



Weather Safety: Hurricanes

Safety and Preparedness Fact Sheet

Before the Hurricane Season

- ▶ Determine safe evacuation routes inland.
- ▶ Learn location of official shelters.
- ▶ Make emergency plans for pets.
- ▶ Check emergency equipment, such as flashlights, generators and battery-powered NOAA Weather Radio All Hazards and cell phones.
- ▶ Buy food that will keep and store drinking water.
- ▶ Buy plywood or other material to protect your home.
- ▶ Clear loose and clogged rain gutters and downspouts.
- ▶ Trim trees and shrubbery.
- ▶ Decide where to move your boat in an emergency.
- ▶ Review your insurance policy.

During the Storm

When in a **Watch** area...

- ▶ Listen frequently to radio, TV or NOAA Weather Radio All Hazards for bulletins of a storm's progress.
- ▶ Fuel and service your vehicles.
- ▶ Inspect and secure mobile home tie-downs.
- ▶ Board up windows in case the storm moves quickly and you have to evacuate.
- ▶ Stock up on batteries, food that will keep, first aid supplies, drinking water and medications.
- ▶ Store lawn furniture and other loose, light-weight objects, such as garbage cans and garden tools.
- ▶ Have cash on hand in case power goes out and ATMs don't work.

Plan to evacuate if you...

- ▶ Live in a mobile or manufactured home. They are unsafe in high winds no matter how well fastened to the ground.
- ▶ Live on the coastline, an offshore island or near a river or flood plain. In addition to wind, flooding from storm surge waves is a major killer.
- ▶ Live in a high-rise. Hurricane winds can knock out electricity to elevators, break windows and more.

TERMS TO KNOW

Hurricane Watch: Hurricane conditions are possible within the specified coastal area. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane watch is issued 48 hours in advance of the anticipated onset of tropical-storm-force winds.

Hurricane Warning: Hurricane conditions are expected in the specified area of the warning. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane warning is issued 36 hours in advance of the anticipated onset of tropical-storm-force winds.

Tropical Storm Watches and Warnings: Take these alerts seriously. Although Tropical Storms have lower wind speeds than hurricanes, they often bring life-threatening flooding and dangerous winds. Take precautions!

When in a **Warning** area...

- ▶ Closely monitor radio, TV or NOAA Weather Radio All Hazards for official bulletins.
- ▶ Close storm shutters.
- ▶ Follow instructions issued by local officials. **Leave immediately if ordered!**
- ▶ If evacuating, leave as soon as possible. Stay with friends or relatives, at a low-rise inland motel or at a designated public shelter outside the flood zone.
- ▶ **DO NOT** stay in a mobile or manufactured home.
- ▶ Notify neighbors and a family member outside of the warned area of your evacuation plans.
- ▶ Take pets with you if possible, but remember, most public shelters do not allow pets other than those used by the handicapped. Identify pet-friendly motels along your evacuation route.

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If Staying in a Home...

- ▶ Turn refrigerator to maximum cold and keep closed.
- ▶ Turn off utilities if told to do so by authorities.
- ▶ Turn off propane tanks.
- ▶ Unplug small appliances.
- ▶ Fill bathtub and large containers with water in case tap water is unavailable. Use water in bathtubs for cleaning and flushing only. Do NOT drink it.



If Winds Become Strong...

- ▶ Stay away from windows and doors, even if they are covered. Take refuge in a small interior room, closet or hallway.
- ▶ Close all interior doors. Secure and brace external doors.
- ▶ If you are in a two story house, go to an interior 1st floor room.
- ▶ If you are in a multi-story building and away from water, go to the 1st or 2nd floor and stay in the halls or other interior rooms away from windows.
- ▶ Lie on the floor under a table or other sturdy object.

This information is adapted from a joint NWS, FEMA and American Red Cross brochure:
www.weather.gov/os/brochures/hurr.pdf

For links to forecasts, billion dollar hurricanes, service assessment, brochures, and more go to:
www.weather.gov/os/hurricane
NOAA Weather Radio All Hazards:
www.weather.gov/nwr
National Hurricane Center
www.nhc.noaa.gov

What to Bring to the Shelter

- First aid kit
- Medicine
- Baby food and diapers
- Cards, games, books, music players with headphones
- Toiletries
- Battery-powered radio, cell phone
- Flashlights, one per person
- Extra batteries
- A blanket or sleeping bag for each person
- Identification
- Valuable papers such as insurance policies
- Cash, credit card

REMINDER: If you are told to leave, do so immediately!

Be Alert For...

- ▶ Tornadoes: They are often spawned by hurricanes.
- ▶ The calm “eye” of the storm. It may seem like the storm is over but after the eye passes, the winds will change direction and quickly return to hurricane force.

After the Storm

- ▶ Keep listening to radio, TV or NOAA Weather Radio.
- ▶ Wait until an area is declared safe before entering.
- ▶ Watch for closed roads. If you come upon a barricade or a flooded road, **Turn Around Don't Drown!**TM
- ▶ Avoid weakened bridges and washed out roads.
- ▶ Stay on firm ground. Moving water only 6 inches deep can sweep you off your feet. Standing water may be electrically charged from power lines.
- ▶ Once home, check gas, water and electrical lines and appliances for damage.
- ▶ Use a flashlight to inspect for damage. Never use candles and other open flames indoors.
- ▶ Do not drink or prepare food with tap water until officials say it is safe.
- ▶ If using a generator, avoid electrocution by following manufacturers instructions and standard electric code.

Be Red Cross Ready

Hurricane Safety Checklist

Hurricanes are strong storms that cause life- and property-threatening hazards such as flooding, storm surge, high winds and tornadoes.

Preparation is the best protection against the dangers of a hurricane.

Know the Difference

Hurricane Watch—Hurricane conditions are a threat within 48 hours. Review your hurricane plans, keep informed and be ready to act if a warning is issued.

Hurricane Warning—Hurricane conditions are expected within 36 hours. Complete your storm preparations and leave the area if directed to do so by authorities.

What should I do?



- Listen to a NOAA Weather Radio for critical information from the National Weather Service (NWS).
- Check your disaster supplies and replace or restock as needed.
- Bring in anything that can be picked up by the wind (bicycles, lawn furniture).
- Close windows, doors and hurricane shutters. If you do not have hurricane shutters, close and board up all windows and doors with plywood.
- Turn the refrigerator and freezer to the coldest setting and keep them closed as much as possible so that food will last longer if the power goes out.
- Turn off propane tanks and unplug small appliances.
- Fill your car's gas tank.
- Talk with members of your household and create an evacuation plan. Planning and practicing your evacuation plan minimizes confusion and fear during the event.
- Learn about your community's hurricane response plan. Plan routes to local shelters, register family members with special medical needs as required and make plans for your pets to be cared for.
- Evacuate if advised by authorities. Be careful to avoid flooded roads and washed out bridges.
- Because standard homeowners insurance doesn't cover flooding, it's important to have protection from the floods associated with hurricanes, tropical storms, heavy rains and other conditions that impact the U.S. For more information on flood insurance, please visit the National Flood Insurance Program Web site at www.FloodSmart.gov.

What supplies do I need?



- Water—at least a 3-day supply; one gallon per person per day
- Food—at least a 3-day supply of non-perishable, easy-to-prepare food
- Flashlight
- Battery-powered or hand-crank radio (NOAA Weather Radio, if possible)
- Extra batteries
- First aid kit
- Medications (7-day supply) and medical items (hearing aids with extra batteries, glasses, contact lenses, syringes, cane)
- Multi-purpose tool
- Sanitation and personal hygiene items
- Copies of personal documents (medication list and pertinent medical information, proof of address, deed/lease to home, passports, birth certificates, insurance policies)
- Cell phone with chargers
- Family and emergency contact information
- Extra cash
- Emergency blanket
- Map(s) of the area
- Baby supplies (bottles, formula, baby food, diapers)
- Pet supplies (collar, leash, ID, food, carrier, bowl)
- Tools/supplies for securing your home
- Extra set of car keys and house keys
- Extra clothing, hat and sturdy shoes
- Rain gear
- Insect repellent and sunscreen
- Camera for photos of damage

What do I do after a hurricane?



- Continue listening to a NOAA Weather Radio or the local news for the latest updates.
- Stay alert for extended rainfall and subsequent flooding even after the hurricane or tropical storm has ended.
- If you evacuated, return home only when officials say it is safe.
- Drive only if necessary and avoid flooded roads and washed-out bridges.
- Keep away from loose or dangling power lines and report them immediately to the power company.
- Stay out of any building that has water around it.
- Inspect your home for damage. Take pictures of damage, both of the building and its contents, for insurance purposes.
- Use flashlights in the dark. Do NOT use candles.
- Avoid drinking or preparing food with tap water until you are sure it's not contaminated.
- Check refrigerated food for spoilage. If in doubt, throw it out.
- Wear protective clothing and be cautious when cleaning up to avoid injury.
- Watch animals closely and keep them under your direct control.
- Use the telephone only for emergency calls.

Let Your Family Know You're Safe

If your community has experienced a hurricane, or any disaster, register on the American Red Cross Safe and Well Web site available through RedCross.org/SafeandWell to let your family and friends know about your welfare. If you don't have Internet access, call **1-866-GET-INFO** to register yourself and your family.



For more information on disaster and emergency preparedness, visit RedCross.org.



FOODFACTS

From the U.S. Food and Drug Administration

Food and Water Safety During Hurricanes, Power Outages, and Floods

What Consumers Need to Know

Emergencies can happen. When they do, the best strategy is to already have a plan in place. This includes knowing the proper food and water safety precautions to take if hurricanes — or other flooding/power outages — do occur.



Be Prepared for Emergencies

- 1. Make sure you have appliance thermometers in your refrigerator and freezer.**
 - Check to ensure that the freezer temperature is at or below **0 °F**, and the refrigerator is at or below **40 °F**.
 - In case of a **power outage**, the appliance thermometers will indicate the temperatures in the refrigerator and freezer to help you determine if the food is safe.
- 2. Freeze containers of water for ice** to help keep food cold in the freezer, refrigerator, or coolers in case the power goes out. If your normal water supply is contaminated or unavailable, the melting ice will also supply drinking water.
- 3. Freeze refrigerated items** such as leftovers, milk, and fresh meat and poultry that you may not need immediately. This helps keep them at a safe temperature longer.
- 4. Group food together** in the freezer. This helps the food stay cold longer.
- 5. Have coolers on hand** to keep refrigerated food cold if the power will be out for more than 4 hours.
- 6. Purchase or make ice cubes in advance** and store in the freezer for use in the refrigerator or in a cooler. Freeze **gel packs** ahead of time for use in coolers.
- 7. Check out local sources** to know where **dry ice** and **block ice** can be purchased, just in case.
- 8. Store food on shelves** that will be safely out of the way of contaminated water in case of flooding.
- 9. Make sure to have a supply of bottled water** stored where it will be as safe as possible from flooding.



Power Outages: *During and After*

When the Power Goes Out . . .

Here are basic tips for keeping food safe:

- **Keep the refrigerator and freezer doors closed** as much as possible to maintain the cold temperature.
 - The **refrigerator** will keep food **cold for about 4 hours** if it is unopened.
 - A **full freezer** will keep the temperature for approximately **48 hours** (24 hours if it is half full) if the door remains closed.
 - Buy **dry or block ice** to keep the refrigerator as cold as possible if the power is going to be out for a prolonged period of time. Fifty pounds of dry ice should hold an 18 cubic foot, fully-stocked freezer cold for two days.
- If you plan to eat refrigerated or frozen meat, poultry, fish or eggs while it is still at safe temperatures, it's important that each item is **thoroughly cooked to its proper temperature** to assure that any foodborne bacteria that may be present are destroyed. However, if at any point the food was above 40 °F for 2 hours or more — discard it.
- **Wash fruits and vegetables** with water from a safe source before eating.
- For infants, try to use prepared, canned baby formula that requires no added water. When using concentrated or powdered formulas, prepare with bottled water if the local water source is potentially contaminated.



Once Power Is Restored . . .

You'll need to determine the safety of your food. Here's how:

- If an appliance thermometer was kept in the freezer, **check the temperature** when the power comes back on. If the freezer thermometer reads 40 °F or below, the food is safe and may be refrozen.
- If a thermometer has not been kept in the freezer, **check each package** of food to determine its safety. You can't rely on appearance or odor. If the food **still contains ice crystals** or is 40 °F or below, it is safe to refreeze or cook.
- Refrigerated food should be safe as long as the power was out for **no more than 4 hours** and the refrigerator door was kept shut. Discard any perishable food (such as meat, poultry, fish, eggs or leftovers) that has been above 40 °F for two hours or more.



Keep in mind that perishable food such as meat, poultry, seafood, milk, and eggs that are **not kept adequately refrigerated or frozen** may cause illness if consumed, even when they are thoroughly cooked.

When Flooding Occurs — Keep Water Safe

Follow these steps to keep your **WATER SAFE** during – and after – flood conditions.

1. Use **bottled water** that has not been exposed to flood waters if it is available.
2. If you don't have bottled water, you should **boil water** to make it safe. Boiling water will kill most types of disease-causing organisms that may be present.
 - If the water is cloudy, filter it through clean cloths, or allow it to settle and then draw off the clear water for boiling.
 - Boil the water for one minute, let it cool, and store it in clean containers with covers.
3. If you can't boil water, you can **disinfect it using household bleach**. Bleach will kill some, but not all, types of disease-causing organisms that may be in the water.
 - If the water is cloudy, filter it through clean cloths, or allow it to settle and then draw off the clear water for disinfection.
 - Add 1/8 teaspoon (or 8 drops) of regular, unscented, liquid household bleach per each gallon of water. Stir it well and let it stand for at least 30 minutes before you use it.
 - Store disinfected water in clean containers with covers.
4. If you have a **well** that has been flooded, the water should be **tested and disinfected** after flood waters recede. If you suspect that your well may be contaminated, contact your local or state health department or agricultural extension agent for specific advice.



When Flooding Occurs — Keep Food Safe

Follow these steps to keep your **FOOD SAFE** during — and after — flood conditions.

1. **Do not eat** any food that may have come into contact with flood water.
2. **Discard any food** that is **not in a waterproof container** if there is *any* chance that it has come into contact with flood water.
 - Food containers that are not waterproof include those with screw-caps, snap lids, pull tops, and crimped caps.
 - Also discard cardboard juice/milk/baby formula boxes and home canned foods if they have come in contact with flood water, because they cannot be effectively cleaned and sanitized.
3. Inspect canned foods and **discard any food in damaged cans**. Can damage is shown by swelling, leakage, punctures, holes, fractures, extensive deep rusting, or crushing/denting severe enough to prevent normal stacking or opening with a manual, wheel-type can opener.
 - Sanitize cans and retort pouches by immersion in one of the two following ways:
 - Place in water and allow the water to come to a boil and continue boiling for 2 minutes, or
 - Place in a freshly-made solution consisting of 1 tablespoon of unscented liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available) for 15 minutes.
 - Air dry cans or retort pouches for a minimum of 1 hour before opening or storing.
 - If the labels were removable, then re-label your cans or retort pouches, including the expiration date (if available), with a marking pen.
 - Food in reconditioned cans or retort pouches should be used as soon as possible thereafter.
 - Any concentrated baby formula in reconditioned, all-metal containers must be diluted with clean drinking water.
4. Undamaged, commercially prepared foods in **all-metal cans** and **“retort pouches”** (like flexible, shelf-stable juice or seafood pouches) can be saved if you follow this procedure:
 - Remove the labels, if they are the removable kind, since they can harbor dirt and bacteria.
 - Brush or wipe away any dirt or silt.
 - Thoroughly wash the cans or retort pouches with soap and water, using hot water if it is available. Rinse the cans or retort pouches with water that is safe for drinking, if available, since dirt or residual soap will reduce the effectiveness of chlorine sanitation.
5. Thoroughly wash metal pans, ceramic dishes, and utensils (including can openers) with soap and water, using hot water if available. Rinse, and then sanitize them by boiling in clean water or immersing them for 15 minutes in a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available).
6. Thoroughly wash countertops with soap and water, using hot water if available. Rinse, and then sanitize by applying a solution of 1 tablespoon of unscented, liquid chlorine bleach per gallon of drinking water (or the cleanest, clearest water available). Allow to air dry.



Everyone can practice safe food handling by following these four simple steps:

