

## Health Risks associated with Floodwaters:

- Floodwaters may contain bacteria from human and animal wastes; they can also transport disease-carrying materials from barnyards, feedlots or sewage disposal systems.
  - The most likely symptoms from an infection are stomach-ache, fever, vomiting and diarrhea.
  - It is important to remember to wash your hands after having contact with floodwaters or other contaminated materials.
- Food Safety may be a concern if food or food containers come in contact with floodwater or other contaminated materials, or if it was not stored at correct temperatures.
  - Clean surfaces that hold food. (1. Use soap and warm, safe water; 2. Rinse with safe water; 3. Soak 1 minute with a mix of 1 Tablespoon household chlorine bleach per gallon of safe water; 4. Allow to air dry.)
  - If you lose power, a refrigerator will keep food cool for 4-6 hours if you keep it closed. Food will stay frozen for one day in a freezer that is half-full and kept closed; or up to 2 days if it is full.
- Safe drinking water concerns:
  - Residents who receive their water from a city or other public water supply source should watch and listen for public announcements about the safety of their water and follow the specific advice offered.
  - Flooded private water wells can sometimes make the water drawn from that well unsafe. People who receive their water from a private well that has been flooded should not drink the water or use it to wash dishes, brush teeth, wash and prepare food, make ice, make baby formula or otherwise use for human consumption without taking precautions. Flooded, private water wells will need to be tested and disinfected after flood waters recede. Below are things that a well owner can look for, any one of these signs may indicate that a well is contaminated. Most private wells have the pump located inside the well casing and submerged, so well owners will probably not be able to inspect the pump. Well owners should contact a qualified professional, registered well driller or pump contractor, to evaluate and service well pumps.
    - Is the well located in or near the area that was flooded? If you did not see the area during the flood, debris and mud in the area and water or mud stains on the well can indicate that the well was flooded.
    - Is the ground surface around the well intact and stable? During flooding the ground around the well may erode, possibly creating unsafe conditions or a pathway for surface water and contaminants to enter the well.
    - Are there any electrical components or wires visible? Visible electrical wires may be dangerous and should be avoided due to electrical shock. If electrical connections or controls located outside the well casing remain submerged,

turning on the pump may cause electrical shock or damage to the system. A qualified electrician should be contacted.

- Is any damage to the well casing visible? A bent or cracked well casing may allow surface water, sediment and debris to enter the well and will increase the risk of contamination.
- Is the well cap and seal securely fastened to the well casing? A loose well cap can allow sediment and debris to enter the well and contaminate it.
- Safe water for human consumption includes bottled water or water that has been boiled for at least three minutes.
- Chemical contamination of floodwaters can also occur and contamination levels may be higher nearer to sources such as industrial locations.
  - Possible symptoms from chemical contamination are headache, nausea, burns, and skin irritation.
- Tetanus – widespread in environment; even more so in warm, wet conditions. Workers and volunteers involved in flood mitigation or clean-up efforts may be at higher risk for injury and should assess if they are up-to-date on their tetanus immunizations.
  - Adults should have routine boosters every 10 years; if injured, maybe sooner.
  - Post-injury:
    - If minor and clean wound, booster needed if  $\geq 10$  years since last booster, OR if patient has not had at least 3 previous boosters.
    - If wound dirty, severe, or puncture, booster needed if  $\geq 5$  years since last booster, OR if patient has not had at least 3 previous boosters.
    - In certain situations your healthcare provider may determine that additional treatment in the form of tetanus immune globulin (TIG) is needed.
- The improper use of alternative power sources such as portable generators can cause carbon monoxide poisoning.
  - If using portable generators, place outside in well ventilated areas away from doors, windows, or ventilation intake ports to enclosed spaces.
- Work in and around moving or standing water in flooded areas presents a risk of drowning.
- Standing or working in water which is cooler than 75 degrees F (24 degrees C) will remove body heat more rapidly than it can be replaced, resulting in hypothermia.
- Electrical, overhead power lines, power junctions, and downed electrical wires and cables can cause electrocution and burns.
- Mold can grow within 12 to 24 hours after a flood.
  - May be visible, or not visible and only detected by odor or adverse reactions.
  - May cause allergic or respiratory type symptoms in sensitive people.
  - Suggest wearing respiratory protection, such as high-efficiency mask (e.g. N95) if see mold in working space, and also if experiencing allergic or respiratory symptoms while working in dirty, dusty conditions. Can buy these high-efficiency masks at home improvement stores (often in painting section).

- Avoid stray/wild animals. Bites from such animals can pose many health hazards, including rabies. If bitten, seek immediate medical attention.
- Standing water left by a flood can make mosquito numbers rise. Greater river flow can lead to larger numbers of biting flies. Other insects, such as wasps, may become very aggressive.
  - Wear insect repellent containing DEET, and long sleeves and long pants to avoid insect (particularly mosquito) bites.
  - If you need any additional resources for West Nile, refer to the following website:  
<http://www.health.wyo.gov/phsd/skeeter/index.html>

**For More Information:**

Contact your local public health unit, or call the Wyoming Department of Health at 877-996-9000.