

Information from the Massachusetts Department of Environmental Protection

Recommendations for Private Wells Inundated by Flooding

1. Introduction

If you live in an area that was recently or is currently flooded, your private well may be in danger of contamination from pollutants carried in floodwaters. If your well cap is or has been underwater, you should assume that your well is contaminated.

Flood waters which inundate wells can carry large debris that could loosen well hardware, dislodge well construction materials or distort the casing. Coarse sediment in the flood waters can erode pump components. If the well is not tightly capped, sediment and flood water can enter the well and contaminate it. Wells that are more than 10 years old or less than 50 feet deep are likely to be contaminated, even if there is no apparent damage. Floods may cause some wells to collapse.

After flood waters have receded and the pump and electrical system have dried, care must be taken before restarting wells. Equipment should not be turned on until the wiring system has been checked by a qualified electrician, well contractor, or pump contractor. If the pump's control box was submerged during the flood, all electrical components must be dry before electrical service can be restored. All pumps and their electrical components can be damaged by sediment and flood water. The pump including the valves and gears needs to be cleaned of silt and sand. If pumps are not cleaned and properly lubricated they can burn out. Assistance should be obtained from a well or pump contractor who can clean, disinfect, repair or maintain different types of pumps before turning on the pump.

MassDEP Role

Although MassDEP does not regulate private wells, MassDEP Drinking Water Program (DWP) provides assistance to owners of private wells by providing guidance on issues related to private wells, including what to do during floods. Guidance on private wells is available at: <http://www.mass.gov/dep/water/drinking/pwfaq.htm> and recommendations for private wells inundated by flooding is available at: <http://www.mass.gov/dep/water/drinking/weldsinf.htm>

2. Boiling Your Water

If you suspect your drinking water is contaminated, you should obtain water from a known safe source for drinking, cooking and food preparation. You can get water from a neighbor's well you know is safe, from a community water supply or you can purchase bottled water. If you cannot find a convenient source of safe water, you can boil your well water for five minutes before use.

If you have any questions about your well or water quality, please call your local Board of Health or the MassDEP Drinking Water Program at 617-292-5770 during business hours. Use the following procedure to disinfect your well.

3. Disinfecting a Well

1. Once the water has subsided below the cap of the well, remove the well cap. Mix the appropriate amount of unscented chlorine bleach (Clorox, Dazzle, or other EPA/NSF

- approved bleach) from the table below with 5 gallons of water and pour into the well. Make sure the well casing walls are wetted completely with the solution.
2. Replace the well cap. In order to distribute the disinfectant, the well should be pumped, re-circulating the water back to the well, for at least 15 minutes.
 3. Open all faucets, sill cocks and similar outlets individually until you smell chlorine in each outlet.
 4. Allow the mixture to stand in the system a minimum of 2 hours, preferably overnight, then flush the chlorine mixture from the system using an outside faucet and garden hose. **DO NOT FLUSH THE MIXTURE INTO YOUR SEPTIC SYSTEM.** You may resume using the toilet facilities as the septic system is designed to handle this, but the septic system cannot handle the large amount of water needed to flush the chlorine from the well. Since the chlorine will kill grass, be careful where you run the water outside.
 5. After disinfection, the water supply should be sampled and tested for coliform bacteria by a MassDEP certified laboratory. To find a certified lab, click on <http://public.dep.state.ma.us/Labcert/Labcert.aspx>, or call the MassDEP Wall Experiment Station at 978-682-5237. Sampling should be done 24 hours after the odor of chlorine disappears. It takes about 3 or 4 days of normal water usage before all of the chlorine smell disappears.

Drilled Well	
(Please note: a greater amount of chlorine may be needed to disinfect the water depending on the degree of contamination)	
Depth	Dosage
50 feet	2 1/2 cups
100 feet	1 1/2 quarts
150 feet	2 quarts
200 feet	2 1/2 quarts
250 feet	3 quarts
300 feet	3 1/2 quarts
Dug Well	
(Approximate amount of water in the bottom of a well and not the total depth of the well. For a surface SPRING, use 2 gallons)	
Depth	Dosage (gal.)
5 feet	1/2 gallon
10 feet	1 gallon
15 feet	1 1/2 gallons
20 feet	2 gallons

4. Contact Information

For more information about private wells visit the MassDEP website at <http://www.mass.gov/dep/water/drinking/privatew.htm>.

<http://www.mass.gov/dep/water/drinking/weldsinf.htm>