Fact Sheet

Flood advice for drinking water systems

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Updated

Floods are the most common and widespread of all natural disasters, except fire, according to the Federal Emergency Management Agency. Most communities have experienced some degree of flooding following heavy rain or spring and winter thaws.

Floods pose a particular threat to drinking water systems because floodwaters often carry biological and chemical contaminants that can make consumers sick. If source water or any part of the water distribution system flood, these contaminants can end up at consumer taps.

How floods contaminate drinking water

Surface water sources: Increased water flow during a flood often makes rivers and streams murky. Elevated turbidity in source water could make it impossible for a water system's treatment plant to treat water. If that occurs, the water system may have to rely on emergency storage capacity or an emergency water source.

Either way, the water system will have to ask customers to conserve water. That request can confuse customers when flooding or heavy rains make it look like there's water everywhere.

Even if the water system can overcome high turbidity, the change in disinfection levels may cause taste or odor problems in the treated water.

The December 2007 floods completely submerged Interstate 5 in Lewis County. Flooding damaged several area water systems. (Photo courtesy of Washington Department of Transportation.)

Groundwater sources: Contaminants can enter the water supply if the wellhead or the areas immediately around the wellhead flood.

Distribution systems: Contaminants can enter the water distribution system if a significant loss of pressure occurs when all or part of the service area floods.

What to do when the weather forecaster predicts flooding in your area

- Have enough coliform sample bottles on hand to sample each well and the distribution system daily for at least a week.
- If you routinely disinfect your water system with chlorine, increase the chlorine level. This will not ensure your drinking water will remain safe, but it will make it easier to monitor chlorine residuals in your water system. A drop in the chlorine residual may indicate contaminated water entered your water system.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

What to do if your well floods

- Advise residents to bring their drinking water to a rolling boil for one minute to kill disease-causing bacteria and parasites. Do this even if you chlorinate your water system because your treatment may not be effective against contaminated floodwaters.
- Collect coliform samples at your well and throughout the distribution system as soon as you are able to gain safe access. Exercise extreme caution any time an electric power supply component is under or near floodwater.
- Contact us anytime you advise customers to boil their water, or when water test results show coliform bacteria is present.

What to do if your distribution system floods

- Monitor chlorine residuals and system pressure as soon as you can safely gain access to the system and its control facilities.
- If the water system loses pressure at any time while the area is flooded, advise residents to bring their drinking water to a rolling boil for one minute to kill disease-causing bacteria and parasites. Collect coliform samples throughout the flooded area and let your customers know when the water is safe to drink.
- If you are monitoring chlorine levels and notice a drop in the residual while the area is flooded, advise residents to bring their drinking water to a rolling boil for one minute. Collect coliform samples throughout the flooded area, especially in the area where chlorine is low.
- Even if you don't believe your water system flooded, plan to collect extra coliform samples.
- Contact us anytime you advise customers to boil their water, or when water test results show fecal coliform bacteria is present.

Communicate with your customers

- Your customers' perception of risk during a flood may be high. They need timely and accurate information about the quality of their drinking water.
- Not all customers experience the same flooding conditions. Some may feel a direct threat from floodwaters, while others do not. It's important to know your water quality and communicate to all customers.
- Be conservative and informative, not sorry later on! Make sure your customers have the information they need to make good decisions about their drinking water.

Where to go for help

Visit our website at http://www.doh.wa.gov/ehp/dw/our_main_pages/dwflood.htm or call our regional office:

Eastern Region: Spokane Valley (509) 329-2100

Northwest Region: Kent (253) 395-6750

Southwest Region: Tumwater (360) 236-3030

After hours and weekends (877) 481-4901

You can also call your local health or emergency management agency. Contact information is online at http://access.wa.gov/emergency/index.aspx

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