



Ottawa County Health Department



The Ottawa County Health Department is providing guidance to residents affected by recent flooding. Do not drink or use water from wells that have been submerged in flood waters. Possible disease causing contaminants may be present in flood waters causing wells to become contaminated. Contact with flood waters may also be a health hazard.

Persons in contact with flood water should wash hands with soap and disinfected or boiled water before preparing or eating food; after toilet use; after participating in flood cleanup activities and after handling articles contaminated with flood water or sewage.

If your well head is surrounded by or covered by water, do not use the water for consumption, cleaning, or cooking until it is tested and approved by the health department. Call the Environmental Health Services for details (616) 393-5645

BEWARE OF HAZARDS UPON REENTRY

Flooding can cause structural, electrical and other hazards. Physical dangers are not necessarily over after the water goes down. Hazards are not always obvious. They can be potentially life-threatening if precautions are not taken.

Please be mindful of the following safety tips when returning home after a flood or severe storm:

- Check your home before you go in. Carefully check outside your home for loose power lines, gas leaks, foundation cracks or other damage. See if porch roofs and overhangs still have all their supports. If you see damage, a building inspector or contractor should check the building before you enter.
- Turn off the electricity in effected areas.
- If you suspect a gas leak or smell gas, leave your home immediately and call the gas company from a neighbor's house.
- Enter carefully. If the door sticks at the top, it could mean your ceiling is ready to fall. If you force the door open, wait outside the doorway in case debris falls.
- Check the ceiling for signs of sagging. Wind, rain, or deep flooding may wet plaster or wallboard. It is very heavy and dangerous if it falls.

WATER QUALITY

If your home is served by a private well please check well for signs of contamination. If your well has been submerged by flood waters, or is currently surrounded by flood waters you must assume that the water sources are contaminated until proven safe. If your well has been submerged the Ottawa County Health Department is advising you to purify all water used for drinking, cooking, cleaning kitchen and bathroom surfaces, and washing (eating & cooking utensils, hands, & body). For information on how to purify your water source or on how to obtain uncontaminated water please refer to the Boiling Water Advisory enclosed.

Tips to Remember:

- It is important to note that any person(s) that are exposed or have contact with flood waters should wash as soon as possible using soap and a pure water source.
- Do not use water that has a dark color, an odor, or contains floating material.
- Keep children and pets out of affected area until cleanup has been completed.
- Boil water at a rolling boil for 3 minutes to disinfect or use bottled water.

Testing Water Quality

After a flood has occurred in your area you will want to have your water source tested and approved by the local health department to ensure that it is safe to use for cleaning, cooking, washing, and consumption. Residents may obtain a test kit; test kits cost \$15, from ANY Ottawa County Health Department location. Call (616) 393-5645 for details.

The Ottawa County Health Department is advising all residents with swells submerged by flood waters to ted to purify all water used for drinking, cooking, and washing eating and cooking utensils. Also purify the water used for washing hands, body, and kitchen/bathroom surfaces.

Safe purified water for drinking, cooking and personal hygiene includes:

- Bottled Water
- Boiled Water
- Chemically Treated Water

Guidelines for Treatment of Water

- Bottled Water
 - please ensure that you know the water came from a safe source
 - if you suspect the source is NOT safe please see the Boiled Water Guidelines
- Boiled Water
 - Boil water for 3 minutes at a rolling boil and refrigerate
 - Kills bacteria & parasites
- Chemically Treated Water
 - Unscented Chlorine Bleach:(5.25% sodium hypochlorite) (NOT lemon, sea breeze, or wildflower scents, etc)
 - Clear Water: add 1/8 teaspoon (~0.75 mL) of bleach to 1 gallon of water let stand for 30 minutes
 - Cloudy Water: add ¼ teaspoon (~1.50 mL) of bleach to 1 gallon of water let stand for 30 minutes
 - Chlorine Tablets: purchase at store and follow the directions that are provided
 - Iodine Tablets: purchase at store and follow the directions that are provided

***NOTE:** Water treatment through chemicals will NOT kill parasitic organisms

Personal Hygiene

- Hand washing
 - Use treated water and soap to wash your hands
- Brushing your Teeth
 - Use treated water ONLY

Dispose of any spoiled or contaminated food. Contaminated food is any food that came into contact with the flood water. If you are unsure if the food came into contact with flood water it is best to dispose of the food to prevent illness.

FOOD SAFETY

- Throw away any food that came into contact with flood water. Undamaged commercially canned foods can be saved
 - Remove the labels
 - Wash cans with purified water
 - Disinfect the cans with a solution of 1 cup of unscented chlorine bleach (5.25% sodium hypochlorite) in 5 gallons of water
 - Relabel the cans with a marker, be sure to include the expiration date
- Food containers with screw-caps, snap-lids, crimped caps, twist caps, flip tops, and home canned foods need to be thrown away because they **CANNOT** be disinfected

Frozen & Refrigerated Foods

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

- Seek freezer space at a friend's home or a commercial freezer
- Use dry ice
 - 25 lbs of dry ice will keep a 10 cubic foot freezer below freezing for 3 to 4 days
 - Be careful when handling dry ice
- **"When in doubt, throw it out"**
- Any food at room temperature for two hours or more should be discarded.
- Any food that has an unusual odor, color, or texture should be discarded

Infants

Use only pre-prepared, canned baby formula that requires no added water, rather than powdered formulas prepared with treated water.

TIPS FOR BEGINNING FLOOD CLEANUP

Your community has been flooded, and it is time to begin the cleanup process while assessing the property that has suffered flood damage. It is important to stay calm and stay safe during flood cleanup. The following information may act as guidance on where to begin the process of flood cleanup.

1) FIRST STEP: Call your Insurance Agent

If your home has suffered damage, call the agent who handles your flood insurance to file a claim. If you are unable to stay in your home, make sure to say where you can be reached.

2) Take Photos of Damage:

To make filing your claim easier, take photos of any water in the house and save the damaged personal property. If necessary, place these items outside the home. An insurance adjuster will need to see what's been damaged in order to process your claim.

3) Structural Damage:

Check for structural damage before re-entering your home. **DO NOT** go in if there is a chance of the building collapsing.

4) Gas:

Upon re-entering your property, do not use matches, cigarette lighters or other open flames since gas may be trapped inside. If you smell gas or hear hissing, open a window, leave quickly, and call the gas company from a neighbor's home.

5) Electricity:

Keep power off until an electrician has inspected your system for safety.

6) Plumbing:

Check for sewage and water line damage. If you suspect damage, avoid using the toilets and the tap and call a plumber.

7) Food:

Throw away any food that has come into contact with flood waters. This includes any canned good items. (See Food Advisory Handout)

8) Water Quality:

If your well has been effected by flood waters, boil water for drinking and food preparation. (See Boil Water Advisory Handout) until water supply has been tested safe.

9) Repair:

Make sure to follow local building codes and ordinances when rebuilding. Use flood-resistant materials and techniques to protect your property from future flood damage.

PREVENTING DAMAGE FROM MOLD

Following a flood, conditions in your home may be ripe for an outbreak of mold, one of the most serious sources of damage to your family possessions.

What is Mold?

Mold, a common term for fungus, attacks organic materials such as paper, books, cloth, photographs, and leather. Mold grows from spores, which are everywhere in our environment. Usually these spores are inactive, but they will germinate when the relative humidity exceeds 70 percent. Temperatures above 65 degrees increase the likelihood of mold growth.

What does it look like?

Active mold growth is slimy or fuzzy and is usually green, black, orange or purple. Inactive mold is dry and powdery and may be white. In early stages, the mold may look like a fine web; in full bloom it looks bushy. Mold spores spread easily; they are carried by air currents, pets and people.

What harm can it do?

Active mold "digests" organic materials such as cloth book covers or the cellulose that composes paper. It can also make permanent stains.

Is mold dangerous to humans?

It can be hazardous to people with respiratory problems. Only a few species are toxic, but many can cause allergic reactions or irritate skin. If you handle moldy materials, work outdoors when possible and wear protective clothing: respirator mask with filter, disposable plastic gloves and clothing you can wash in very hot water or discard. If you are concerned about the toxicity of the mold, your local hospital can refer you to a mycologist.

How can I stop mold from spreading?

Work fast. Under the right conditions, mold can spread and grow quickly. Lower the humidity and temperature. Remember that mold cannot grow in low relative humidity and low temperature. Open the windows if outside humidity is lower than inside; otherwise, use air conditioning. Install dehumidifiers and empty them often. Isolate any moldy objects. Seal moldy trash in plastic bags and remove them immediately. Objects you can save should be dried or frozen as soon as possible. Freezing inactivates mold. Keep the area clean. Mold may remain on shelves and in cupboards where valuables were kept. Clean these surfaces

with a disinfectant such as Lysol, and then increase air circulation in the room. Use fans only after moldy objects are removed and all display and storage areas are clean.

How can I save moldy possessions?

Air dry them away from other objects. Spread out papers, stand books on end and fan the pages open. Use blotting materials like clean towels or absorbent paper between layers of cloth or paper. Increase air circulation with a fan, but don't aim the fan directly at the objects.

If you can't dry the objects quickly or you have a large quantity, you can freeze books, documents and small textiles until conditions are right to dry them. Do not freeze moldy photographs. Although ultraviolet light can be damaging, brief exposure to sunlight can stop mold growth and aid drying. Exposure should not exceed 30 minutes. Clean the mold only after it is dry and inactive. Very gently wipe or brush away the mold residue. Work outdoors if possible and always wear protective clothing and a respirator. Avoid harsh cleaning products and bleach; they can ruin objects. Never vacuum fragile items. Use a household vacuum cleaner outdoors, since the exhaust will spread mold spores. Be sure display and storage areas are free of mold before you return any clean object to its proper place. Reinspect the objects from time to time for any new mold growth.

Valuable artifacts and photographs should be handled by a professional conservator. If you would like a free referral for a conservator, you may contact the American Institute for Conservation of Historic and Artistic Works, 1717 K Street, NW, Ste. 301, Washington, DC 20036 (202) 452-9328.

PRECAUTIONS AND SAFETY TIPS

Your home has been flooded. Although flood waters may be down in some areas, many dangers still exist. Here are some things to remember in the days ahead.

- Roads may still be closed because they have been damaged or are covered by water. Barricades have been placed for your protection. If you come upon a barricade or a flooded road, go another way.
- Keep listening to the radio for news about what to do, where to go, or places to avoid.
- Do not allow children to play in flood areas
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area
- If you must walk or drive in areas that have been flooded beware of the following:
 - Stay on firm ground. Moving water only 6 inches deep can sweep you off your feet. Standing water may be electrically charged from underground or downed power lines.
 - Flooding may have caused familiar places to change. Flood waters often erode roads and walkways. Flood debris may hide animals and broken bottles, and it's also slippery. Avoid walking or driving through it.
 - Play it safe. Additional flooding or flash floods can occur. Listen for local warnings and information. If your car stalls in rapidly rising waters, get out immediately and climb to higher ground.

Staying Healthy

- A flood can cause emotional and physical stress. You need to look after yourself and your family as you focus on cleanup and repair.
- Rest often and eat well.
- Keep a manageable schedule. Make a list and do jobs one at a time.
- Discuss your concerns with others and seek help. Contact Red Cross for information on emotional support available in your area.

RESOURCES FOR HELP

American Red Cross
Ottawa County Chapter

270 James St
Holland, MI 49424-1826
Phone: 616-396-6545

- Contact your insurance agent to discuss claims.
- Listen to your radio for information on assistance that may be provided by the state or federal government or other organizations.

If you hire cleanup or repair contractors, be sure they are qualified to do the job. Be wary of people who drive through neighborhoods offering help in cleaning up or repairing your home. Check references.

FUTURE PREPARATION FOR FLOODING

BEFORE A FLOOD STRIKES:

Besides insuring your property, there are other things you can do before a flood to minimize potential loss to your home and ensure your family's safety.

- Take photos or videos of all of your important possessions. If your home is damaged in a flood, these documents will help you file a full flood insurance claim.
- Store important documents and irreplaceable personal objects (such as photographs) where they won't get damaged. If major flooding is expected, consider putting them in a storage facility.
- Post emergency telephone numbers by the phone. Teach children to dial 911.
- Plan and practice a flood evacuation route with your family.
- Ask an out-of-state relative or friend to be the "family contact" in case your family is separated during a flood. Make sure everyone in your family knows the name, address, and phone number of this contact person.
- Buy and install sump pumps with back-up power.
- Have a licensed electrician [raise electric components](#) (switches, sockets, circuit breakers and wiring) at least 12" above your home's projected flood elevation.
- For drains, toilets, and other sewer connections, install [backflow valves](#) or plugs to prevent flood waters from entering.
- [Anchor fuel tanks](#): An unanchored tank in your basement can be torn free by flood waters, and the broken supply line can contaminate your basement. An unanchored tank outside can be swept downstream, where it can damage other houses.
- If your washer and dryer are in the basement, elevate them on masonry or pressure-treated lumber at least 12" above the projected flood elevation.
- Place the furnace and water heater on masonry blocks or concrete at least 12" above the projected flood elevation.

FLOODING IS OCCURRING:

- The flood waters are rising, and there's nothing you can do to stop them. But there are things you can do to make sure your family stays safe until the water levels drop again.
- Fill bathtubs, sinks, and jugs with clean water in case water becomes contaminated.
- Listen to a battery-operated radio for the latest storm information.
- If local authorities instruct you to do so, turn off all utilities at the main power switch and close the main gas valve.
- If told to evacuate your home, do so immediately.
- If the waters start to rise inside your house before you have evacuated, retreat to the second floor, the attic, and if necessary, the roof.
- Flood waters may carry raw sewage, chemical waste and other disease-spreading substances. If you've come in contact with flood waters, wash your hands with soap and disinfected water.
- Avoid walking through flood waters. As little as six inches of moving water can knock you off your feet.
- Don't drive through a flooded area. If you come upon a flooded road, turn around and go another way. A car can be carried away by just 2 feet of flood water.
- Electric current passes easily through water, so stay away from downed power lines and electrical wires.
- Look out for animals -- especially snakes. Animals lose their homes in floods.