

For More Information:

Technical advice and information:
**Oregon Public Health Division
 Environmental Toxicology Section**
 Ph. 971-673-0440
 Fax. 971-673-0457
<http://www.oregon.gov/DHS/ph/ophs/index.shtml>

You can visit the following Web sites for more information about flood recovery and public health:

Oregon Department of Human Services - State Public Health Division:
www.oregon.gov/DHS/ph/ophs

Oregon Department of Environmental Quality - Drinking Water Protection for Shallow Injection Well Owners:
www.deq.state.or.us/wq/pubs/fact-sheets/uic/shallowinjwell.pdf

Groundwater Basics for Drinking Water Protection:
www.deq.state.or.us/wq/pubs/fact-sheets/drinkingwater/Groundwater-Basics.pdf

U.S. Centers for Disease Control & Prevention - After a Flood:
www.bt.cdc.gov/disasters/floods/after.asp

Introduction

If you suspect or know that your well has been affected by flood waters, the Oregon Public Health Division, Office of Environmental Public Health (OEPH) recommends that you boil your water, or obtain water known to be safe from another source until you are sure your well is safe. Water should be boiled for one minute after it comes to a rolling boil. The best way to determine if the well has been contaminated is to have it sampled and tested for coliform bacteria by an approved drinking water laboratory.

Signs of contamination

- Cloudy or muddy water, flooded well houses or submerged well casing seals are signs that your well might have been contaminated by flood water, surface water or shallow groundwater.
- If there is doubt about the safety of your water, it should not be used for drinking, brushing teeth, preparing food, making ice or mixing beverages. It can probably be safely used for all other household purposes.

Disinfecting well water

- If the water from your well is clear (not cloudy or muddy) you can disinfect the water taken from the well by adding 5 to 10 drops of household bleach to each gallon of water and allowing it to stand for at least 20 minutes.
- This is recommended for water that would be temporarily used for drinking, brushing teeth, washing dishes and for other food preparation activities.

Private well sanitation

After the floodwater has subsided from the well vicinity, disinfect the well with household bleach and then test it to be sure it is free of bacterial contamination. Steps for disinfecting your well are as follows:

- 1) Find and remove from the top of the well casing, the inspection plug. If there is not an inspection plug, you may be able to remove the air-vent line or you may be able to remove a plug or valve from the water line itself somewhere near the top of the seal.
 - a) Many wells have a foot valve that prevents addition of anything through the water line itself.
 - b) You may need to contact your pump supplier for advice about how to get bleach into the well.
 - c) If the casing of your well is not airtight before you remove the plug, it is very likely that the well will continue to be contaminated even without flooding.
 - d) There should be no unplugged openings through the seal.

Local Health Departments

Baker	541-523-8211
Benton	541-766-6835
Clackamas	503-655-8430
Clatsop	503-325-8500
Columbia	503-397-4651
Coos.....	541-756-2020
.....ext. 510
Crook.....	541-447-5165
Curry.....	541-247-3300
Deschutes.....	541-322-7400
Douglas.....	800-234-0985
Gilliam.....	541-384-2061
Grant	541-575-0429
Harney	541-573-2271
Hood River	541-386-1115
Jackson.....	541-774-8209
Jefferson	541-475-4456
Josephine	541-474-5325
Klamath.....	541-882-8846
Lake	541-947-6045
Lane.....	541-682-4041
Lincoln.....	541-265-4112
Linn.....	541-967-3888
Malheur.....	541-889-7279
Marion	503-584-4870
Morrow.....	541-676-5421
Multnomah.....	503-988-3674
Polk.....	503-623-8175
Sherman	541-506-2600
Tillamook.....	503-842-3900
Umatilla.....	541-278-5432
Union	541-962-8801
Wallowa.....	541-426-4848
Wasco.....	541-506-2600
Washington	503-846-3594
Wheeler.....	541-763-2725
Yamhill.....	503-434-7525

If you have a disability and need this document in an alternate format, call (971) 673-1222 (971) 673-0372 TTY

- e) You should not be able to see around or between the casing plates or around any of the pipes that come through the casing seal at any point. Before disinfecting and testing a well with an open or faulty casing seal, repair it or have it repaired to ensure air tightness.
- 2) Pour one-and-one-half cups of household bleach into the well for each 100 gallons of water estimated to be in the well and plumbing. (A six-inch cased well with 70 feet of standing water in the casing will hold 105 gallons. You should add to that the capacity of your storage or pressure tank and plumbing, usually 25 to 50 gallons.) For most private wells, treating for 200 gallons of water should be adequate. It is not harmful to use more bleach than recommended. It will just take longer to pump it all from the well. It is better to overtreat with bleach than to not use enough. You should not be able to see around or between the casing plates or around any of the pipes that come through the casing seal at any point. Before disinfecting and testing a well with an open or faulty casing seal, repair it or have it repaired to ensure air tightness.
- 3) Put a hose on a water faucet in or near the well house and run the pump, allowing water from the hose to run back into the well through the inspection plug or air breather opening. Direct the flow of water from the hose so that it contacts as much of the interior of the casing as possible. This is to ensure that the bleach mixes thoroughly throughout the well column and to flush the inside of casing with bleach. A minute or two of this recirculation should be adequate.
- 4) Turn off and remove the recirculation hose. Turn on faucets in the house at all points and run them until you can smell the bleach in the water at each faucet, and then turn each faucet off. This can be done one faucet at a time if necessary. This will ensure that all of your plumbing is exposed to the disinfectant.
- 5) Allow the water to remain in the plumbing and in the well undisturbed for several hours. Ideally this should be done in the evening and the chlorine left in place overnight.
- 6) Turn faucets on in the morning or after a period of no less than two hours, and run them until all odor of bleach disappears. This may take several minutes to an hour. Be sure you have discharged all of the chlorinated water from the well and plumbing or your bacterial test will be meaningless. For this reason, a careful sampler or testing lab may refuse to test samples in which chlorine remains.
- 7) Contact your local health department, a private well-water testing firm or a testing laboratory that is certified to test drinking water for bacterial contaminants.

Please call the Oregon Public Health Division, OEPH at 1-971-673-0440 or your local health department for assistance and advice, or to help interpret the results of any testing you have done.