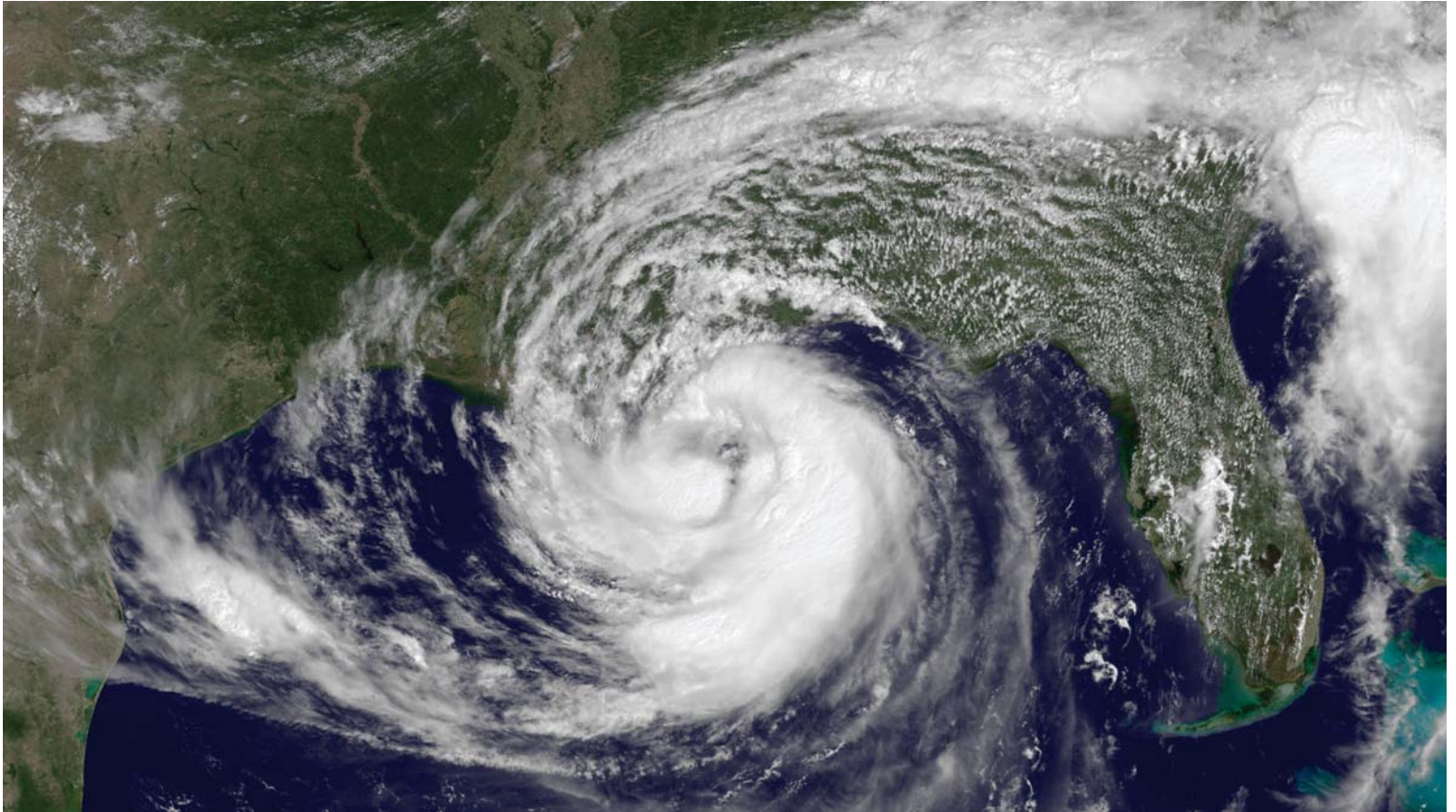


# Tropical Cyclones

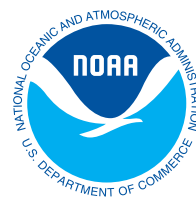


*Hurricane Isaac, August 28, 2012/NOAA*

## A PREPAREDNESS GUIDE

U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service

Revised April 2013



**FEMA**



**American  
Red Cross**

# Ways to Stay Informed

## NOAA Weather Radio All Hazards

The National Weather Service (NWS) continuously broadcasts warning, watches, forecasts and non-weather related hazard information on NOAA Weather Radio All Hazards (NWR). The average range of the 1000+ NWR transmitters is 40 miles, depending on topography. For the best performing NWR receivers, NWS suggests you look at devices certified to Public Alert™ standards.

These radios meet specific technical standards and come with many features such as Specific Area Message Encoding (SAME), a battery backup, both audio and visual alarms, selective programming for the types of hazards you want to be warned for, and the ability to activate external alarm devices for people with disabilities. Similar to a smoke detector, an NWR can wake you up in the middle of the night to alert you of a dangerous situation.



### Current Storm Information

- National Weather Service: [www.weather.gov](http://www.weather.gov)
- National Hurricane Center: [www.nhc.noaa.gov](http://www.nhc.noaa.gov)
- Central Pacific Hurricane Center: [www.prh.noaa.gov/cphc](http://www.prh.noaa.gov/cphc)

### Historical Storm Information

- National Climatic Data Center: [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)
- NOAA Coastal Services Center: [www.csc.noaa.gov](http://www.csc.noaa.gov)

### Emergency/Preparedness Information

- American Red Cross: [www.redcross.org](http://www.redcross.org)
- FEMA: [www.fema.gov](http://www.fema.gov)

### Mobile NHC and NWS Information

- Mobile NHC website in basic HTML: [www.nhc.noaa.gov/mobile](http://www.nhc.noaa.gov/mobile)
- Mobile NWS website for smartphones: [mobile.weather.gov](http://mobile.weather.gov)
- Mobile NWS website in basic HTML: [cell.weather.gov](http://cell.weather.gov)

### Other Information

- Audio Podcasts: [www.nhc.noaa.gov/audio/index.shtml](http://www.nhc.noaa.gov/audio/index.shtml)
- Geographic Information System Data: [www.nhc.noaa.gov/gis/](http://www.nhc.noaa.gov/gis/)
- NOAA Weather Radio All Hazards: [www.weather.gov/nwr](http://www.weather.gov/nwr)
- Hurricane Tracking Charts: [www.weather.gov/os/hurricane/](http://www.weather.gov/os/hurricane/)

### Facebook

- NHC Facebook Page: [www.facebook.com/US.NOAA.NationalHurricaneCenter.gov](http://www.facebook.com/US.NOAA.NationalHurricaneCenter.gov)
- CPHC/ NWS Honolulu Facebook Page: [www.facebook.com/US.NationalWeatherService.Honolulu.gov](http://www.facebook.com/US.NationalWeatherService.Honolulu.gov)

### Twitter

- Atlantic: [@NHC\\_Atlantic](https://twitter.com/NHC_Atlantic)
- Eastern North Pacific: [@NHC\\_Pacific](https://twitter.com/NHC_Pacific)
- Central Pacific: [@NWSHonolulu](https://twitter.com/NWSHonolulu)
- Storm Surge: [@NHC\\_Surge](https://twitter.com/NHC_Surge)

# What To Listen For

- **HURRICANE WATCH:** An announcement that hurricane conditions (sustained winds of 74 mph or higher) are possible within the specified area in association with a tropical, subtropical, or post-tropical cyclone. 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. During a Watch, prepare your home and review your plan for evacuation in case warnings are issued. Listen closely to instructions from local officials.
- **TROPICAL STORM WATCH:** An announcement that tropical storm conditions (sustained winds of 39 to 73 mph) are possible within the specified area within 48 hours in association with a tropical, subtropical, or post-tropical cyclone. During a Watch, prepare your home and review your plan for evacuations in case warnings are issued. Listen closely to instructions from local officials.
- **HURRICANE WARNING:** An announcement that hurricane conditions (sustained winds of 74 mph or higher) are expected somewhere within the specified area in association with a tropical, subtropical, or post-tropical cyclone. 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. The warning can remain in effect when dangerously high water or a combination of dangerously high water and waves continue, even though winds may be less than hurricane force.
- **TROPICAL STORM WARNING:** An announcement that tropical storm conditions (sustained winds of 39 to 73 mph) are expected somewhere within the specified area within 36 hours in association with a tropical, subtropical, or post-tropical cyclone.
- **EXTREME WIND WARNING:** Extreme sustained winds of a major hurricane (115 mph or greater), usually associated with the eyewall, are expected to begin within an hour. Take immediate shelter in the interior portion of a well-built structure.

Additional Watches and Warnings are issued to provide detailed information on specific threats such as floods and tornadoes. Local National Weather Service offices issue Flash Flood/Flood Watches and Warnings as well as Tornado Warnings.

## National Hurricane Center and Central Pacific Hurricane Center Products

**PUBLIC ADVISORIES** offer critical hurricane watch, warning and forecast information.

**FORECASTS/ADVISORIES** provide detailed hurricane track and wind field information

**PROBABILITIES OF HURRICANE/TROPICAL STORM CONDITIONS** offer locally specific chances of experiencing tropical storm, strong tropical storm and hurricane force winds out to 5 days to better know if one will be impacted and when these conditions may occur.

*Use all of the above information to make an informed decision on your risk and what actions to take. Listen to recommendations of local officials on TV, radio and other media and to NOAA Weather Radio All Hazards for the latest tropical cyclone information.*

## Local National Weather Service Office Products

**HURRICANE LOCAL STATEMENTS** give greater detail on how the storm will impact your area.

**NON-PRECIPITATION WEATHER PRODUCTS** provide High Wind Watches and Warnings for inland areas that could experience strong winds.

# Are You Ready?

## Before the Hurricane Season

- ✓ Determine safe evacuation routes inland.
- ✓ Learn locations of official shelters.
- ✓ Check emergency equipment, such as flashlights, generators and battery-powered equipment such as cell phones and your NOAA Weather Radio All Hazards receiver.
- ✓ Buy food that will keep and store drinking water.
- ✓ Buy plywood or other material to protect your home if you don't already have it.
- ✓ Trim trees and shrubbery so branches don't fly into your home.
- ✓ Clear clogged rain gutters and downspouts.
- ✓ Decide where to move your boat.
- ✓ Review your insurance policy.
- ✓ Find pet-friendly hotels on your evacuation route.



FEMA

## During the Storm

### When in a Watch Area...

- ✓ Frequently listen to radio, TV or NOAA Weather Radio All Hazards for official bulletins of the storm's progress.
- ✓ Fuel and service family vehicles.
- ✓ Inspect and secure mobile home tie downs.
- ✓ Ensure you have extra cash on hand.
- ✓ Prepare to cover all windows and doors with shutters or other shielding materials.
- ✓ Check batteries and stock up on canned food, first aid supplies, drinking water and medications.
- ✓ Bring in light-weight objects such as garbage cans, garden tools, toys and lawn furniture.

### 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!
- ✓ Stay with friends or relatives at a low-rise inland hotel 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 people with disabilities. Identify pet-friendly hotels along your evacuation route.

### Plan to Leave if You...

- ✓ Live in a mobile 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 a flood plain.
- ✓ Live in a high rise building. Hurricane winds are stronger at higher elevations.

## If Staying in a Home...

- ✓ Turn refrigerator to maximum cold and keep it 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 clean 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 first 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.

## 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.



American Red Cross

## What to Bring to a Shelter

### What to Bring to a Shelter

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

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

## After the Storm

- ✓ Keep listening to radio, TV or NOAA Weather Radio All Hazards.
- ✓ 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!<sup>TM</sup>
- ✓ Stay on firm, dry ground. Moving water only 6 inches deep can sweep you off your feet. Standing water may be electrically charged from power lines.
- ✓ Never use a generator indoors.
- ✓ Avoid weakened bridges and washed out roads.
- ✓ Once home, check gas, water and electrical and appliances for damage.
- ✓ Use a flashlight to inspect damage. Never use candles and other open flames indoors.
- ✓ Wear proper shoes to prevent cutting feet on sharp debris.
- ✓ Do not drink or prepare food with tap water until officials say it is safe.
- ✓ Avoid electrocution by not walking in areas with downed power lines.

# Family Emergency Plan



Everyone needs to be prepared for the unexpected. You, as well as your family and friends, will most likely not be together when disaster strikes. How will you find each other? Will you know if your children or parents are safe? You may have to evacuate or be confined to your home. What will you do if water, gas, electricity or phone services are shut off?

## Steps to Take

- I Gather information about hazards.** Contact your local National Weather Service office, emergency management office and American Red Cross chapter. Find out what type of emergencies could occur and how you should respond. Learn your community's warning signals and evacuation plans. Assess your risks and identify ways to make your home and property more secure.
- II Meet with your family to create an emergency plan.** Pick two places to meet: a spot outside your home for an emergency, such as fire, and a place away from your neighborhood in case you can't return home. Choose an out of state friend as your family's point of contact for everyone to call if the family gets separated. Discuss what you would do if advised to evacuate.
- III Implement your plan.**
  1. Post emergency telephone numbers by the phone.
  2. Install safety features in your house, such as smoke alarms and fire extinguishers.
  3. Inspect your home for items that can move, fall, break or catch fire and correct them.
  4. Have your family learn basic safety measures, such as CPR and first aid, how to use a fire extinguisher, and how and when to turn off water, gas and electricity in your home.
  5. Teach children how and when to call 911 or your local emergency number.
  6. Keep enough supplies in your home for at least 3 days. Assemble an emergency supplies kit. Store these supplies in sturdy, easy-to-carry containers, such as backpacks or duffle bags. Keep important documents in a waterproof container. Keep a smaller emergency supplies kit in the trunk of your car.

### An Emergency Supplies Kit Should Include:

- |   |  |  |
|---|--|--|
| ✓ At least a 3-day supply of water (one gallon per person, per day) | ✓ One blanket or sleeping bag per person   | ✓ Extra set of car keys  |
| ✓ At least a 3-day supply of non-perishable food                    | ✓ First-aid kit                            | ✓ Credit card and cash   |
| ✓ At least, one change of clothing and shoes per person             | ✓ Battery-powered NWR and a portable radio | ✓ Special items for infant, elderly or disabled family members |
|   | ✓ Emergency tools                          | ✓ Prescription and non-prescription medicines                  |
|   | ✓ Flashlight, extra batteries              |  |

- IV Practice and maintain your plan.** Ensure your family knows meeting places, phone numbers and safety rules. Conduct drills. Test your smoke detectors and NWR monthly and change the batteries at least once each year. Test and recharge your fire extinguisher(s) according to manufacturer's instructions. Replace stored water and food every 6 months.

*Safety and preparedness material is online at:*

Federal Emergency Management Agency: [www.ready.gov](http://www.ready.gov)

American Red Cross: [www.redcross.org](http://www.redcross.org)

NOAA National Weather Service: [www.weather.gov/safety.php](http://www.weather.gov/safety.php)