



**COUNTY OF SAN LUIS OBISPO HEALTH AGENCY
ENVIRONMENTAL HEALTH SERVICES DIVISION**

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DISINFECTION GUIDELINES AND EMERGENCY WATER WELL RECOVERY

Power outages, floods, earthquakes, fires and other disasters can damage or contaminate water wells and systems. **After a disaster, it is safest to drink bottled water until you are certain that your water is free of contaminants and safe to drink.** If your water system has lost pressure or has been compromised and you do not have bottled water you can purify your water by boiling vigorously for 10 minutes. You can also use chlorine (liquid household bleach) according to the following chart. It is important to mix and let the water stand for 30 minutes after the addition of chlorine.

Amount of Water	Amount of Household Bleach (sodium hypochlorite 5.25%)	
	Clear Water	Cloudy Water
1 quart	2 drops	4 drops
1 gallon	8 drops	16 drops
5 gallons	½ tsp.	1 tsp.

Working on a water well after a disaster can be hazardous because in addition to the well and the area around the well, water storage, piping and electrical systems can also be damaged. Unless you are highly skilled, electrical and water system evaluations should be conducted by a qualified electrician or well contractor.

Once emergency services personnel determine it is safe for you to do so, you can likely visually check for:

1. Damaged well houses
2. Damaged or exposed electrical wiring
3. Damaged and or leaking well casing, liners, components or piping
4. Damaged water storage and pressure tanks
5. Debris, such as ash and sediment entering water system at well or storage

Keep children and animals away from the area, and **wear protection** (such as a N-95 respirator, safety glasses, gloves, long pants, long-sleeved shirts and boots). Exposed electrical wiring to the well poses a significant electrical safety hazard with a potential for an electrical short to the metal components. If the electrical wiring has been damaged or is wet, do not handle the wiring or attempt to start the pump. Barricade the area around the well and electrical panel and contact a licensed electrician for repairs.

If your well has been damaged or flooded, contact a licensed and bonded well contractor or pump installer to determine the extent of the damages and what must be done to either repair or decommission the well. Also contact the Environmental Health Services Division if a well has been damaged because a permit may be required to ensure the repairs are made correctly.

A well MUST be disinfected after flooding, repair, maintenance, contamination or if the water system has lost pressure.

Disinfection can be performed using regular household bleach (caution: use only household chlorine bleach with no fabric softeners or other additives). Generally disinfection involves the following steps:

1. Pump well water to a waste line or appropriate site until clear and colorless.

2. Stop pump, turn OFF electrical power to pump.
3. Open well by removing cap and add bleach based on the following table (note: the numbers provided are for 100 feet of pipe; if for example your well is 400 feet you would need to multiply the amount of bleach to be added by 4).

CHLORINE REQUIRED TO DOSE 100 FEET OF PIPE TO 50 PARTS PER MILLION (PPM)	
Diameter of Pipe Casing (in inches)	5.25% Sodium Hypochlorite (Household Bleach)
2	.25 cup
4	1.125 cups
6	2.5 cups
8	4.25 cups
10	7 cups

4. Wait 30 minutes, then surge the well by turning the pump off and on. If possible use the chlorinated water pumping from the well to wash down the casing.
5. If there is a tank, add bleach based on the following table:

Tank Capacity (in gallons) Amount of Water to be Treated	5.25% Sodium Hypochlorite (Household Bleach)
1,000	1 gallon
2,000	2 gallons
5,000	5 gallons
10,000	10 gallons
25,000	25 gallons

6. Open taps at the farthest end of the water system and throughout the house until chlorine odor is detected, then close the taps.
7. Let the chlorinated water remain in the well, the storage tank, and in any piping in the house for at least 24 hours.
8. Flush water to a waste line or appropriate site until there is no chlorine odor in the water.
9. Test your water for coliform bacteria to be sure that it is safe for drinking.
10. Bacteria may regrow in your water system so it is important to retest your water between two to four weeks after disinfection. If a bacteria is detected, repeat the disinfection procedure.

For more information, please go to:

<http://www.slocounty.ca.gov/health/publichealth/ehs.htm>

<http://www.cdc.gov/healthywater/emergency/drinking/private-drinking-wells.html>

<https://www.epa.gov/privatewells>

<https://www.fema.gov/pdf/library/f&web.pdf>