

PUBLIC HEALTH ADVISORY
ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FLOODED PRIVATE DRINKING WATER WELLS MAY NEED DISINFECTION
FLOODED SEPTIC SYSTEMS MAY BE DAMAGED

The Department of Environmental Conservation (DEC) issues the following warning to property owners of low-lying lots that may be subject to flooding. The Department recommends that precautions be taken to reduce impacts to public health and the environment which may be caused by flooding, including contaminated drinking water wells and flooded septic systems.

PRIVATE DRINKING WATER WELLS

Wells that have been flooded may be contaminated by surface waters which may make the water unsafe for human consumption.

The Department recommends that residents monitor their wells for standing water near the well casing. If this condition exists, residents should boil their tap water at a full rolling boil for at least two (2) minutes before drinking until the well has been disinfected.

Once the flooding subsides, DEC suggests that residents chlorinate their wells. During the chlorination procedure water will not be drinkable; therefore, a 24-hour supply of either bottled or boiled water should be on hand before chlorinating the well.

Water softeners and related water treatment equipment may be damaged by higher concentration of chlorine. Either bypass this equipment during the disinfection process or check with the manufacturer or equipment manual for recommendations.

The Department recommends the following disinfection treatment method for private water wells:

1. Dilute one-half (1/2) gallon of liquid household bleach containing 5-6% sodium hypochlorite in a large bucket of water. (Large diameter wells may require more bleach.)
2. Remove the sanitary seal on the well casing and pour the chlorine solution down the well. Using a clean garden hose, run water into the casing until you smell chlorine in the water from the hose. Turn off the hose, and replace the sanitary seal.
3. Run the water at each tap in the house until the chlorine solution reaches all parts of the plumbing. Do the same for shower heads and hot water taps, and flush toilets until chlorinated.
4. Let the chlorine remain in the pipes for at least two (2) hours, preferably overnight.
5. Open all taps, and flush out the chlorine solution until you can no longer smell chlorine at any of the taps. The well and distribution should now be disinfected.

6. Collect a Total Coliform Bacteria sample and submit it to a local laboratory to ensure that the disinfection procedure was successful. Until you receive the sample results you should continue to boil your water or use bottled water.

If you have any questions regarding the above procedures, please contact your nearest ADEC office.

ON-SITE SEPTIC SYSTEMS

During flood conditions, septic tanks and leachfields may fail due to blocked piping, damaged tanks or flooded drainfields. As a result, systems may release untreated sewage to the ground or standing water. Back up of sewage into buildings may also occur.

The Department recommends the following actions to minimize risk to public health and the environment during periods of flooding and subsequent high water levels:

- Avoid contact with the sewage from septic tanks that are not working. Raw sewage is a public health problem and can contain diseases. If wastewater surfaces in the vicinity of the drainfield, disinfect the area thoroughly using lime or bleach after the flood water has subsided. A light powdering of hydrated lime (finely ground garden lime will work) or a chlorine solution with 5% chlorine (Chlorox or equal) should be spread across the area. Make sure that you keep people (especially children) and pets away from any contaminated areas for 24 hours after disinfection.
- Watertight caps should be installed on septic tank vent pipes and drain field monitor tubes. In addition, vent pipes and monitoring tubes should be inspected to assure that joints and connections are in good condition.
- Avoid using the house plumbing system (water taps, toilets, washing machine, dishwasher, etc) if the septic tank or the drain field is under water.
- Do not use the water or toilets in buildings in which sewage is backing up.
- Carefully investigate the cause of sewage backups. Check the septic tank to see if it has shifted, or if the grease layer in the top of the tank has blocked the inlet or outlet pipes. Any of the sewage pipes either leading to the septic tank or to the lateral drain field may be broken or may be filled with silt.
- Try to minimize the amount of mud entering the septic tank and plumbing system. Mud will fill the septic tank and can cause the lateral lines to become clogged.
- If your system is an aerated system with an electrical element, do not attempt to shut down the power on this system yourself, as electrical shock can occur. If the system is wired with a breaker, you can flip the breaker to stop all power to the service. If you are unsure call a licensed electrical contractor to disconnect the system until flood waters recede

- Check for any changes in the ground surface that might indicate movement or damage to any part of the system. Raised areas may indicate that the septic/holding tank may have floated upward due to buoyant forces. If this has occurred, damage to the tank and/or piping is likely. Depressed areas may indicate a collapsed tank, or that the upper soils have sunk downward into the drainfield. The system should be checked for damage by a qualified system installer or a professional engineer. ADEC recommends that for safety reasons, you keep people and pets away from these areas prior to repairs.
- Once the flood waters and groundwater levels have receded, the septic tank may be pumped, which can give the drainfield a resting period before introducing additional wastewater to the drainfield from the tank. Prior to pumping a septic or holding tank, the homeowner should verify that their tank is anchored down to prevent floatation when pumped, and that groundwater levels have receded enough to prevent further inflow of groundwater into the tank, and/or damage to the tank and piping when pumped out.
- Contact your borough/city health department, a local septic tank contractor or the Alaska Department of Environmental Conservation for information on repair of a damaged system or construction of a new septic system.

FUEL TANKS AND OIL RELATED WASTE

All barrels and above ground tanks used for storage of fuels should be secured against floatation. Partially full underground fuel tanks that are not properly restrained against floatation may also be damaged. Tank vents and fill pipes should be maintained above the high water level. All pipe joints and connections should be water/fuel tight. All fuel piping should be checked for leakage after the water recedes.

Waste oil and other hazardous materials should be removed from areas that could be or are flooded. Such materials should be stored in a dry place and need to be disposed of properly as soon as possible.

If you have any questions about the above procedures, please contact the nearest ADEC office.