# Flood INFORMATION

NORTH DAKOTA
DEPARTMENT of HEALTH
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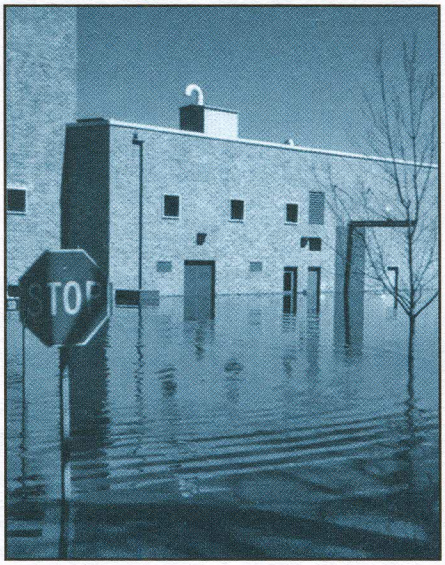
www.ndhealth.gov/flood

## Emergency Health Precautions for Flooded Areas

Flooding can cause many potential health hazards. Residents of flood-stricken areas can protect their health by following the recommendations below.

### Personal

After handling contaminated materials, wash your hands thoroughly with soap and uncontaminated water before touching yourself or anyone else, particularly on the face, mouth, eyes or nose. Do not touch or handle food and eating or cooking utensils until you have washed your hands thoroughly. Immediately report to your doctor or public health professional any diarrhea, stomach upset, sudden illness or infection you observe. Children should not be allowed to play in floodwater because of its disease transmission potential. Some diseases associated with flood waters include typhoid fever, dysentery and infectious hepatitis.




### Power

Electrical power and natural gas or propane tanks should be shut off to avoid fire, electrocution or explosions. Try to return to your home during the day so that you do not have to use any lights. Use battery-powered flashlights and lanterns, rather than candles, gas lanterns or torches. If you smell gas or suspect a leak, turn off the main gas valve, open all windows and leave the house immediately. Notify the gas company, the police or fire department. Do not turn on the lights or do anything that could cause a spark. Do not return to the house until you are told it is safe. Your electrical system also may be damaged. If you see frayed wiring or sparks, or if there is an odor of something burning but no visible fire, you should immediately shut off the electrical system at the circuit breaker.

### Flooded, Frozen and Refrigerated Food

Do not eat any food that may have come in contact with flood water. Discard any food without a waterproof container if there is any chance it has come into contact with flood water. Undamaged, commercially canned foods can be saved if you remove the can labels, thoroughly wash the cans, and then disinfect them with a solution consisting of 1 cup of bleach to 5 gallons of water. Re-label your cans, including expiration date and maker. Home-canned foods and food containers with screw caps, snap lids, crimped caps (soda pop bottles), twist caps and flip tops should be discarded if they have come into contact with flood water because they cannot be disinfected. For infants, use only canned baby formula that requires no added water.

If your refrigerator or freezer is without power for a long period:

- Divide your frozen foods among friends' freezers if they have electricity.
- Seek freezer space in a store, church, school or commercial freezer that has electrical service.
- Use dry ice: 25 pounds of dry ice will keep a cubic-foot freezer below freezing for three to four days. (Be careful with dry ice because it freezes everything it touches. Wear dry, heavy gloves to avoid injury.)

Thawed food usually can be eaten or refrozen if it is still "refrigerator cold" or if it still contains ice crystals. To be safe, remember, **"When in doubt, throw it out."** Discard any food that has been at room temperature for two hours or more and any food that has an unusual odor, color or texture. Your refrigerator will keep foods cool for about four hours without power if it is unopened. Add block or dry ice to your refrigerator if the electricity is off longer than four hours.

## Drinking Water Supply

**Community:** Your community drinking water supply has many safeguards to protect water quality. However, this protection may be compromised during floods and other emergencies. Public water system officials will notify you of possible problems and instruct you how to ensure safety of the drinking water. If you have safety concerns, contact your public water system to determine if any precautions are necessary.

**Private:** Floodwaters can transport disease-carrying materials from barnyards, feedlots or sewage disposal systems into drinking water wells. Water from a well that may have been flooded should not be used for drinking until the well has been tested and found to be safe by state or local health officials. It may be best to use bottled water for drinking and cooking until your water supply is proven to be safe. When in doubt about the **bacteriological** safety of your water, take the following precautions:

- Strain the water through a clean cloth to remove any sediment and floating matter.
- Bring water to a rolling boil for one full minute.
- If boiling is not possible, disinfect the water with any of the following chemicals:
  - Laundry bleach (5.25 percent sodium hypochlorite) – Mix 1/8 teaspoon of household bleach (with no artificial scents) per gallon of water and let stand for 30 minutes before using. Double the amount of bleach added to the water if the water is colored or cloudy.
  - Tincture of iodine – Add 10 drops to each quart of water, mix thoroughly, and let stand for 30 minutes before using.
  - Iodine/chlorine tablets (obtained from drug or sporting goods store) – Follow package instructions.

To have the bacteriological safety of your drinking water analyzed, contact one of the laboratories below for a special sample container and further instructions.

Astro-Chem Lab, Inc.
4102 Second Ave W
PO Box 972
Williston, ND 58801
701.572.7355

Fargo Cass Public Health
435 14th Ave S
Fargo, ND 58103
701.298.6986

First District Health Unit
801 11th Ave SW
PO Box 1268
Minot, ND 58702-1268
701.852.1376

Grand Forks Environmental Laboratory
503 South 4th St
PO Box 5200
Grand Forks, ND 58206
701.746.2594

Division of Laboratory Services
North Dakota Department of Health
2635 E Main Ave
PO Box 5520
Bismarck, ND 58502-5520
701.328.6272

Minnesota Valley Testing Laboratories
1411 S 12th St
Bismarck, ND 58504
701.258.9720
800.279.6885

Southwestern District Health Unit
2869 3rd Ave W
Dickinson, ND 58601
701.483.0171
800.697.3145

In addition to bacteria, a well may become contaminated with certain chemicals during flooding. Of special concern is **nitrate** which, if carried into drinking water, can cause a serious condition in infants. Methemoglobinemia destroys the oxygen-carrying capacity of blood, causing the infant to appear blue. Serious poisonings, sometimes fatal, have occurred in infants younger than 6 months old after drinking water containing nitrate (as nitrogen) at concentrations greater than 10 milligrams per liter.

## Assistance

If you have questions or need assistance, call your local public health unit or the North Dakota Department of Health:

Water Quality – 701.328.5210
Municipal Facilities – 701.328.5211
Disease Control – 701.328.2378
Food and Lodging – 701.328.1291