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Moving From Chlorine to Monochloramine: What Rutland Residents Need to Know

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DRINKING WATER UPDATE

What Rutland Residents Should Know

What's Happening?

To improve water quality, Rutland City is updating its drinking water treatment process by switching the system's **secondary disinfectant from chlorine to monochloramine**.

A **secondary disinfectant** is added to drinking water as it leaves the treatment facility to protect you from harmful microbes.

Why the Switch?

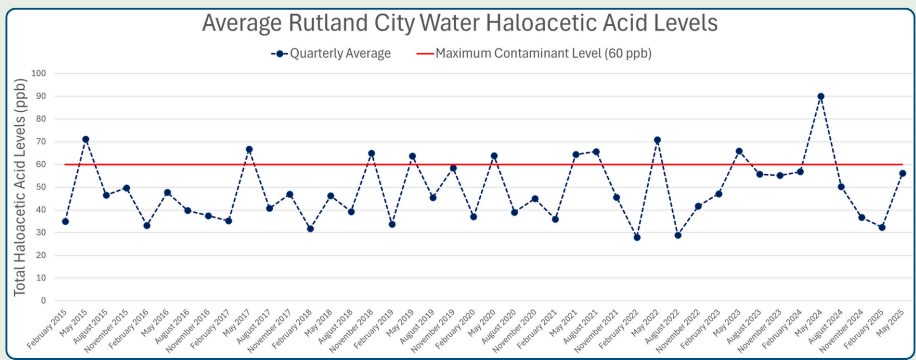
Rutland City is switching its secondary disinfectant from chlorine to monochloramine to reduce the levels of **haloacetic acids (HAAs)** in your drinking water.

What are Haloacetic Acids (HAAs)?

HAAs form when a drinking water disinfectant, such as chlorine, reacts with bits of natural organic matter in the water, such as plants and algae.

Studies have shown that low levels of HAAs are safe for humans. However, long-term exposure to high levels of HAAs may increase the risk of some cancers.

Rutland City drinking water's HAA levels are currently below the regulatory limit (60 ppb) but have **exceeded this limit in the past**. The graph below shows Rutland's HAA levels over the past 10 years.



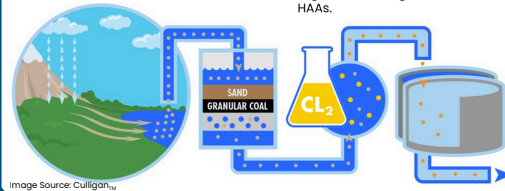
HALOACETIC ACIDS (HAAs): How Do They Form?

Rainfall carries organic material from the environment into the reservoir.

Filters remove most of the organic material, but some excess can remain.

When chlorine is added to filtered water, it reacts with the remaining organics, forming HAAs.

HAAs flow into the distribution system.



Since February of 2015, **10 out of 42** quarterly averages of Rutland City water samples have exceeded the current regulatory limit of HAA levels.

Monochloramine **creates lower levels of HAAs** because it is less reactive than chlorine with natural organic matter. The switch to monochloramine is expected to keep HAA levels in Rutland City water below regulatory limits and reduce potential health risks.

What else should I know about Monochloramine?

Drinking water disinfection with monochloramine is **not new**.

Monochloramine is EPA-approved and has been used in the United States for **over 100 years**.

Some people say that water treated with monochloramine **tastes and smells better** than water treated with chlorine.



About **3 in 10** Americans are served by water treated with monochloramine.

Monochloramine dissipates less quickly than chlorine, allowing it to effectively protect water from microbes all the way to your home.

Many communities have adopted monochloramine over the past century. Some examples include...

- o Champlain Water District, VT (2006)
- o Boston, MA (1932)
- o Portland, ME (1938)
- o Philadelphia, PA (1969)
- o Denver, CO (1918)
- o Indianapolis, IN (1954)
- o Miami, FL (1982)
- o San Francisco, CA (2004)

Looking for More Information?

Vermont Department of Health: Monochloramines and Disinfection Byproducts in Drinking Water



Rutland City Water Filtration Plant



EPA: Basic Information about Chloramines and Drinking Water Disinfection



Additional Resources Used in this Infographic

