

FACT SHEET

Chlorine

What is chlorine?

Chlorine is a disinfectant DMWW adds to the water to kill or inactivate microbiological organisms.

Why do we use chlorine?

DMWW uses chlorine to disinfect the water and keep it clean and safe as it travels through the distribution system. This can be done in a variety of ways, but DMWW uses liquid chlorine (sodium hypochlorite solution) and injects it into our water as it enters clear wells – our 10 million gallon (Fleur Drive), 5 million gallon (McMullen) and 2 million gallon (Saylorville) reservoirs located on the treatment plant properties. Chlorine is a strong oxidizer that either kills or inactivates microbiological contaminants.

How much chlorine do we put into the water?

As a surface water plant, we must maintain at least a 0.3 milligrams per liter (mg/L) level to the distribution system. The amount added each day varies with how much chlorine-consuming material is in the water, but is kept above the 0.3 mg/L requirement.

What are the health effects?

When chlorine reacts with the organic material present in the raw water, a group of chemicals called trihalomethanes (THMs) may form. This by-product has some health concerns and is closely regulated. The current EPA maximum limit is 80 parts per billion (ppb). Water from the Des Moines Water Works distribution system typically runs in the 40-60 ppb range. Some people who drink water containing THMs in excess of the maximum limit over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. It is important to remember that this risk is small when compared to the risks associated with drinking water that has not been disinfected. For more information, please contact your health care provider.