

## **Chloramine Fact Sheet**

### **What is the proposed change to the Red Bank Water Supply provided by New Jersey American Water Co.?**

DBPs are formed when chlorine mixes with naturally occurring organics predominantly found in surface water sources such as reservoirs and rivers. The Environmental Protection Agency (EPA) regulates the levels of DBPs that systems can have in their water and EPA has lowered the maximum level allowed over the years to protect the health of the public. New Jersey American Water Co. which operates the Swimming River Reservoir has selected Chloramination as a treatment technique to meet the EPA standard

### **Why do we need to add a disinfectant to drinking water at all?**

As a safeguard to prevent waterborne illnesses, the State of New Jersey requires public water systems to maintain a disinfection residual throughout the water distribution system.

### **What are chloramines?**

Chloramines are a combination of chlorine and a small amount of ammonia, and have been used for many years by water systems across the country. Chloramines last longer in the distribution system which results in the water having lower levels of Disinfection By-Products (DBPs), such as Trihalomethanes and Halocetic Acids. DBPs are formed when chlorine mixes with naturally occurring organics predominantly found in surface water sources such as reservoirs and rivers. The Environmental Protection Agency (EPA) regulates the levels of DBPs that systems can have in their water and EPA has lowered the maximum level allowed over the years to protect the health of the public. Chloramines will only be in the bulk water purchased from New Jersey American Water Co. since their supply consists of surface water from reservoirs. The Borough of Red Bank will continue to use chlorine for disinfection since our source comes from wells which have little or no organic material. The result will be a mix of chlorine and chloraminated water throughout the months of May through September when our treatment plants are in operation. The water will be fully chloraminated during the winter months when our water plants are shut down for the winter season and we purchase all our water from New Jersey American Water Co.

### **Chlorine and chloramine -- what's the difference between these disinfectants?**

Chlorine is most commonly used because it's quick, effective, safe, and is the least expensive method of water disinfection.

Chlorine is quicker acting, but is used up faster as it reacts with contaminants in the water. It will also form chemical compounds called trihalomethanes and Halocetic Acids when it mixes with organic compounds predominantly found in surface water sources.

Chloramines are safe and effective, but react more slowly than chlorine. However, they stay active longer, and they do not form Disinfection By-Products when mixing with organics in water.

### **Are chloramines safe?**

Yes. Chloramines have been used safely in the United States and Canada for many years. The NJ Dept. of Environmental Protection accepts chloramines as an approved disinfectant.

### **Are there special considerations for chloramines?**

Kidney dialysis equipment

Aquariums

## **Kidney Dialysis**

In the dialysis process, water comes in contact with the blood across a permeable membrane and must be pretreated to remove chlorine and ammonia. Medical centers that perform dialysis are responsible for purifying the water that enters the dialysis machines. Persons with home dialysis machines should check with their physician or equipment supplier. Please contact your doctor and dialysis equipment provider for more information.

## **Aquariums**

Chlorine and ammonia are toxic to all fish since water enters through the gill structure and goes directly in the bloodstream. Chloramines stay in the water for up to several weeks, so a dechlorinating agent must be added to remove it. This includes the water for both freshwater and saltwater aquariums. Pet stores should have a product that will quickly neutralize both the chlorine and ammonia molecules.

## **Will reverse osmosis remove chloramines?**

No. Salts can be caught by the permeable membranes, but chloramines pass through easily.

## **Can persons with kidney ailments, diabetes, or on low sodium diets drink chloraminated water?**

Yes. People with serious medical conditions should contact their doctor. It can be used for any other purpose except for dialysis treatment.

## **Do home water softeners remove chloramines?**

Only if the softeners have a Granular Activated Carbon (GAC) filter.

## **Will chloramines harm plants?**

No. It is safe to water plants of any type, including ornamentals, vegetables, fruit and nut trees.

## **Are chloramines new?**

No. Many countries and cities in the U.S. have used chloramines for decades. Chloramine has been approved by the EPA and NJDEP for use as a municipal drinking water disinfectant for decades. It is a water quality improvement as it reduces disinfection byproducts (DBP) levels.

## **Will chloramination affect routine household water uses?**

No. Chloramination will not affect routine water uses such as food preparation, household laundering and dishwashing, water plants, etc. Chloramines is not reported to have any effect on plants of any type, and will usually be removed by the high chlorine demand in soil.

## **When will the conversion to chloramines occur?**

New Jersey American Water Co. has informed us that their project should be completed before the end of May 2012.