

FREQUENTLY ASKED QUESTIONS

Temporary Free Chlorine Conversion



Why is drinking water disinfected?

Disinfection is critical to protecting consumers from disease causing microorganisms, called pathogens, including bacteria or viruses. Disinfectants are very effective at inactivating pathogens.



Why use Chloramine?

Chloramine is an effective disinfectant and persists over a long period of time particularly in areas with high temperatures.



Why are fire hydrants flushed during this process?

Flushing hydrants helps to move the chlorine-disinfected water through the system faster. Flushing will also help to reduce the chlorine odor and taste.



What are the drinking water disinfection requirements in Texas?

Public water systems are required to disinfect water prior to its entering the distribution system, maintain a minimum amount of residual disinfectant through out the distribution system and use either chlorine or chloramine in the distribution system.



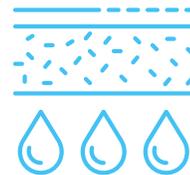
Is chloramine safe?

Yes, water disinfected with chloramine is safe for drinking, cooking, bathing, & everyday use. Chloramine, like chlorine, must be removed from the water prior to use in dialysis machines and can be harmful to fish & amphibians. Proper filters and dechloramination products will address these concerns.



What is chloramine?

Chloramine is a long lasting disinfectant added to public drinking water for disinfection. It is formed by combining chlorinated water with small amounts of ammonia. It is commonly used for disinfection in many public water systems.



What is free chlorine conversion?

A free chlorine conversion occurs when a water system that typically uses chloramine removes ammonia from their treatment process and disinfects the water with only chlorine.



Is the chlorine level tested during this period?

Yes, the water is continuously monitored for chlorine levels along with other compounds.

For more information on Free Chlorine Conversion visit,
www.tceq.texas.gov/drinkingwater/disinfection/temporary-free-chlorine-conversion

Excerpt from TCEQ

What is a free chlorine conversion (“chlorine burn”)?

A free chlorine conversion (also referred to as a “chlorine burn”) occurs when a water system that typically uses chloramine removes ammonia (needed to form chloramine) from the treatment process, and disinfects the water with only chlorine. Chlorine is more effective than chloramine at inactivating certain types of bacteria. Excess ammonia, which can accumulate in a chloramine-treated distribution system over time, is a source of food for specific types of bacteria that are harmless to people. These bacteria can make it difficult for public water systems to maintain a disinfectant residual, which means that microorganisms that are harmful to people can grow.

The “chlorine burn” is a common practice by many public water systems throughout the country to reduce the number of the bacteria so that a satisfactory disinfectant residual can be maintained throughout the distribution system. Chlorine conversions can be used as a preventative strategy or to stop nitrification (the microbial process that converts ammonia and similar nitrogen compounds into nitrite and nitrate), which can diminish water quality. According to a 2016 EPA survey, 25 to 40 percent of the utilities that use chloramine reported using free chlorine burns to control nitrification. (^1)

Public water systems should notify their customers prior to a chlorine conversion, because changes in taste and odor may briefly occur.

Why is my water system conducting a free chlorine conversion?

A free chlorine conversion is typically conducted for two reasons:

1. It is often conducted as a preventative maintenance measure to kill bacteria that can make the maintenance of disinfection residual problematic. A film can form in the distribution system piping that can contain bacteria which use ammonia as a food source. These bacteria in this film are harmless to people. When the water system stops adding ammonia, the bacteria starve. Therefore, a periodic conversion to free chlorine is effective for inactivating these types of bacteria in piping with biofilm by interrupting the supply of ammonia and can help prevent subsequent issues from occurring.
2. In rare occasions, if the distribution system receives a moderate to excessive amount of ammonia over long periods of time, bacteria using ammonia as a food source can bloom and cause a loss of disinfectant residual. As a result, the water system may not be able to maintain the minimum required disinfectant residual in the distribution system, and may receive complaints regarding taste/odor. The conversion to free chlorine, in conjunction with increased flushing activities, assists in removing excess film from the distribution system and also starves these bacteria. The chlorine conversion helps the system return to an environment where the disinfectant residual can be maintained.