



## **Drinking Water Quality Frequently Asked Questions**

### **Where does our drinking water come from?**

Lake Whatcom is the source of drinking water for the citizens of Bellingham. On occasion, water from the Middle Fork of the Nooksack River is diverted into Lake Whatcom to supplement the supply of water available for treatment.

### **What can I do to help preserve our drinking water source?**

For information about how you can help preserve the quality of water in Lake Whatcom, visit [www.cob.org/lakewhatcom](http://www.cob.org/lakewhatcom).

### **How does the City of Bellingham treat our drinking water?**

Water from Lake Whatcom is piped to a screenhouse where it is screened of larger debris. After screening a pipeline conveys the water to the Water Treatment Plant (WTP). Once it reaches the WTP, aluminum sulfate is added to the water with mixing to enhance the removal of fine particulate and algae. Water then enters a pretreatment system known as dissolved air floatation (DAF). In DAF, fine bubbles are used to float the clumped impurities to the surface where these are skimmed off and sent to the wastewater plant. Water is then lightly chlorinated and flows by gravity to the flume where a filter aid polymer is added to further remove impurities. The water then flows into one of six dual media filters which contain anthracite coal and silica sand. The filtered water is then chlorinated as it flows to a reservoir where it is held long enough to ensure that pathogens (germs) are destroyed. As a final step, the pH of the water is adjusted with soda ash (sodium carbonate) before it enters the distribution system, and chlorine is again added to ensure there is enough to keep it safe all the way to the last house in the distribution system.

### **Should I buy bottled water?**

Water treatment providers such as the City of Bellingham test their water for more substances than the manufacturers of bottled water! City water meets all the federal and state drinking water standards. You may enjoy the convenience of bottled water, but it can cost up to 1,000 times more than water from your tap. According to Co-op America, as much as 40 percent of bottled water is simply tap water, often with additional treatment, though not always. If you use bottled water, consider it a food and refrigerate it after opening. Questions about water quality can be directed to the City's laboratory at (360) 778-7870.

### **Is water with chlorine in it safe to drink?**

Chlorine is the most common disinfectant used in the United States. It is used by 75% of large water systems and 95% of smaller systems. Chlorine has been added to drinking water to kill germs since 1902. The amount of chlorine used is sufficient to kill germs but is not enough to harm humans. Chlorination of public water supplies was listed by *Time* magazine as one of the 50 greatest achievements of the 19th century, leading to great success in reducing water-borne diseases. Chlorine is added to drinking water at the water filtration plant. The City chlorinates the water to ensure there is 0.7 parts per million when it leaves the filtration plant. Regulations allow the City to chlorinate to a level over 5 times higher than what we currently use. Researchers raised concerns about the by-products of chlorine in the 1960's. It was found that chlorine could combine with naturally occurring, non-toxic, chemicals in the water to

form compounds that may cause cancer. These compounds are called disinfection by-products. The City treats water to minimize the formation of these disinfection by-products. There are strict regulations about the amount of disinfection by-products allowed in water supplies. The City monitors for these compounds in the distribution system and has always had levels below the level Environmental Protection Agency says is safe. Any risk of harmful effects to humans from disinfection by-products is small and difficult to measure, especially when weighed against the real risks associated with the lack of chlorine in water.

### **Why does chlorine smell stronger in my water during certain times?**

The level of chlorine in our drinking water is constantly monitored and does not change from the target level. At certain times of the year, some of our customers report that their water smells more like chlorine than other times. Chlorine can react with substances, such as algae, in the source water (Lake Whatcom). The specific types of algae that cause this phenomenon only grow during certain times of the year. The combination of the algae and chlorine create a stronger chlorine smell at the tap. This is usually what makes the smell of chlorine more noticeable, particularly in late summer.

### **Is it alright to use hot water from the tap for cooking/drinking?**

No, use cold water. Hot water is more likely to contain rust, copper, and lead from household plumbing and water heaters. These substances can dissolve into hot water faster than they do in cold water. This is especially true when water has not been used for a while. When water has not been used for an extended period, it is recommended to allow the faucet to run for 1 to 2 minutes if you are going to use the water to drink or cook with. To avoid wasting water, catch the water in a pitcher or bucket and use it to water plants.

### **Why does my drinking water sometimes taste or smell funny?**

There is usually one of three things happening if water tastes or smells unusual:

1. Leaving a garden hoses open at the valve can cause water to travel in and out of the home plumbing depending on the pressure in the water pipes.
2. Water heaters set below 140 degrees Fahrenheit can be cool enough to grow certain organisms in the holding tank. These organisms can cause off-tasting or odorous water.
3. Algae and tiny fungi grow in the water source (Lake Whatcom) and can give off nontoxic chemicals that can cause unpleasant taste and odors in the drinking water. This happens most often in late summer.

While most taste and odor problems can be caused by the above factors, contact the City's laboratory at (360) 778-7870 to report any sudden taste or odor change in the water.

### **What can I do if my drinking water tastes funny?**

Contact the City's laboratory at (360) 778-7870 to report any sudden taste or odor change in the water or try one of the following:

1. Pour water from the cold water tap into a glass pitcher and store in the refrigerator. Although plastic containers can be used for storing water, some plastic can change the taste of water. Allowing the water to sit overnight in the refrigerator should be sufficient to remove the taste of chlorine.
2. Boiling tap water for 5 minutes should remove most of the chlorine taste in water. As the water cools, it should be refrigerated. Chlorine is a disinfectant, and once it is removed, water must be treated like any other food product. Keep covered and use it within 3 days. Tip: Add 1 or 2 teaspoons of lemon juice to refrigerated water for a more pleasant tasting drink.

**Sometimes my water is reddish or brown. What causes this?**

This reddish-brown color is non-toxic, but it can stain laundry. Four possible causes are:

1. Water main flushing—The City may be flushing water mains in the area. Water mains are flushed annually to remove rust and other substances. The City announces the locations where mains are being flushed in the Bellingham Herald, and on the radio. To clear the water, allow the faucet to run for 1 to 2 minutes if using the water to drink or cook with. To avoid wasting water, catch the water in a pitcher or bucket and use it to water plants. Avoid doing laundry until the water is running clear.
2. Firefighting—A fire in the neighborhood or maintenance on the water lines can cause reddish water. Contact Public Works Operations at (360) 778-7870 for information about such activity in your area.
3. The hot water heater is often a source of water quality problems. The storage tank in the water heater needs to be flushed out periodically. Some manufacturers recommend doing this every 6 months. Refer to the owner's manual of your water heater for instructions.
4. Drinking water pipes in the street leading to a home, or within a home, may be rusting and creating rusty-brown water. Some areas in Bellingham's distribution system, such as those at dead-end lines or those served by unlined cast iron water mains, may be more susceptible to this type of problem. If the neighbors are not having this problem, it is likely household pipes or the water heater in the home experiencing the problem.

*Adapted from Plain Talk About Drinking Water (Third Edition), by permission. Copyright © 1997, American Water Works Association*