



STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL HEALTH



DRINKING WATER PROGRAM

Earthquake Information for Private Well Owners

Drinking Water Supply Summary

Did your water change color, does it smell different, has the flow rate changed, or do you have other concerns? If so, the following is a summary of considerations that should be taken; the paragraphs in the next section provide more details:

- Inspect your well for visible damage.
- Use an alternate water supply until you can confirm the water is safe.
- Boiling the water temporarily may be necessary.
- Let the cloudiness settle out or flush the well clean following the recommended procedures below.
- Test your water for potential contamination.
- Disinfect following the recommended procedures below.
- If there is prolonged cloudiness or it continues to be cloudy after flushing, changes below the surface may have occurred.
- Consult a groundwater professional (e.g., well contractor, professional engineer or hydrologist).

Drinking Water Supply System

Following an earthquake, private well owners may notice changes in the appearance of their water supplies, may have concerns about the quality of their water supply, or may have noticed a change in the supply rate. Well owners, especially those close to the epicenter, should inspect the structural integrity of their well and also the clarity of the water coming from the well. There is a possibility that the ground shaking of an earthquake can stir up sediments and cause your drinking water to be cloudy and discolored. This cloudy condition should clear itself up in a relatively short time (e.g., hours or days), once the sediments have a chance to settle.

If structural damage is noted, your well produces cloudy water for an extended period of time, or the well suddenly does not produce an adequate amount of water, you should have your well checked by a groundwater professional (i.e., well contractor, professional engineer, or hydrologist). Well contractor contact information can be found on the DEC Private Water Wells web site, http://dec.alaska.gov/eh/dw/DWP/DWP_PrivateWells.html.

Well owners who observe sediment in the water supply should use an **alternate source of water until the water supply is safe**. If in doubt regarding water quality, as a precaution, ADEC advises that water used for drinking, cooking, hand washing, or dish washing, should be boiled (rolling boil for at least 1 minute), unless you are in an area with naturally occurring deposits of

arsenic, in which case boiling the water may concentrate any arsenic. As discussed below, you may want to have your well tested for arsenic levels after an earthquake.

If the water has become cloudy, it may be cleared by either letting it settle for several hours or by flushing. Flushing can be accomplished by hooking up a garden hose and letting it drain at a low flow rate until it becomes clear. Caution should be given to where the water drains such as to an area that is clear of hazards and does not impact neighboring properties. For low flow wells, the draining should be low enough that the water in the well doesn't draw down too far and possibly cause excessive wear to the pump.

As a precaution for bacterial contamination once the water has cleared up (free of sediments) ADEC recommends that homeowners disinfect their well with chlorine bleach. See the ADEC handout titled, "Disinfection of Wells and Distribution Lines in Small Water Systems" Link: <http://dec.alaska.gov/eh/docs/dw/brochures/WhatsInTheWater-Disinfection%202014-07-07.pdf>. During the disinfection procedure, the water will not be drinkable, therefore, a 24-hour supply of either bottled or boiled water should be on hand before the procedure is started. Plan to disinfect the well late at night or at other times when there is little need for water. After the disinfection procedure is completed, ADEC recommends to have your water tested for total coliform bacteria, to ensure that it is safe to drink. Additional sampling recommendations are for nitrate, and if you are in an area with naturally occurring deposits of arsenic, you may want to have your well tested for arsenic levels.

Link to Certified Labs in Alaska:

<http://dec.alaska.gov/applications/eh/ehllabreports/certmicrolabs.aspx>

If you detect a fuel spill near your well, contact your local ADEC office to report the spill. You may want to have your well water tested to see if it may be contaminated with petroleum products that could pose a health risk to you and your family. For specific testing of your well water, ADEC recommends that you talk with an independent, state-certified laboratory about the problem you suspect and their recommendation for sampling analysis.

NOTE: Chlorine disinfection will not eliminate fuel contamination in your well water.

Household Water Usage in the Event of Possible Well Contamination

- Use only bottled or purified water for drinking, diluting fruit juices, making formula, all other food preparation and for tooth brushing.
- Dispose of ice cubes and do not use ice from a household automatic icemaker until the supply is determined safe.
- Disinfect dishes and other food contact surfaces by immersion for at least one minute in water that contains one teaspoon of unscented household bleach per gallon of water.
- Water used for bathing does not generally need to be boiled; however, close supervision of children is necessary to make sure that it is not ingested.
- Do not depend on water treatment devices to adequately purify contaminated water.

For more information regarding water disinfection procedures, or where to have your water tested, call your local ADEC office.