



# Skagit County Public Health

Jennifer Johnson, Director  
Howard Leibrand, M.D., Health Officer

**FLOOD AND ALL-HAZARDS  
EMERGENCY INFORMATION**  
**KEEP YOURSELF HEALTHY!**

## **CONSIDER ALL FLOODWATERS CONTAMINATED!**

To protect yourself and your family, be aware that exposure to contaminated water, food, air, and garbage can cause illness. For the most current information, check the Skagit County website at [www.skagitcounty.net](http://www.skagitcounty.net) or call our department at 360-416-1500 or [EH@co.skagit.wa.us](mailto:EH@co.skagit.wa.us).

### **Hand Washing and Personal Hygiene**

Take the following precautions during cleanup, particularly handling items that have been contaminated by floodwater. Increased personal hygiene to prevent illness or a serious infection is necessary.

- Wash hands often with uncontaminated water and soap.
- When the only water available for hand washing is contaminated, use it with soap, rinse, and dry with paper towels and then use an antibacterial hand sanitizer.
- Wear gloves while working.
- Always work in protective clothing (boots, gloves, and coveralls). Be sure to change clothes when finished to avoid contaminating your home or temporary housing.
- Treat cuts and abrasions immediately by cleaning them with pure water and using an antibacterial product to protect them. Avoid contact with flood water and mud.
- Contact your health care professional to assure that your tetanus vaccination is up-to-date. A booster is necessary every 10 years.

### **WASH YOUR HANDS OFTEN!**

### **Drinking Water**

A minimum of one gallon of water per person per day is needed for drinking, cooking and washing. Have several days' worth of water for each person in your household in advance.

Emergency sources of water inside the home include:

- Melted ice cubes
- Use water from water pipes. Be sure to shut off the water supply then open a faucet on the top floor or highest elevation in your home. Using clean containers, open the faucet at the lowest point in your home.

- Hot water tank. Turn off the power that heats it, and let the tank cool. Then place a container underneath and open the drain valve at the bottom of the tank. Don't turn the tank on again until water services are restored

Emergency sources of water outside the home include:

- Rainwater
- Spring water
- Water from streams, river, lakes, and coiled garden hoses can be used after it is purified.

**IMPORTANT! - Water that is clear and pure in appearance can be highly contaminated with organisms that can make you sick. Follow these steps to purify water:**

1. **First, strain water** containing sediment or floating material through a cloth or paper filter before beginning the purification process.
2. **Second**, either **heat disinfect** (boil water for one full minute) or **chemically disinfect** (using chlorine/bleach or iodine tablets):
  - Chemical disinfection: put 20 drops (approximately ¼ teaspoon) of household 5.25% bleach per gallon of filtered water then let stand for 60 minutes.
  - For disinfection using iodine tablets, follow instructions on the package.

Store water in clean glass or plastic containers. Metal containers (except stainless steel containers specifically for the purpose of storing drinking water) should be considered as a last resort because they may corrode and give water an unpleasant taste.

### **Emergency Drinking Water and Well Disinfection during Flood Events**

Wells that have been flooded may be contaminated with pathogenic organisms that can cause disease (bacteria, viruses). Before drinking the water be sure to sample and test for coliform bacteria. Samples may be taken to Edge Analytical in Burlington (360-757- 1400). Or disinfect the well (instructions to follow) then collect a sample and have it tested at an accredited laboratory.

Instructions for disinfecting an individual drinking water well:

<https://www.cdc.gov/disasters/wellsdisinfect.html>

## **Onsite Sewage Disposal (Septic Systems)**

### **Before the flood**

- Minimize water use.
- Be sure all tanks such as septic tanks and pump tanks are water tight with secure lids and risers.

### **During the flood**

- If floodwaters have covered your septic tank, pump tank and/or drainfield, do not use the septic system. The drainfield will be saturated due to higher water tables and surface water, and cannot accommodate or treat the wastewater from your home. Use emergency shelters provided by Red Cross.
- If you are still in your home during and after the flood, you can use the toilet bowl but do not flush. Use minimal paper. If necessary, you can use a bucket with kitty litter or portable toilet (either a toilet in recreational vehicle or one provided by a company).

## After the flood

- Minimize water use until flood waters completely recede. After flood waters recede if your toilets do not flush or sinks do not drain there may be several reasons:
  - The septic tank may be overfull
  - The pump tank may be overfull and/or the pump is inoperable
  - The drainfield is still saturated.
- Do not use the system until drains flow again. Use emergency shelters provided by Red Cross or portable toilets as above.
- Refer to the Handwashing and Personal Hygiene section on page 1 of this handout.
- If you have continued problems after flood waters recede call an Operations and Maintenance Specialist or the Skagit County Department of Public Health.

## Food Safety

If your power goes out, use food that spoils rapidly first. Most foodborne diseases are caused by bacteria in raw or undercooked foods of animal origin such as meat, milk, eggs, fish or shellfish. Proper storage and cooking of these foods can help prevent illness. Keep refrigerator and freezer doors closed to conserve cold air or keep cold food cold with ice, dry ice or snow. It is most important to keep meat, seafood and dairy products cold. If food is cold to touch, it is probably safe to keep, use or refreeze. Discard food you would normally refrigerate if it is not cold to the touch, or if it shows obvious signs of spoilage. For further information, see guide below

### Cold Food Temperature and Holding Time Guidelines

Time	42° to 45° F	46° to 55° F	56° F or above
0 to 4 hours	Safe to use	Immediately cool to 41° F	Reheat to 165° F
4 to 12 hours	Safe to use	Immediately cool to 41° F	PHF cannot be eaten, throw away the food
12+ hours	Immediately cool to 41° F	PHF cannot be eaten, throw away the food	PHF cannot be eaten, throw away the food

## Mold and Indoor Air Quality

Mold growth may be a risk if flood waters entered your house. Take the following steps to reduce the risk of mold growth:

- Remove standing water as much as possible from floors, carpets, clothing, etc.
- Remove and dispose of wet materials that cannot be cleaned and dried within 48 hours.
- Flooded basements should be emptied by only one-third of the volume each day, beginning once the surrounding floodwater has receded.
- Dry the inside of the house. Open windows, closets, doors, the attic, eaves, and other vents. Warm the house at least 15 degrees higher than outside temperature and open a few windows to allow for moisture to leave the house (make sure the electrical and gas systems are not hazardous first before using). To dry areas between walls, remove the baseboards and drill or

punch holes in the wall about two inches from the floor. If sheetrock or other porous materials are soaked by flood water, the sheetrock needs to be removed and disposed. Drying does not remove the bacterial or chemical contamination.

- **Avoid Carbon Monoxide poisoning.** Carbon Monoxide can build up rapidly if certain types of combustion devices (such as gasoline-powered generators, camp stoves, lanterns, and charcoal-burning devices) are used indoors. Do not use combustion devices designed for outdoor use. Check for gas leaks. If you smell gas or hear a blowing or hissing noise, open the window and quickly leave the building. Turn off the gas at the outside main valve if you can and call the gas company from a neighbor's home. If you turn off the gas for any reason it must be turned back on by a professional. See section on carbon monoxide below.

## Carbon Monoxide (CO)

When power outages occur after an emergency, using alternative sources of fuel for heating, cooking, or electricity can cause CO to build up in a home, garage, camper, or other enclosed space to poison people and pets inside. CO is odorless and can be produced by small engines, stoves, generators, lanterns, gas ranges, or by burning charcoal and wood.

CO exposure can cause loss of consciousness and death. The most common symptoms are headache, dizziness, weakness, nausea, vomiting, chest pain, and confusion. People who are sleeping or who have been drinking alcohol can die from CO poisoning before experiencing symptoms.

Important CO poisoning prevention tips:

- Do not use a gas range or oven to heat a home.
- Do not leave a vehicle motor running in a garage, even if partially enclosed.
- Do not run a vehicle motor, generator, or other gasoline powered engine outside an open window or vent, inside a basement or garage unless the equipment is professionally installed and vented.
- Do not use a charcoal grill, hibachi, lantern or portable camping stove inside a home, camper, or tent.

**More information is available at this website:**

<http://www.doh.wa.gov/CommunityandEnvironment/Contaminants/CarbonMonoxide>

## Solid Waste, Chemicals, Vectors and Animal Carcasses

Properly disposing of garbage, chemicals and dead animals reduce your exposure to hazardous substances.

**Before and during a flood event:**

Place all solid waste in plastic bags or containers that will not fall apart when wet. Secure containers in buildings or to objects that are not going to float away if water floods the area.

Pay special attention to bags, containers or barrels of chemicals and hazardous substances such as: pesticides, paints, oil, fuels, propane and gas canisters and tanks. Secure the containers in buildings or to objects that will not float away if water floods the area. Make sure all lids are secure and closed on all containers and. Whenever possible, place the chemicals above the expected high water mark in a secure location to keep them dry and prevent them from floating away.

### **After the flood waters subside:**

Bag up all garbage and flood-contaminated food then place in rodent- and animal-proof garbage cans and containers (such as metal or plastic). Clean up debris such as flood damaged carpeting and furniture to eliminate hiding places for rats and mice.

As soon as possible haul garbage to the nearest solid waste disposal site. The Skagit County Transfer Station (360-416-1570) and the Sauk Transfer site (360-853-8810) are the best locations to dispose of solid waste during and immediately after a flood event.

The Skagit County Transfer Station also has a Household Hazardous Waste Facility that can dispose of chemical and hazardous wastes, such as fuel contaminated by water and other chemical wastes.

Dead animals should be buried at least two feet below the ground surface and at least 100 feet away from drinking water wells or where streams or lakes are normally present. Alternately, contact a dead animal disposal company to pick up the carcass as soon as possible after flood waters subside. The current (2021) local dead animal disposal company is Tri County Dead Stock Removal.

## **Pet Safety**

Keep pets safe in natural disasters:

- Make sure your pets are wearing collars and have identification tags with current information.
  - Put your cell phone number on your pets' tags.
- Put together a disaster kit for each pet.
- Find a safe place to stay ahead of time.
  - Never assume that your pet will be allowed in an emergency shelter.
  - Contact hotels and motels in your area to find out if they allow pets.
  - Make arrangements with friends and relatives to shelter your pets.
  - Make a list of veterinarians and boarding kennels in advance.
- If you evacuate, take your pets with you. If it's not safe for you, it's not safe for your pets.
- If you stay home, do it safely.
- Don't allow your pets to roam loose.
- Be patient with your pets after a disaster.
- Stress may cause behavioral issues. If problems persist, contact your veterinarian to rule out possible health problems.
- If you use a pet sitting service, find out if they can help out during an emergency.
- Consider emergency plans for farm animals and outdoor pets.
- Find more information at [www.humanesociety.org](http://www.humanesociety.org) or the American Veterinary Medical Association ([www.avma.org](http://www.avma.org)) and search for Disaster Preparedness.