

Find out if you live in a Flood Zone!

Dangers of Hurricanes

Storm Surge – A large dome of water often 50 – 100 miles wide that sweeps across the coastline near where a hurricane makes landfall. The surge of high water topped by waves can be devastating. The stronger the hurricane and the shallower the offshore water, the higher the surge will be. Along the immediate coast, storm surge is the greatest threat to life and property.

Storm Tide – If the storm surge arrives at the same time as the high tide, the water height will be even greater. The storm tide is the combination of the storm surge and the normal astronomical tide. For example, as a hurricane moves ashore, a 12-foot surge added to the normal 2-foot tide creates a storm tide of 14 feet. This mound of water, topped by battering waves, moves ashore along an area of the coastline as much as 100 miles wide. The combination of the storm surge, battering waves and high winds is deadly.

Winds – Hurricane-force winds of 74 mph or more can destroy poorly constructed buildings and mobile homes. Debris such as signs, roofing material, siding, and small items left outside become flying missiles in hurricanes.

Tornadoes – Hurricanes also produce tornadoes which add to the hurricane's destructive power. These tornadoes most often occur in thunderstorms embedded in rain bands well away from the center of the hurricane. However, they can also occur near the eyewall.

Developing hurricanes gather heat and energy through contact with warm ocean waters. The addition of moisture by evaporation from the sea surface powers them like giant heat engines. If the right conditions persist long enough, they can combine to produce violent winds, incredible waves (storm surge and storm tides), torrential rains, tornadoes and floods.

Hurricane winds blow in a large spiral around a relatively calm center known as the "eye." The "eye" is generally 20 – 30 miles wide and the storm may extend outward up to 400 miles. A single hurricane can last for more than two weeks over open waters and can run a path across the entire length of the Eastern Seaboard. The Hurricane season extends from June 1 through November 30.

Know the Difference

Cyclone – A low pressure area with rotating winds, often associated with clouds and precipitation.

Tropical Depression – A tropical cyclone in which the maximum sustained surface wind is 38 mph or less.

Tropical Storm – A tropical cyclone with wind speeds of 39-73 mph. Tropical storms have the potential to become hurricanes.

Tropical Storm Watch – Tropical storm conditions are possible in the specified area of the watch, usually within 36 hours.

Tropical Storm Warning – Tropical storm conditions expected in the specified area of the warning, usually within 24 hours.

Hurricane – An intense tropical cyclone with wind speeds of 74 mph or greater.

Hurricane Watch – Indicates the possibility that you could experience hurricane conditions within 36 hours. This watch should trigger your family's disaster plan and protective measures should be initiated, especially those actions that require extra time such as securing a boat or leaving a barrier island.

Hurricane Warning – Indicates that sustained winds of at least 74 mph are expected within 24 hours or less. Once this warning has been issued, your family should be in the process of completing protective actions and deciding the safest location to be during the storm.

Family Disaster Survival Kit Checklist

- Important documents, insurance papers, medical records
- Cash – Minimum of \$200
- Bottled water (5-7 gallons per person)
- Canned vegetables, juice, fruit and meat
- Hand-operated can opener
- Instant foods, coffee, tea and milk
- Dry cereal
- Baby food and diapers
- Disposable cups, plates and utensils
- Paper products: napkins, paper towels
- Heavy duty garbage bags
- Flashlights and extra batteries
- Portable AM/FM radio, extra batteries
- Extra clothing, wet weather gear
- Blankets/sleeping bags
- Hand wipes
- Personal hygiene products
- Latex gloves, 2 pair
- Insect repellent
- Spare set of house and car keys
- Heavy rope
- Tarp or rolls of plastic
- Duct tape
- Bungee cords
- Tool kit – hammers, nails, pliers, etc.
- Heavy work gloves
- Cards, books and small games
- Camera with extra film
- Bleach
- First aid kit
- Extra prescription medicine (2 week minimum)
- Scissors
- Tweezers
- Liquid hand soap
- Camping or utility knife
- Propane gas
- Charcoal and lighter fluid
- Grill
- Generator with extra fuel
- Cell phone – charged batteries
- _____
- _____
- _____
- _____

Hurricane Preparedness

The frequency of hurricane activity has been on the rise since 1995. Many meteorologists are predicting that the Northeast will be impacted by a major hurricane within the next few years. The National Oceanic and Atmospheric Administration (NOAA) indicates that the 2004 hurricane season was one for the record books. Nine named storms affected the United States during the six-month hurricane season and three hurricanes made landfall as major hurricanes. Hurricane season extends from June 1 to November 30, with peak activity during the months of August and September.

Although it has been 50 years since a Category 3 hurricane has impacted the Northeast, we must take tropical storms and hurricanes seriously. History reveals that major land falling hurricanes in the Northeast have led to both the loss of life and massive property damage.

Whether living along the coast, by a river or stream, or far inland, a tropical storm or hurricane striking the Northeast will have a great impact on you and your local area.

Three Important Things to Remember About Hurricanes

1. Any tropical storm has the possibility to affect our area. This does not mean it will definitely reach the Northeast, but the storm should be monitored.
2. Predicted time of landfall is not when the storm will begin to be felt. Characteristically, the first effects of the storm will be felt 13 hours before landfall.
3. Hurricanes typically exhibit high winds east of the storm's center, while heavy rain falls mainly to the western side of the storm center.

BEFORE Hurricane Season Starts

- Plan an evacuation route. Contact the local emergency management office or American Red Cross Chapter and ask for information about community hurricane preparedness plans. Plans typically include information on evacuation routes and shelters.
- Know hurricane risks for your area and determine if you live in a flood zone.
- Be ready to drive approximately 20 miles inland to locate safe haven. Have disaster supplies on hand.
- Make pet arrangements, as they are not allowed in emergency shelters for health, safety and space reasons.
- Teach children how and when to call 9-1-1, police, fire department and which radio station to tune into for emergency information.
- Renter's Insurance to cover personal belongings, regardless of whether you live on the economy or in government provided quarters, is strongly recommended. Renter's Insurance with "replacement value" coverage is more likely to fully reimburse for damages in the event of a disaster. Insurance companies will not issue policies when a hurricane is threatening, so take care of your insurance needs early.
- Develop an emergency communication plan in case family members are separated from one another during a disaster. Have a plan for getting back together. Ask an out-of-area relative or friend to serve as the "family contact." Make sure everyone in the family knows the name, address and phone number of the contact person.
- Ensure your vehicle is operating properly. Keep the gas tank filled.
- Maintain up-to-date prescriptions, stocking at least a two-week supply during hurricane season.

BEFORE, DURING and AFTER

DURING

Hurricane Watch

Expect hurricane conditions within 24-36 hours

- Listen for hurricane updates via television or battery-operated radio.
- Check emergency supplies.
- Fuel car.
- Bring all potential missile objects such as lawn furniture, toys and garden supplies indoors.
- Secure outdoor equipment and recreational vehicles or move to a designated safe place. Use rope or chain to secure items and use tiedowns to anchor equipment to the ground or a building.
- Secure buildings - close windows.
- Remove outside antennas.
- Turn refrigerator and freezer to coldest settings.
- Store drinking water in clean bathtubs, jugs and bottles.
- Review your evacuation plan.

SAFFIR SIMPSON SCALE			
Category	Sustained Winds (mph)	Storm Surge (feet)	Damage
1	74 - 95	4 - 5	Minimal
2	96 - 110	6 - 8	Moderate
3	111 - 130	9 - 12	Extensive
4	131 - 155	13 - 18	Extreme
5	156 or more	Higher than 18	Catastrophic

Disaster Prevention Should Include

- Developing a Family Plan
- Creating a Disaster Supply Kit
- Having a Place to Go
- Securing Your Home
- Having a Pet Plan

DURING

Hurricane Warning

Expect hurricane conditions within 24 hours

- Listen constantly to a battery-operated radio or television for official instructions.
- Avoid elevators.
- If at home, stay inside and away from windows, skylights, and glass doors. Keep a supply of flashlights and extra batteries handy. Avoid open flames, such as candles and kerosene lamps used as light sources. If power is lost, turn off major appliances to reduce power "surge" when electricity is restored.
- If officials indicate evacuation is necessary, leave as soon as possible following authorized evacuation routes. Avoid flooded roads and watch for washed-out bridges. Secure your home by unplugging appliances and turning off electricity. Tell someone outside of the storm area where you are going. If you live in an identified surge zone and time permits, elevate furniture or move furniture to a higher floor to protect it from flooding. Take pre-assembled emergency supplies, warm protective clothing, blankets and sleeping bags to shelter. Lock up home and leave.

AFTER The Hurricane

- Stay tuned to local radio for information.
- Give first aid where appropriate.
- Do not move seriously injured persons unless they are in immediate danger of further injury. Call for help.
- Return home only after authorities advise that it is safe to do so.
- Avoid loose or dangling power lines and report them immediately to the power company, police or fire department.
- Enter your home with caution. Beware of insects and animals driven to higher ground by flood waters.
- Open windows and doors to ventilate and dry your home.
- Check refrigerated foods for spoilage.
- Take photos of the damage, both to the house and its contents, for insurance claims.
- Drive only if absolutely necessary and avoid flooded roads and washed-out bridges.
- Inspect utilities in a damaged home:
 - ✓ Check for gas leaks. If you smell gas or hear a blowing or hissing noise, open a window and quickly leave the building. Call the gas company from a neighbor's home. If the gas is shut off for any reason, it must be turned back on by a professional.
 - ✓ Look for electrical system damage. If you see sparks or broken or frayed wires, or if you smell hot insulation, turn off the electricity at the main fuse box or circuit breaker.
 - ✓ Check for sewage and water lines damage. If you suspect sewage lines are damaged, avoid using the toilets and call a plumber. If water pipes are damaged, contact the water company and avoid water from the tap.

Information in this brochure compiled by the ISC Boston Area Housing Office from the following sources:

FEMA - <http://www.fema.gov/hazards/hurricanes/>; Hurricanes.net - <http://www.hurricanes.net/>; NOAA - <http://www.nhc.noaa.gov/HAW2/english/intro.shtml>; American Red Cross - <http://www.redcross.org/news/ds/0205hurricane/>