

DEC Drinking Water Program Boil Water Notice Fact Sheet

Introduction

Waterborne diseases are the most important public health protection issue and of greatest concern when considering the quality of drinking water. All public water systems can be vulnerable to waterborne disease outbreaks for a variety of reasons. Waterborne diseases are typically caused by disease-causing organisms, or pathogens, that enter into the water system. These pathogenic organisms can be bacteria, viruses or protozoa. They enter the body through drinking contaminated water and can cause gastrointestinal symptoms such as vomiting and diarrhea, and in rare cases, death. Some common pathogenic waterborne disease causing organisms found in Alaska are *Giardia lamblia*, *Cryptosporidium parvum*, *Escherichia coli* (*E. coli* for short), and Norovirus.

What is a Boil Water Notice?

A Boil Water Notice (BWN) is issued to protect the public using an affected water source from the possibility of contracting a waterborne disease. A BWN is issued only after careful consideration by the Drinking Water Program of all of the issues affecting the water system. A BWN means that all water used for drinking, food preparation, cooking, and brushing teeth should be boiled for 2 minutes before using. Boiling is the most effective way to kill or inactivate bacteria, viruses, and protozoa.

When Would A Boil Water Notice Be Issued By the Drinking Water Program?

A BWN can be issued for several different reasons. The most common reason for issuing a BWN is because of total or fecal coliform (*E. coli*) detection in a routine water sample. Coliform bacteria are a group of bacteria used to indicate the possibility of fecal contamination in a water system. *E. coli* is a specific type of fecal coliform bacteria that is used as indicator bacteria to determine the microbiological safety of the drinking water supply. All public water systems are required to submit samples for total coliform bacteria analysis on a regular basis. If a sample is positive for the presence of total coliform, the system must collect four repeat samples within 24 hours of being notified of the positive sample. The repeat samples are collected at different points in the distribution system. If any of the four repeat samples are positive for total coliform bacteria, the system may be placed on a BWN if the Environmental Program Specialist feels there are significant problems with the system or the sampling procedure. However, a system is not typically put on a BWN if samples are only total coliform

positive. If at any time, a system has an *E. coli* positive sample, either routine or repeat samples, the system will be placed on an immediate BWN.

Another reason a BWN may be issued is if a water system has a break in any of the distribution lines or if the system does not maintain a pressure of 20 pounds per square inch (psi) or greater. A BWN may also be issued if a water system exceeds specified turbidity limits, since high turbidity can adversely affect the disinfection process in a treatment plant. A precautionary BWN may be issued to water systems that do not monitor and report required turbidity and entry point chlorine levels. Without monitoring for coliform bacteria, turbidity, and entry point chlorine levels it is not known if the water is safe.

In addition, a precautionary BWN may be recommended by the Drinking Water Program in the event of flooding or other catastrophic events in order to protect the public health of people in affected communities. A precautionary BWN would remain in place until the system could collect total coliform bacteria samples and receive satisfactory results.

What Should Individuals do when Their Public Water System is on a BWN?

For personal use, create a supply of water for drinking, food preparation, cooking and brushing teeth by bringing water to a rolling boil for 2 minutes. Timing starts when the water begins to bubble. Cool the water then place in clean containers. It is important to make sure the containers you use for storage have been thoroughly cleaned.

Hot (not boiled) soapy water can be used for dishwashing and kitchen and bathroom surface cleaning. As a precaution, add one tablespoon of bleach per gallon of water for disinfection. Laundry water does not need to be treated. Unless specifically listed on your BWN, water for showering does not need to be treated.

Persons with special medical needs should always contact their primary care provider for information if their public water system is placed on a BWN.

How Will I be Notified if My Public Water System is on a BWN?

The Drinking Water Program will send a Boil Water Notice and the Public Health Notification language to the public water system owner. It is the responsibility of the public water system owner to notify its consumers of the BWN. The BWN should be posted in a central location where it will be visible to all consumers. If possible, a community wide announcement should

be made to make sure that everyone knows what to do. A public service announcement should be provided to the local radio station in communities that have radio service.

Who Can Lift the BWN?

Only the DEC Drinking Water Program can lift the BWN once it has been issued. The public water system will be given specific instructions on the number of total coliform bacteria samples that must be taken and where the samples should be taken. The BWN will not be lifted until the Drinking Water Program receives satisfactory results from a certified laboratory. Drinking Water Program staff will also look at other factors that may have led to the BWN, such as low pressure in the distribution system. The Drinking Water Program will notify the public water system owner when it is safe to lift the BWN. The public water system owner is responsible for notifying its individual consumers.

Conclusions

The BWN is a very important public health protection tool that is used to protect the public from potentially contaminated drinking water. If your public water system is issued a BWN it is important to follow all instructions for posting the BWN and for notifying all your consumers.