Fact Sheet
Emergency Water Treatment

January 2017

When power goes out, water purification systems may not be working and breaks in distribution lines may have occurred. Here are some general rules to make water safe for drinking, cooking, and personal hygiene.

- **Do not use contaminated water** to wash dishes, brush your teeth, wash, or prepare food, wash your hands, make ice or make baby formula. If possible, use prepared baby formula. Use an alcohol-based hand sanitizer to wash your hands.
- If you use **bottled water**, be sure it came from a safe source. Otherwise, boil or treat it before use. Use only bottled, boiled, or treated water until your supply is tested and found safe.

What happens if you drink bad water?

Reactions range from no symptoms at all, to desperate illness, to death for some immune-compromised individuals. The reaction depends on the specific pathogen and the person's immune system.

If you are exposed to pathogenic micro-organisms, you may be one of the lucky few, who experiences few, mild, or no symptoms. For others, there will be an incubation period of between a few hours (e.g., *Salmonella*) and a couple of months (e.g., *Hepatitis A* or *C*), during which no symptoms will be evident.

During this time, the pathogen is invading your system and multiplying. When concentrations of the pathogen reach a certain threshold, you enter the "manifestation" period during which you begin to feel symptoms.

Fever, cramps, fatigue, diarrhea, nausea, dehydration, and general malaise can either sneak up on you slowly or slam you all at once. During the manifestation period, being more than 10 seconds away from the nearest bathroom is often a bad idea. Remember: functional bathrooms may be in short supply during water or utility emergencies

Maintaining an adequate and pure supply of drinking and cooking water will be critically important during any emergency.

Boiling is best

If you don't have safe bottled water, you should boil water to make certain it is safe. Boiling is the surest way to kill disease causing organisms, including viruses, bacteria, and parasites.

If the water is cloudy:

- Filter it through a clean cloth, paper towel, or coffee filter or allow it to settle.
- Draw off the clear water; bring it to a rolling boil for three minutes.
- Let the water cool and store in clean, sanitized containers with tight covers.

If the water is clear:

- Bring the water to a rolling boil for three minutes.
- Let the water cool and store in clean, sanitized containers with tight covers.

Disinfectants

If you don't have safe bottled water and boiling is not possible, you can use unscented household chlorine bleach or iodine to make it safer for consumption. These can kill most harmful organisms, such as viruses and bacteria, but are not as effective in controlling more resistant organisms such as the parasites *Cryptosporidium* and *Giardia*.

To disinfect water:

- Filter water through a clean cloth, paper towel, or coffee filter OR allow it to settle. Draw off the clear water.
- Add 1/8 teaspoon (8 drops) of unscented liquid household chlorine (5-6 percent) bleach for each gallon of clear water. Stir well and let stand at least 30 minutes before use.
- Store the disinfected water in clean sanitized containers with tight covers.
- To use iodine, follow the manufacturer's instructions.

Chlorine dioxide tablets have also been proven effective against pathogens, including Cryptosporidium, when used according to manufacturer's instructions.

Emergency water sources for treatment

In the home — water heater tank, melted ice cubes from uncontaminated water, toilet tank, and canned liquids. **Outside the home —** rainwater, streams, rivers, ponds and lakes, natural springs.