

CHLORINE

A necessary ingredient in the treatment of drinking water from lakes, streams and reservoirs



PENNSYLVANIA
AMERICAN WATER

Chlorine plays a critical role in the disinfection process

The use of chlorine in drinking water as a disinfectant in drinking water supplies has played a critical role in the prevention of water-borne diseases for nearly a century. According to the World Health Organization, the adoption of drinking water chlorination has been one of the most significant advances in public health protection, stating that "disinfection by chlorine is still the best guarantee of microbiologically safe water."

Why is chlorine added to your drinking water?

Chlorine is added to water for the customers' protection. It is used as a disinfectant to ensure that harmful organisms, such as bacteria and viruses, are destroyed in the treatment process.

In addition, the Pennsylvania Department of Environmental Protection (DEP) and the U.S. Environmental Protection Agency (EPA) require Pennsylvania American Water to maintain low levels of this disinfectant to be present in the water at the furthest point of the distribution system. Our company complies with these minimum levels as the water travels from our treatment facility to your home. Consequently, customers who live or work closest to the facility might experience higher levels of chlorine.

We make every attempt to minimize this level, and we frequently perform monitoring at various locations within our system. The results of this monitoring are used to adjust the chlorine concentrations in the water leaving our facilities to make sure that the levels are not excessive, but are adequate for public health protection. Pennsylvania American Water continues to meet the drinking water standards related to chlorine use in your drinking water set by EPA and DEP in all of its systems.

Will my home treatment device remove chlorine?

Some home treatment devices can remove chlorine. Please keep in mind, once the chlorine is removed, it is like any other food. You should refrigerate it and use it as quickly as possible. If you do decide to use a home treatment device, it is important that you adhere to the manufacturers instructions for maintaining the device. Homeowners who choose not to follow the recommended instructions properly could reduce the effectiveness of these devices and end up with lower quality water.

Are there other ways to remove the chlorine taste or smell from my water?

To remove the taste of chlorine, follow these three helpful tips:

- Place water in a glass container in the refrigerator overnight uncovered. This will allow the chlorine to dissipate at a faster pace.
- Bring your water to a rolling boil for five minutes and allow the water to cool. This should reduce the chlorine taste and smell in the water.
- Add a lemon slice or a few drops of lemon juice to a glass of drinking water.



For more information

Pennsylvania
American Water
Customer Service
Center:
1-800-565-7292

Our customer service representatives are available 24/7 to assist you.

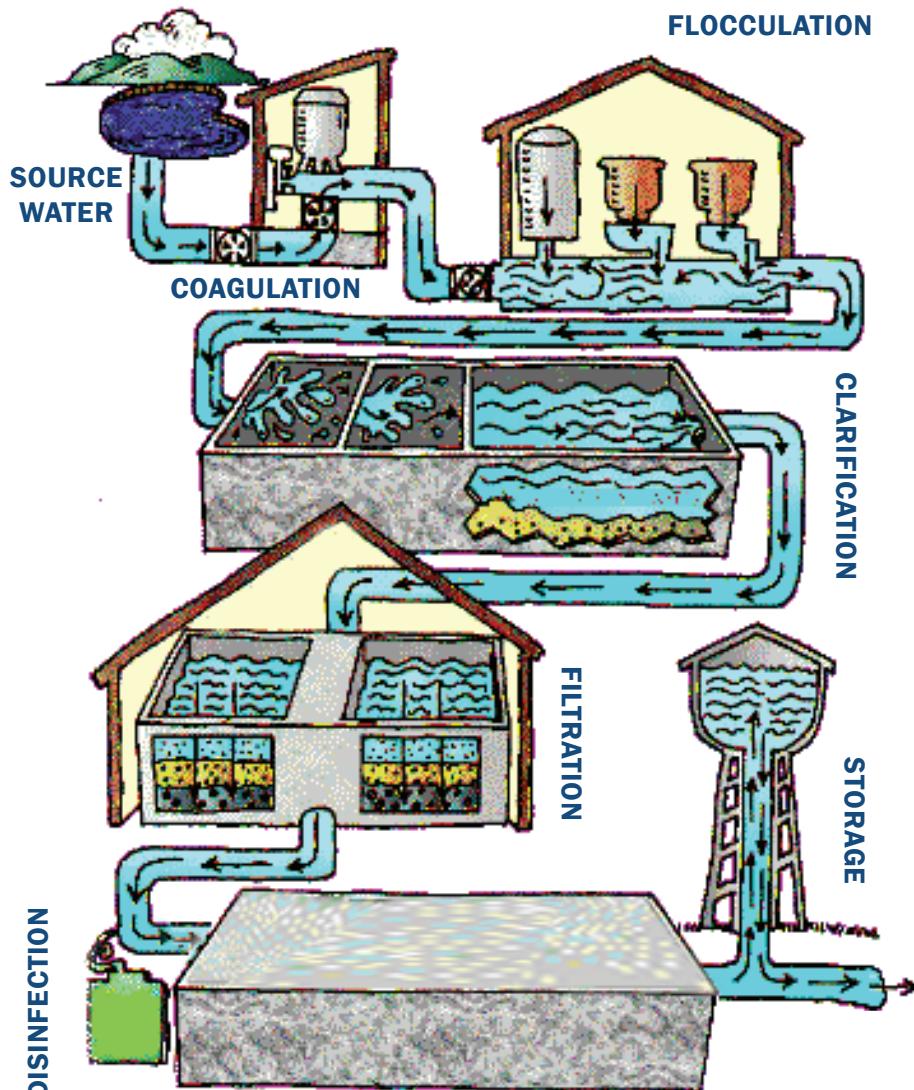
For more information related to drinking water standards, customers can also call the EPA Hotline: 1-800-426-4791

WE CARE ABOUT WATER. IT'S WHAT WE DO.



PENNSYLVANIA
AMERICAN WATER

WATER TREATMENT



We can speak in your community about how your water is treated

Through Pennsylvania American Water's speakers bureau, we can arrange for a member of our staff to speak to your civic or community group or visit your child's classroom. Whether you are looking for information on the water treatment process, water quality, wise water use or watershed protection, we can tailor the presentation to meet your needs. For more information on Pennsylvania American Water's speakers bureau, contact our Customer Service Center toll-free at 1-800-565-7292 or visit our website at www.pennsylvaniaamwater.com.

The Water Treatment Process

Disinfection is just one part of the water treatment process.

SOURCE WATER

Lake, stream or river

COAGULATION

Coagulation removes dirt and other particles suspended in water. Chemicals, such as aluminum and iron salts, are added to water to form tiny sticky particles called "floc."

FLOCCULATION

The floc acts as a magnet and attracts other dirt particles. The combined weight of the dirt and floc become heavy enough to sink to the bottom during clarification/sedimentation.

CLARIFICATION/SEDIMENTATION

The heavy particles (floc) are removed and the clear water moves to filtration.

FILTRATION

The water passes through filters, some made of layers of sand, gravel and activated carbon, which help remove even smaller particles.

DISINFECTION

A small amount of chlorine is added during the treatment process to kill any bacteria or microorganisms that might be present in the water. After the chlorine is added, the water is transferred to a temporary vessel to provide ample contact time for proper disinfection to occur.

STORAGE

The water then flows through pipes to homes and businesses in the community. Distribution tanks within the system provide storage of water to enhance reliability of water service and to provide fire protection.

Source of information: US Environmental Protection Agency (EPA) website for kids: <http://www.epa.gov/ogwdw/kids/watertreatmentplant/index.html> and <http://www.epa.gov/safewater/kids/watertreatmentplant/>