



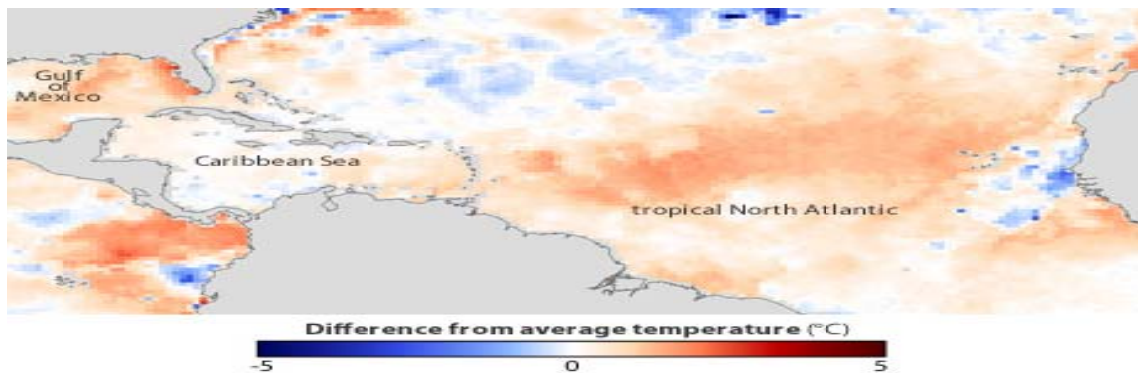
DELRAY BEACH FIRE RESCUE Hurricane Preparedness 2011



Prepared by Fire Fighter / Paramedic Kenneth Thompson
Community Emergency Response Team Instructor / Coordinator

June 1st is the official start date for the 2011, 6 month Atlantic hurricane season. The seasonal hurricane outlook issued by NOAA's Climate Prediction Center says an **above-normal season is likely, with 12 to 18 named storms, 6 to 10 hurricanes, and 3 to 6 major hurricanes.**

Among the key climate conditions favoring increased hurricane activity are **warmer-than-average Atlantic Ocean temperatures** that are expected throughout the season. Warmer waters supply more water vapor to the air. When water vapor condenses into rain, it releases heat into the atmosphere, which energizes storms.



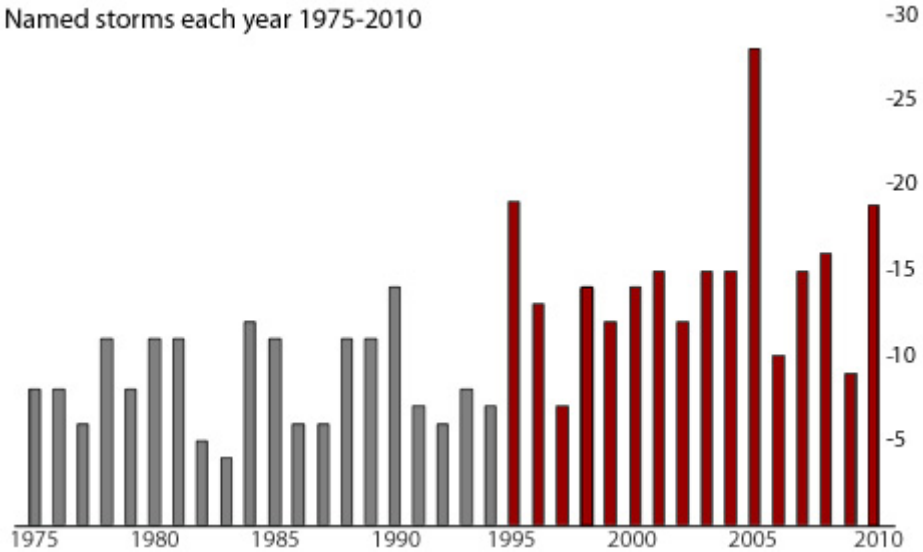
A map of ocean temperature anomalies on May 16, 2011, shows a band of warmer-than-average water in the ocean basins where hurricanes form and travel: the tropical North Atlantic, the Caribbean, and the Gulf of Mexico. (Map by Hunter Allen based on data from NOAA's Coral [ReefWatch](#) Project.)

A second influence on the 2011 seasonal outlook is **ongoing wind and air-pressure patterns** that have been producing more and stronger Atlantic hurricanes since 1995. There is evidence of these natural climate cycles extending back as far as the 1850s. Hurricane activity ebbed throughout the 1970s and 80s, but 1995 marked the return to an active phase that is still ongoing.

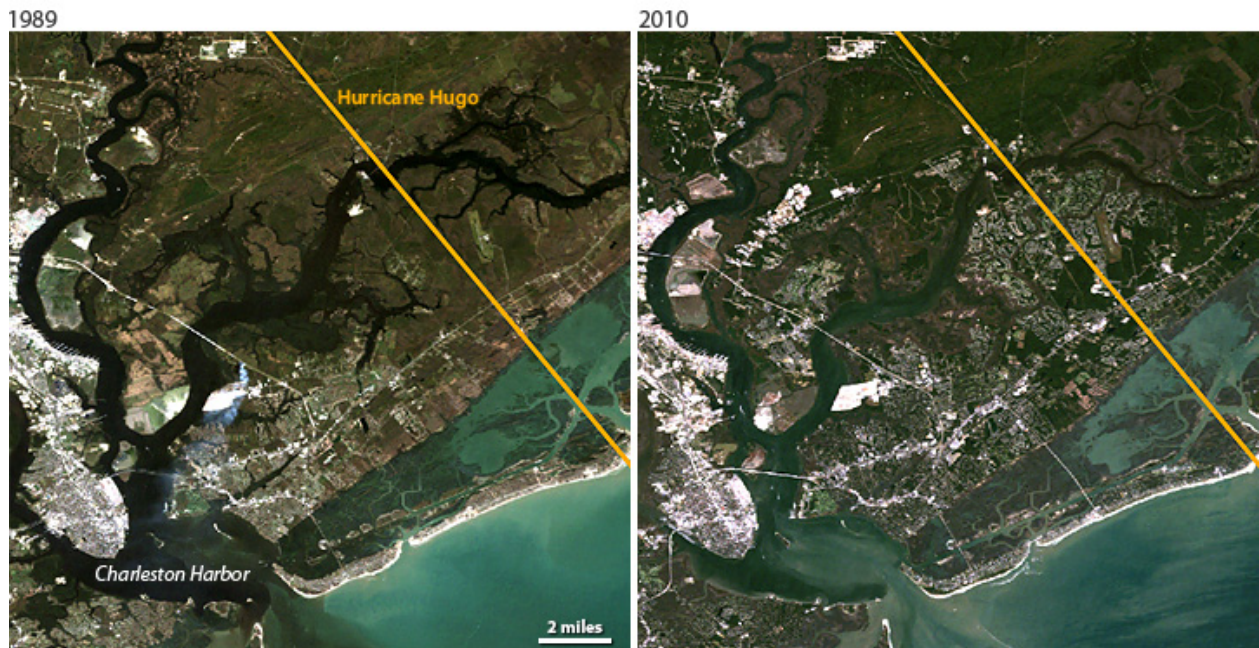
A final influence on this year's outlook is **the fading [La Niña](#) event in the tropical Pacific Ocean.** [During La Niña](#), changes in atmospheric circulation over the Pacific reach "downstream" to the Atlantic. Vertical wind shear is reduced, which contributes to more Atlantic hurricanes. La Niña is fading, however, and by late summer, conditions in the Pacific will likely be "ENSO-neutral," according to the outlook.

Natural climate variability influences how vulnerable coastal communities are to hurricanes from year to year. Between rising sea levels and increasing ocean surface temperatures, global warming will add to that vulnerability. Even so, population growth and shoreline development are what make us most vulnerable to hurricanes.

Named storms each year 1975-2010



More than half the United States' population lives in coastal counties, even though they account for less than 20 percent of the country's total land area excluding Alaska. **Between 1970 and 2011, four of the top five fastest-growing coastal counties (in terms of percent increase) were located in Texas or Florida**—along shorelines that are vulnerable to Atlantic hurricanes. Projections for population growth between 2011 and 2025 suggest that the top five coastal counties with the largest percent increase in population will be along the Southeast or Gulf coasts.



When Category 4 Hurricane Hugo made landfall near Charleston, South Carolina, in mid-September 1989, the area northeast of the city and the harbor was still largely undeveloped. Today, significantly more homes and other development would be in the path of the storm. Left: October 3, 1989 ([large version](#)). Right: October 29, 2010 ([large version](#)). (Images by Hunter Allen, based on Landsat data from the [USGS](#) and hurricane tracks the NOAA [Coastal Services Center](#).)

Poll: U.S. Coastal Residents Still Not Prepared For Hurricanes in 2011

MIAMI -- Most people along the eastern and southern U.S. coasts still lack a hurricane survival plan and don't feel vulnerable to storms.

That's according to a Mason-Dixon poll released recently. Nevertheless, a majority of those surveyed in 18 Atlantic and Gulf Coast states said they don't feel that they are vulnerable to a hurricane, or to related tornadoes and flooding.

But only a small amount of people said they would defy orders to evacuate and ride out a hurricane in their homes.

The poll also found that Florida residents were more prepared than people in other states. About two-thirds of Floridians had a disaster plan, prepared a survival kit or said they felt vulnerable to hurricanes. The six-month Atlantic Hurricane season starts **JUNE 1st** and hurricane forecasters predict an above-average year.

RESULTS FROM THE POLL:

Some results from a Mason-Dixon poll on hurricane preparedness. The May 10-15 2011, telephone poll of 1,100 people in 18 states on the Atlantic and Gulf coasts has a margin of sampling error of plus or minus 3 percentage points.

HURRICANE RISK

- 53 percent don't feel vulnerable to a hurricane or related tornadoes or flooding.
- 16 percent said they might not or would not evacuate if ordered to do so.
- 39 percent believe the 2010 Atlantic hurricane season will be about the same or less active than last year.

HURRICANE KNOWLEDGE

- 78 percent did not know that storm surge posed the greatest potential for a large loss of life, and can cause deaths as far as 20 miles inland.
- 96 percent did not know that garage doors are the structural component most likely to fail during a hurricane.
- 25 percent did not know that standard home owner insurance policies do not cover flooding.
- 54 percent believed tornadoes only occur within 3 miles of a hurricane's eye. In reality, a hurricane can spawn tornadoes hundreds of miles from its eye.
- 79 percent did not know that storm intensity is the least reliable forecasting projection, and so may not understand that a Category 1 storm can strengthen to a major hurricane by landfall.
- 45 percent believed masking tape would help keep windows from shattering.
- 61 percent have no hurricane survival kit. Of those who do pack survival kits, 82 percent pack candles or kerosene lamps - fire hazards.

HOME PREPAREDNESS

- 88 percent have not taken any steps to fortify their homes.
- 20 percent believed it was the government's job to provide food, water and shelter after a storm.
- 25 percent did not know that standard homeowner's insurance policies don't cover flooding.
- 41 percent weren't sure if their policies covered damage caused by wind-driven rain.

Source: Mason-Dixon Polling & Research Inc.

Know what to do, BEFORE THE STORM:

HAVE A PLAN / STOCK UP NOW / EASE STRESS

Decide now whether you are going to evacuate or ride the storm out? The law says that if authorities order an evacuation, you must leave if you live in an evacuation zone where flooding is likely. Flooding is the no. 1 cause of death in hurricanes. In general, anyone living east of the intra-coastal waterway should be ready to leave if a storm is approaching. People who live in an evacuation zone run the risk that the rising ocean, called **storm surge**, will swallow them up.

HURRICANE BASICS

Remember to stock up enough emergency supplies to last your family 3 to 7 days. Clean containers for storing water. You will need 1 gallon per person per day of drinking water. Gallon sized freezer bags for making ice are best. You'll want to fill them with water and freeze as many as you can a few days before the storm. **NON-SCENTED** household bleach to purify water is best. 1 teaspoon per gallon will do the job. Flashlight's for each member of the family with fresh extra batteries. Use Candles **ONLY** as a last resort when the power is out. Candles are a major fire hazard. Battery powered radio; local weather stations go to simile-casting when the power goes out. Charcoal or gas grill with a supply of fuel so you can cook. Use disposable plastic eating utensils to help conserve water. A hand operated can opener for opening non perishable foods. Place toilet paper in plastic bags to keep dry. Extra prescription medications a 1 month supply. Don't forget about your pets, extra cat/dog food, (Kitty litter). Have at least 1 **out-of-state** phone contact so you only have to make one call. Other family members can call that person to see how you are doing. Place important papers in zip lock bags to keep dry.

PREPARE YOUR YARD / PRE STORM MAINTENANCE

- Trim your trees and branches that could hit your home in a storm, BEFORE MAY 30TH!
- Thin out vegetation to lessen wind resistance.
- Place your tree trimmings at the curb on your vegetation collection day. Tie up in bundles of less than 50 lbs. and less than 6 ft in length.
- Clear your yard & property of any bulky waste items. Leave at curb on your bulk collection day.

AS THE STORM APPROACHES

It is a good idea to plan ahead and trim your trees at the beginning of storm season. Do not trim trees once a hurricane watch or warning has been issued.

Do not take your trash to the curb or to landfills during a hurricane watch or warning. Services will be temporarily halted and facilities may close early for storm preparation.

OUTSIDE YOUR HOME

- Cover or brace all windows and door openings.
- Remove a door or one screen panel on each side of your pool enclosure to allow wind to flow through, cutting down wind resistance. This could save your pool enclosure.
- Disconnect propane gas at the tank.
- Bring your barbecue **grill inside**, safely store your **propane tank outside** you home in a shed or exterior closet – this may be your only means of cooking during a power outage.

SWIMMING POOLS

- Drain swimming pools 6"-12" to allow for possible heavy rainfall – do not drain completely.
- Shock the pool by adding additional chlorine to water.
- Disconnect power to your pool pump but do not wrap in plastic. If there is flooding, water will collect in the plastic and ruin the pump.
- Stock up on chlorine to keep your pool water clean. In the event of a prolonged power outage you will not be able to run the filter.
- Use your own discretion about throwing outdoor furniture in the pool. If it sinks to the bottom, it will not blow away but you risk damaging the pool's finish. Do not throw in any metal furniture that is subject to rust.

INSIDE YOUR HOME

- Turn your refrigerator and freezer to coldest setting.
- Freeze water in plastic jugs/bags to help keep freezer cold when power goes out.
- Stock up on jugs of bottled water – one gallon per person per day.
- Fill bathtub with water for non-drinking use.
- Prepare your safe room. Stock it with a battery-powered TV and/or radio with spare batteries, sleeping bags, pillows, chairs, snacks & drinking water, and games for children.
- Have a mattress nearby to get under in case your home suffers structural damage.
- Place valuables and personal papers in water proof containers or zip lock bags.

MOBILE AND MANUFACTURED HOME RESIDENTS

- Turn off main water supply source to your home.
- Turn off gas at the tank but do not disconnect.
- Bring in or secure all outdoor objects.
- Evacuate. Do not attempt to ride out the storm in a manufactured home.

HIGH RISE CONDO RESIDENTS

- Bring in loose objects from balconies.
- Install shutters on windows & doors.
- Evacuate if you are in an evacuation zone.
- Leave early since you have the furthest to travel from the coast.
- Remember, winds are stronger at higher elevations.

IF YOU EVACUATE TO A SHELTER

- Only do so as a **last resort**.
- Try to eat a meal before entering the shelter.
- Take pillows, blankets and other supplies.
- Check to make sure the shelter is open – all shelters do not open at the same time.
- Don't plan on taking pets to the shelter. Few public shelters allow pets, except assistance dogs.

OUTSIDE YOUR HOME

- Locate storm shutters, garage door supports and any hardware or tools necessary for installation.
- Install shutter and supports. Install second story and other difficult shutters first.
- Fill all vehicles with gas and park them in garage or close to the side of your house.
- Turn off propane gas at the tank before evacuating.
- Check with your natural gas provider whether to turn off your gas before leaving.

INSIDE YOUR HOME

- Review your family plan.
- Check your hurricane supply list.
- Have a conventional cord telephone that will work in case of power outage.
- Charge up your cell phones and have a car adapter.
- Check medical supplies and prescription medicines and have a **minimum** two week supply on hand.
- Check all battery-operated TV's, radios, flashlights and lanterns. Make sure they are in good working order with fresh batteries.
- Have enough cash for up to a week. ATM's may be out of cash or not working if power is out.

Know what to do, DURING THE STORM:

- Stay inside until the hurricane passes. Make sure the storm has completely passed before going outside your house. Be aware of the **EYE OF THE STORM**, **stay inside** wait for the all clear from local authorities. Stay tuned to LOCAL NEWS for updates.
- Turn off circuit breakers if the power goes out. Leave one circuit breaker on with a lamp so you will know when power is restored.
- Do not use candles or kerosene lamps during the storm.
- As winds become more intense, go to your safe room and do not expose yourself to the hurricane's winds.
- Keep windows closed. It is a myth that opening a window on one side of the house will equalize pressure.
- If your house begins to sustain damage, cover yourself with a mattress and pillows. If your safe room is a bathroom with a bathtub, get in the tub under a mattress.
- Use the phone for urgent calls only. Don't use the phone if you hear thunder.
- If you're in a tall building, avoid the top floors as wind speeds are stronger the higher you go. Go to a safe room.

Know what to do, AFTER THE STORM:

- Use extreme caution. There may be dangerous situations all around you!
- If your house is damaged, move carefully to get out. Do not return until inspected by officials.
- Always supervise children.
- Do not drink the tap water until officials have announced it's safe.
- Avoid driving if possible because of debris and road blockage.
- If power is out, gasoline will be in short supply and filling stations will have long lines.
- At intersections with stop lights out, **treat it as a 4-way stop** and use extreme caution.
- Phone lines and cell towers will be damaged or overloaded. Try making calls at "off peak" times.
- If power remains out for an extended period, FEMA will set up relief stations to provide free ice, water, and other necessary items.

GENERATORS

Following the storm, many areas may experience wide spread power outages. For the safety of repair crews, power companies will not begin restoration efforts until wind speeds are down below 35 miles per hour. Power outages can last from several hours to several weeks. During the wait, a portable generator can help restore life to normal, but it's safe use requires care and planning.

- Always run portable generators outside the house.
- Never run generators inside, or in a garage. **Install CO2 detector's in your home**, make sure batteries are fresh.
- Be sure to turn the generator off and let it cool down before refueling. Gasoline spilled on hot engine parts can and does ignite causing injury and death.
- Keep generators well away from open windows - including neighbors' - so deadly exhaust does not enter the home.
- Never attempt to connect a generator directly to your home's wiring. Power from the generator will "back feed" into utility lines with the potential to severely injure or kill a neighbor or utility crew working to restore service. Instead, plug appliances directly into the generator's outlet.
- Use heavy-duty extension cords rated for outdoor use and place the generator safely outdoors.
- Follow the manufacturer's recommendations for grounding the generator.
- Observe noise ordinances and be considerate of your neighbors.

RESTORING ELECTRICAL SERVICE

Repair crews work to return power to the facilities that serve the largest number of affected customers first. Priorities are not established by location, your payment history, or how often you call. Crews focus on facilities that provide essential services to your community, such as hospitals, police, fire stations, and television or radio stations. Once major repairs have been made, work begins to restore smaller groups and individual customers.

AFTER THE STORM PASSES

Stay tuned to LOCAL NEWS for information about waste collection service. The Solid Waste Authority will issue a bulletin when normal pick-up service resumes, although it may be several weeks before yard waste is removed.

Keep household garbage separate from other waste materials in tied plastic bags in case of a delay in garbage collection. Place small debris, loose items and household refuse in garbage cans or tied plastic bags. Keep debris away from fences, mailboxes, power poles, transformers, and any downed electric wires. Trash and debris will be collected only from curbside or public roadways.

For more information contact the Solid Waste Authority: www.swa.org

Palm Beach County 561-697-2700

Martin County 772-221-1386

St Lucie County 772-462-1768

Indian River County 772-770-5112

Delray Beach Emergency Radio: 1620 AM (official source of information during and after emergencies -- operated by the City of Delray Beach)

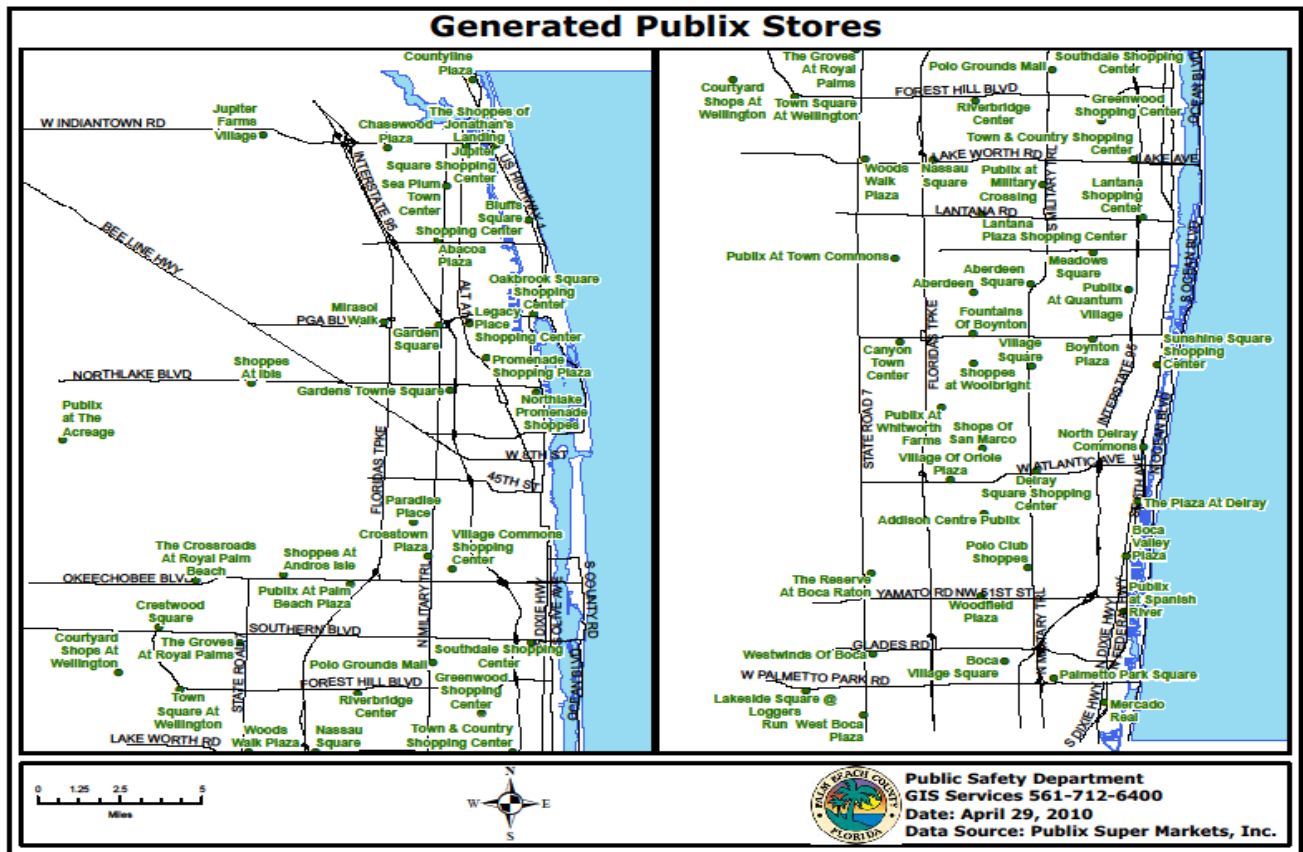
Hurricane Information Line: (561) 243-7840 (provides updated messages from the City of Delray Beach during a potential storm impact)

**Gas Stations In Compliance with Florida State Statute 526.143(2)
Backup Generator-Transfer Switch / 2011**

Delray Chevron 1909 W Atlantic Ave Delray Beach 33444

- Yamato & Congress Chevron 801 NW 51st St Boca Raton 33431
- Mobil On The Run # 18205 850 Gateway Blvd Boynton Beach 33426
- Pinewood Texaco 645 W Boynton Beach Blvd Boynton Beach 33426
- Murphy USA 103 N. Congress Ave Lake Park 33403
- Lake Worth Turnpike Shell 8195 Lake Worth Road Lake Worth 33467
- West Palm/Lake Worth Service Plaza Turnpike Plaza #2 MM 94 Lake Worth 33461
- Mobil On The Run 6221 PGA Blvd Palm Beach Gardens 33418
- PGA Shell East 4150 PGA Blvd. Palm Beach Gardens 33418
- Palm Beach Sunoco 810 N Congress Ave Riviera Beach 33404
- Racetrac 4156 Blue Heron Blvd W Riviera Beach 33404
- Chevron/Dhaka Bakery 9141 Southern Blvd Royal Palm Beach 33411
- Costco #628 11001 Southern Blvd Royal Palm Beach 33411
- G.R. South Bay Marathon 890 US Highway 27 N South Bay 33493
- Southern Bell Valero 255 US Highway 27 N South Bay 33493
- BP Connect / Amoco 1840 Palm Beach Lakes Blvd West Palm Beach 33401
- Racetrac 2995 45th St West Palm Beach 33407
- Sojo Munchie Mart/Sunoco 130 N. Jog Rd. West Palm Beach 33413
- South Congress Airport Shell 242 S. Congress Ave West Palm Beach 33406

Data provided by Florida Department of Agriculture and Consumer Services



KIDS AND HURRICANES:

Make sure your children carry a **waterproof photo ID**. The ID's should include name, address, birth date, medical information and home phone number. The biggest problem is very young children who are not able to clearly communicate. Check website, **Missingkids.com** for information about waterproof ID's.

Parents of younger children should avoid appearing anxious or overwhelmed during a hurricane event. Children are affected by their parents' moods. Staying calm will help children feel calm. Reassure children that they are safe and that adults and other professionals are working very hard to protect them.

Talk to them about the event. Help them understand what is happening in language that is age appropriate.

Express the emotions that you are feeling. This will help children to understand and be able to express their own emotions.

Encourage children to talk about what they are feeling and what they have heard.

Be honest in your answers to questions and use language children can understand. If it seems to a child that you are holding something back they will likely be reluctant to ask for help in the future.

Maintain as much routine as possible; keeping things familiar keeps things comfortable. Spend more time with children following a trauma. This will help calm children and help them feel secure.

Help children find ways to relax and calm themselves. For children, playing can naturally reduce stress. In addition, many children find that exercise, listening to music, or taking a warm bath helps them to relax. Other techniques can include deep breathing or focusing on pleasant thoughts or images.

Limit children's viewing of television coverage about the event. Watching television coverage can re-traumatize children. Young children may believe that the event is happening again and older children can easily become overwhelmed.

Don't be surprised if a child's mood fluctuates or if they become clingier. Respond by letting youngsters know that you are there for them physically and emotionally.

Take care of yourself. You will be better able to support your children if you are monitoring your own stress levels and getting the support that you need. Talking to friends, family members, clergy, and professionals can help you sort out your own feelings and model effective coping strategies for children. Make sure that you **get plenty of rest, nutrition, and exercise.**

PET & ANIMAL SAFETY:

Your pet should be a part of your family plan. If you must evacuate, the most important thing you can do to protect your pets is to evacuate them too. Leaving pets behind, even if you try to create a safe place for them, is likely to result in their being injured, lost, or worse.

HAVE A SAFE PLACE TO TAKE YOUR PETS

Red Cross disaster shelters cannot accept pets due to health and safety regulations and other considerations. Service animals that assist people with disabilities are the only animals allowed in Red Cross shelters. It may be difficult, if not impossible, to find shelter for your animals in the midst of a disaster, so plan ahead. Do not wait until disaster strikes to do your research.

- Contact hotels and motels outside your immediate area to check policies on accepting pets and restrictions on number, size, and species.
- Ask friends, relatives, or others outside the affected area whether they could shelter your animals.
- Prepare a list of boarding facilities and veterinarians who could shelter animals in an emergency; include 24-hour phone numbers.
- Ask local animal shelters if they provide emergency shelter or foster care for pets in a disaster. Animal shelters may be overburdened caring for the animals they already have as well as those displaced by a disaster, so this should be your last resort.

ASSEMBLE A PORTABLE PET SUPPLIES KIT

- Medications and medical records (stored in a waterproof container) and a first aid kit.
- Sturdy leashes, harnesses, and/or carriers to transport pets safely and ensure that your animals can't escape.
- Current photos of your pets in case they get lost.
- Food, potable water, bowls, cat litter/pan, and can opener.
- Information on feeding schedules, medical conditions, behavior problems, and the name and number of your veterinarian in case you have to foster or board your pets.
- Pet beds and toys, if easily transportable.

WHEN THE STORM APPROACHES

- Plan ahead to protect your pet.
- Call ahead to confirm emergency shelter arrangements for you and your pets.
- Check to be sure your pet disaster supplies are ready to take at a moment's notice.
- Bring all pets into the house so that you won't have to search for them if you have to leave in a hurry.
- Make sure all dogs and cats are wearing collars and are securely fastened, with up-to-date identification. Attach the phone number and address of your temporary shelter, if you know it, or of a friend or relative outside the disaster area. You can buy temporary tags or put adhesive tape on the back of your pet's ID tag, adding information with an indelible pen.

The Palm Beach County Animal Care and Control division compiles a list of local animal hospitals and facilities that will board pets during a hurricane. Go to PBCGOV.com/animal for the list or call 561-233-1200 for further information.

Taking Care of Your Boat:

- Damage caused by your boat during a hurricane is your responsibility, so have a plan and to protect your boat.
- If you plan to trailer your boat to the mainland, you must do so before an evacuation order is issued.
- Owners of large crafts that must remain in the water must secure their vessels in a predetermined anchorage or mooring area.
- Be sure batteries are charged and bilge pumps are operational.
- Keep sufficient tie lines and chafing gear, anchors and anchor line, and any other equipment necessary to secure your boat in the water.
- Monitor NOAA Weather radio.
- **Never** stay aboard your boat in a hurricane.

Know What Your Insurance Covers:

The following lists of items are typically covered by a home owner's policy. Review your policy before a storm to be sure you have adequate coverage.

When a storm is approaching, most companies will not allow changes in coverage or initiation of new coverage, according to the Insurance Information Institute.

COVERED BY TYPICAL POLICY:

TREES AND SHRUBBERY

Most insurance companies will pay for the removal of trees that have fallen on your home. They may pay to remove the trees that have fallen and haven't caused damage to your home or other insured structure. They usually won't pay to replace trees or shrubbery that has been damaged in a storm.

WATER DAMAGE

Most homeowners policies don't cover flood damage but they do cover other kinds of water damage. For example, they would generally pay for damage from rain coming through a hole in the roof or a broken window as long as the hole was caused by a hurricane or other disaster covered by the policy. If there is water damage, check with your agent or insurance company representative to see if you are covered.

COMPLIANCE WITH CURRENT BUILDING CODES

Building codes require structures to be built to certain minimum standards. In areas likely to be hit by hurricanes, for example, buildings must be able to withstand high winds to reduce the risk of hurricane damage. If your home was damaged and it was not in compliance with current local building codes, you may have to rebuild the damaged sections according to current codes. In some cases, complying with the code may require a change in design or building materials and may cost more. If you live in an area likely to be flooded, you may have to comply with federal codes which require buildings to be raised above flood level. Generally, homeowner insurance policies won't pay for these extra costs. However, some insurance companies offer an endorsement that pays for these extra costs, while some insurance companies offer an endorsement that pays a specified amount toward such changes. (An endorsement is a form attached to an insurance policy that changes what the policy cover.