6522 Monday through Friday from 9:00 to 16:30 and 705-759-6555 at all other times.

Will my water taste different after the conversion to Free Chlorine?

Most people will not notice any change. Each individual has his or her own sensitivity level to the taste and/or odor of Chlorine.

Is Free Chlorine and Chloraminated water safe?

Yes, both forms of chlorine are effective and safe. Both forms of chlorinated water are safe for people and animals to drink, for cooking and bathing, watering the garden, and for all other common uses. Just as with Chloramine, precautions must be taken to remove or neutralize Free Chlorine in the preparation of water for fish tanks and ponds, and for businesses requiring highly-processed water. A de-chlorination procedure optimized for Chloramine removal will equally remove Free Chlorine.

What should dialysis patients know about Free Chlorine?

Both Free Chlorine and Chloramine need to be removed from water before passing into the bloodstream. Algoma Public Health will notify dialysis facilities in the city so that they are prepared prior to the conversion to Free Chlorine. Like everyone else, dialysis patients may drink water treated with either Free Chlorine or Chloramine because the digestive process neutralizes these chemicals before they can enter the bloodstream. Customers with home dialysis equipment should contact their physicians and check with equipment manufacturers for more information.

How can I remove chlorine from my water?

The easiest and most effective way is to put a pitcher of water in the refrigerator. Cold water always seems to taste better. Adding a lemon wedge, or filling a container with water and leaving it to vent is also effective. Home water treatment devices that employ granular activated carbon or reverse osmosis will reduce or remove chlorine.

Will pool owners need to treat water differently?

Pool owners must maintain the same chlorine level in water treated with either Free Chlorine or Chloramine to prevent algae and bacterial growth. Pool supply stores can provide pool owners with more information.

Where can I get more information?

For more information contact the following:

- For health related questions call Algoma Public Health at 705-759-5286
- For technical, water supply related questions call PUC Services at 705-759-6522