

The Official Coastal Bend

HURRICANE GUIDE

2008

Arthur Bertha Cristobal Dolly Edouard Fay Gustav Hanna Ike Josephine Kyle Laura Marco Nana Omar Paloma Rene Sally Teddy Vicky Wilfred





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During the record breaking hurricane seasons of 2004 and 2005, we saw the devastating impacts that violent hurricanes had on coastal communities. It was a relief that the 2006 and 2007 seasons were below average years. In 2007, only one hurricane (Humberto) reached the U.S. as a category 1 with peak winds of 90 mph. The recent lack of U.S. hurricane strikes adds to the false sense of security that lulls many not to plan ahead for the hurricane season. It is not a matter of if, but when the next storm will make landfall and change our community forever.

Over the past three decades, South Texas has experienced a rapid increase of population and infrastructure. During this same time, the mid Texas coast has not experienced a direct assault from a major hurricane. In fact, an entire Coastal Bend generation has little or no hurricane experience. With the Gulf of Mexico being our front yard, the time to learn about these killer storms and develop a plan is now. Preparation is less costly than learning through tragedy. Your NationalWeatherServiceinCorpusChristialong with several keypartners found it imperative to provide you with this information in our 2008 hurricaneguide to

> The National Weather Service makes it our mission to save lives and property. We are asking you today to take a pledge and commitment to make hurricane preparation of the utmost importance to you. Planning is everyone's responsibility. When you do not plan for the worst, you end up responding to crisis as it occurs without the desired outcomes and results. If you neglect prevention and planning, the crisis may own your life. It is with great hope that this hurricane guide helps you and your family to make a plan and prepare for the 2008 hurricane season.

Sincerely,

Scott Cordero Meteorologist-In-Charge National Weather Service Corpus Christi, Texas Serving and Protecting South Texas since 1887

About the Hurricane



three years on average.

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urricanes form over warm ocean waters, like those found in the Gulf of Mexico. The hurricane season starts June 1 and ends November 30. The peak threat for the Texas coast exists from August through September. However, hurricanes can and have struck the Texas coast during every month of the hurricane season.

Left: High resolution satellite image of Hurricane Rita over the northwest Gulf of Mexico. Image--NASA

Below: Historical perspective of hurricane landfalls in Texas since 1851.



Definitions To Know

TROPICAL DEPRESSION: An organized system of persistent clouds and thunderstorms with a closed low-level circulation and maximum winds of 38 mph or less.

TROPICALSTORM: Anorganized system of strong thunderstorms with a well defined circulation and maximum sustained winds of 39 to 73 mph.

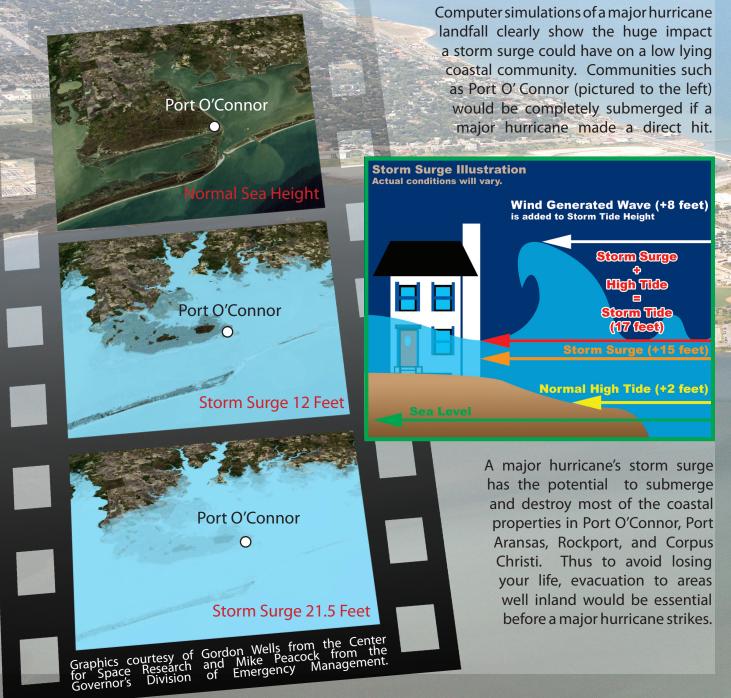
HURRICANE: An intense tropical weather system with a well defined circulation and sustained winds of 74 mph or higher.

TROPICAL CYCLONE: A general term used to describe a tropical depression, tropical storm, or hurricane.

HURRICANE/TROPICAL STORM WATCH: Hurricane or Tropical Storm conditions are possible in the watch area within 36 hours. HURRICANE/TROPICAL STORM WARNING: Hurricane or Tropical Storm conditions are possible in the warning area within 24 hours.

Storm Surge

Form surge is a large dome of water, 50 to 100 miles wide that sweeps across the coastline along and to the right of where the eye makes landfall. The stronger the hurricane winds, the higher the storm surge. The storm surge can be more than 15 feet in major hurricanes. Storm surge poses the greatest threat to life and property for coastal communities.



Storm Surge

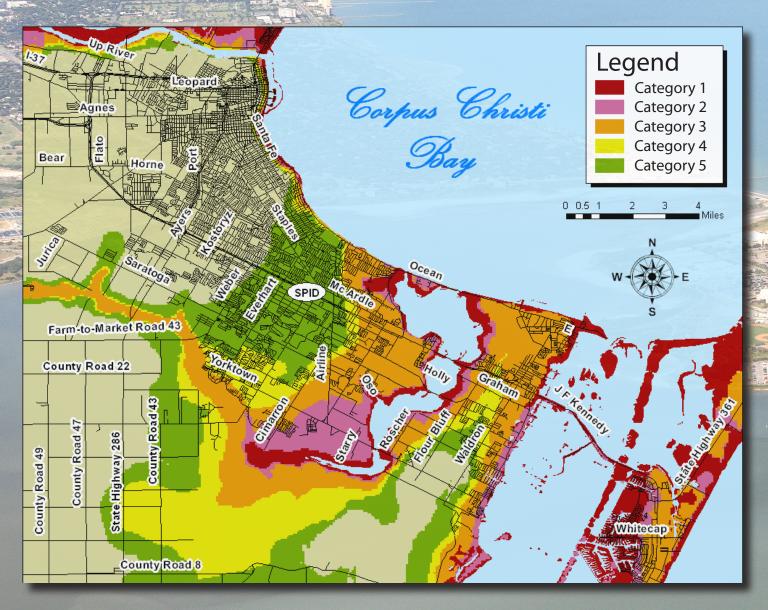
South Texas Storm Surge Inundation Map



Above: This map indicates the potential inland penetration of the storm surge based on a given category of hurricane. Accuracy is +/- 20%.

Inundation Maps

Corpus Christi Storm Surge Inundation Map

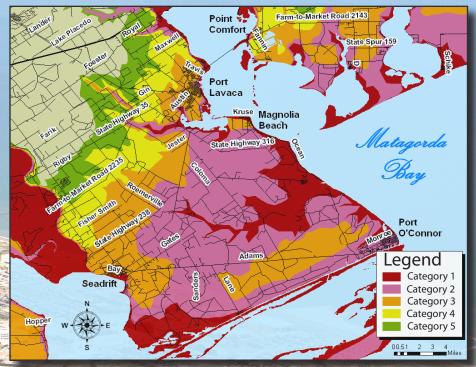




Want to see more high resolution storm surge maps? Go To: www.weather.gov/corpuschristi

Inundation Maps

Port O'Connor

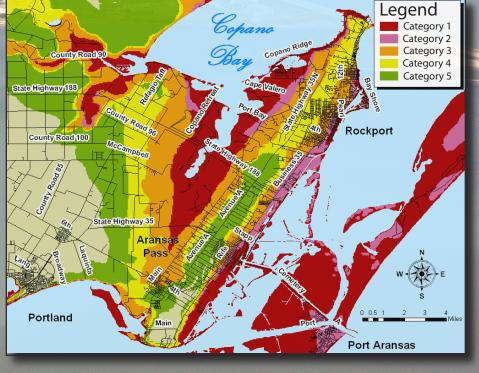


hese storm surge inundation maps show the projected inland penetration of the storm surge based on a given category of hurricane. Colors in the reds and oranges indicate the highest danger. All of these maps have an accuracy of +/- 20 percent.

Rockport

"The greatest potential for loss of life related to a hurricane is from the storm surge."

- National Hurricane Center



Flooding and Tornadoes



Inland Flooding

nland freshwater flooding from tropical cyclones is a major threat to people well inland from the coast. Very slow moving tropical storms and hurricanes can produce tremendous rains of 20 to 30 inches or more in a very short amount of time, resulting in disastrous flooding.

Left: These homes are completely submerged under several feet of water as a result of inland freshwater flooding.

Tornadoes

ropical cyclones many times produce tornadoes adding to the storm's destructive power. Tornadoes are most likely to occur in the right front quadrant of the tropical cyclone in the eyewall region. Tornadoes can also occur in the outer rain bands as far as 150 miles from the center of the storm. The tornadoes are usually weak and short lived, but still pose a serious threat to life and property.

In the last 30 years, inland freshwater flooding has killed more people than any other tropical cyclone related weather hazard. Flooding associated with Hurricane Beulah killed 39 people in 1967.

In 2004, Hurricane Ivan spawned 127 tornadoes which is the most known tornadoes to be spawned by a tropical system. This broke the previous record of 115 set by Hurricane Beulah in south Texas.

Destructive Winds





Above: This large piece of plywood was driven through the trunk of a palm tree during the fierce winds of Hurricane Andrew in south Florida in 1992. urricane force winds of 74 mph or more can destroy buildings, mobile homes, trees and power poles. Debris such as signs, roofing material, siding, and small items left outside become flying missiles in a hurricane. The strongest winds occur in a region of the hurricane called the eyewall. Wind gusts in the right side of the eyewall are the most destructive. Hurricane force winds can be felt as far as 150 miles from the coast.

It is imperative to ensure your home or business is well constructed to minimize the damage from the wind. See page 10 in this guide for cost effective home improvement tips that can help you reduce your damage from a hurricane.

MOBILE HOME RESIDENTS MUST EVACUATE!

Nomobile home or manufactured home - no matter how new it is - can provide safe shelter from hurricane force winds.

Straps or other tie-downs <u>will not</u> protect a mobile home from the high winds associated with a hurricane.

Mobile home residents must evacuate when told to do so by local authorities.



The Saffir-Simpson Hurricane Intensity Scale

•	Category ²	1	Winds
-	955-		

Category 2 Winds 96 to 110 mph

74 to 95 mph

Category 3 Winds 111 to 130 mph

Category 4 Winds 131 to 155 mph Category 5 Winds greater than 155 mph



Planning and Preparing

Preparing Your Home Before the Storm

roper hurricane preparations made ahead of time will not completely protect your property from damage. However, following a few simple tips may greatly reduce the damage to your home and property.

Right: Hurricane clips attaching roof trusses to side walls.



Important Home Preparation Tips

Elevation Matters

Know the elevation of your home! Are you in a flood and/or evacuation zone?

Mobile Homes

- Check tie-downs for rust or breakage.
- Residents of mobile homes <u>must evacuate</u> when told to do so!!

Landscaping

- Trim trees, shrubbery and dead limbs, especially ones close to your home.
- Repair or replace broken or damaged fences.
- Shredded bark is preferred instead of small gravel or stone bedding.

Roofing

- Inspect the roof for loose tiles, shingles or debris. Consider replacing old or damaged shingles with new ones rated for hurricane force winds.
- Check for and/or install hurricane clips to secure roof trusses to side walls.
- Clear loose and clogged rain gutters and downspouts.

Doors

- Reinforce garage doors and tracks or replace with a hurricane tested door. (See above image)
- Reinforce double entry doors with heavy duty foot and head bolts.
- Use a security dead bolt with a one inch minimum bolt length.
- Doors may be shuttered, but one entry must be left easily accessible.

Windows

- If possible, install tested/manufactured hurricane shutters.
- Inspect existing shutters to ensure they are in good working order.
- Alternative: Use 5/8" or greater exterior grade plywood secured by 2 1/2" screws and/or special clips. Obtain wood and fasteners, cut wood to size (labeling pieces), pre-drill holes and place anchors on homes. Store shutters or plywood lying flat to avoid warping when not in use.

Planning and Preparing



- Establish a temporary location for business operations in case your facility is damaged.
- Give employees enough time to secure their homes and families.
- Consider paying employees before they leave to prepare their homes.

Business and Employee Preparation

L Tips for Businesses

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- Identify and protect vital records. Backup and store key files off site.
- Protect electronic equipment from possible water damage.
- Have extra cash and blank checks in case extra money is needed after the storm.
- Identify a safe room for employees that must remain in the building.
- Develop a 24-hour emergency contact with phone numbers of key employees.
- Set up telephone numbers for employees to check in and receive company information.

Protecting Your Boat - Marine Preparations



Tips for Boat Owners

- Check your marina contract for policies and procedures for hurricanes.
- Check with the manufacturer for proper ways to secure your boat during a storm.
- Consider moving arrangements well in advance of an approaching storm.
- Trailer boats should be removed from the water and securely stored at least 48 hours before a hurricane is expected to make landfall.
- Purchase necessary hurricane materials such as additional mooring lines, crew anchors, fenders, fender boards, chafing gear, and anchors.
- Safe storm moorings should consist of good condition ropes of sufficient diameter and length, with at least three or four substantial anchor points.
- Do not moor parallel to bank. Receding tides often breach or capsize boats in this type of anchorage.



Special Needs and Pets

General Preparations for People with Special Needs



reparation in advance of hurricane season is essential, especially for people with special needs. It is essential that a destination is identified ahead of time that can accommodate people with special needs. Shelters should be considered as a <u>last resort</u> when people with special needs evacuate because many shelters cannot provide the attention required. Assisting elderly neighbors and acquaintances with pre-hurricane preparations is encouraged.

Important Special Needs Tips

- Identify with whom you will stay in the event an evacuation become necessary.
- Make arrangements for transportation in the event you evacuate. Make sure that your transportation can accommodate any equipment or other supplies that need to be taken with you.

Preparing For Your Pet's Safety

- Make sure you have the following items that should be stored in advance:
 - Extra copies of your prescriptions in case your physician's office is damaged and not operational.
 - At least a 1 month supply of medications. Identification.

pour pet should be part of your overall hurricane preparation plans. Below are a few important things to help you prepare:

- Make sure your pet's vaccinations are current and have proof they are current. <u>DO NOT</u> assume that a public shelter or hotel will accept your pet.
- Be sure to have a current photo of your pet.
 - Each animal should have a properly sized pet carrier. The carrier should be large enough for the animal to stand up and turn around.
 - Make sure your pet has a proper ID collar.
 - Pack enough food and bottled water for the duration of your evacuation. <u>DO NOT</u> let your pet eat food or drink water from outside that may have become contaminated.
 - Be sure to pack all medications your pet may need along with a muzzle, collar, leash, paper towels, and trash bags.



Contact Info/Supply Kit



he Coastal Bend - Texas Chapter of the American Red Cross recommends that you have the following items in your Hurricane Supply Kit. Do not forget to have a family meeting before hurricane season and review your communication information and evacuation plan. Make sure the contact information such as home, work, school, cell phone numbers, and your "Out of Town" contact person's information is current.



Emergency Contact Information

Out of Town Contact Address: Out of Town Contact Phone Number: Work Telephone Number: Cell Number/Spouse Cell Number: Children Cell Number: School Telephone Number: Doctor Telephone Number: Bank/Credit Card Telephone Number:

HURRICANE SUPPLY KIT



- At least a 7-day supply of non-perishable food and a manual can opener
- At least a 7-day supply of water. One gallon per person per day is recommended
- Battery powered portable television or radio with extra batteries
- Flashlight with extra batteries
- First Aid kit and manual
- Sanitation and hygiene items such as instant hand sanitizing gel, moist towelettes, toilet paper, and feminine hygiene products
- Matches in a waterproof container
- Whistle
- Kitchen accessories and cooking utensils
 - Cash
- Extra clothing, blankets, and sleeping bags

- Photocopies of identification, insurance, prescriptions, household inventory, credit cards, and your latest utility bill
- CD or photocopies of important documents such as birth/marriage certificates and titles
- Prescription medications, eyeglasses, contact lens solution, and hearing aid batteries
- Formula, baby food, diapers, and pacifiers
- Pet carriers and leashes for each animal evacuating with you
- A good map showing county roads and highways
- Tire repair kit, booster cables, pump, and flares
- White distress flag
- Toys and games for children
- List of family phone numbers and addresses outside the area



Insurance Tips

Insurance Tips - Before The Storm

- When shopping for insurance, get quotes from different companies and consider financial strength and history of complaints from each company.
- Ask agents for discounts if available.
- New and existing policies will not be written or modified when a storm nears the Gulf of Mexico.
- Make sure you fully understand what perils are covered and excluded in your policy.
- Make sure your coverage is adequate to replace your home and contents in today's dollar.
- DO NOT cancel an old policy until you have a new policy in effect.
- Before hurricane season, prepare a photographic inventory of your home's contents and store it in a safe place.
- If your insurance company does not cover flood or windstorm perils, ask about coverage through the Texas Windstorm Insurance Association or the National Flood Insurance Program.



Important Web Information

National Flood Insurance Program www.fema.gov/business/nfip

Texas Windstorm Insurance Association www.twia.org

Texas Department of Insurance www.tdi.state.tx.us/consumer

Insurance Tips - After The Storm

- Give prompt written notice to your insurance company.
- If you cannot be easily contacted, give your insurance company the contact information of a trusted friend or relative who can reach you if necessary.
- Photograph or videotape damaged structures and all damaged property. Make a list of damaged or lost items.
- <u>DO NOT</u> throw out damaged property before your adjuster has inspected the debris unless it is a health hazard or impedes local cleanup.
- Protect your property from further damage.
- Keep an accurate record of temporary repair and living expenses if a loss of use is suffered.
- Along with insurance adjuster estimate for repairs to home, obtain two or more contractor estimates. Estimates must be broken down per line item.
- Expect insurance service within 1 week in most severely damaged zip codes (but longer in less damaged zip codes).
- Payment advancements are made to policy holder for home repairs, personal property and living expenses. Final payments are made only after completed repairs and adjuster review.



Five, Six and Ten First Edition **24 HOUR WEATHER INFO LINE:** 361-814-WIND

Dave Cochran

Mike Pesina

Weekends

AMS Bill Vessey

www.kiiitv.com





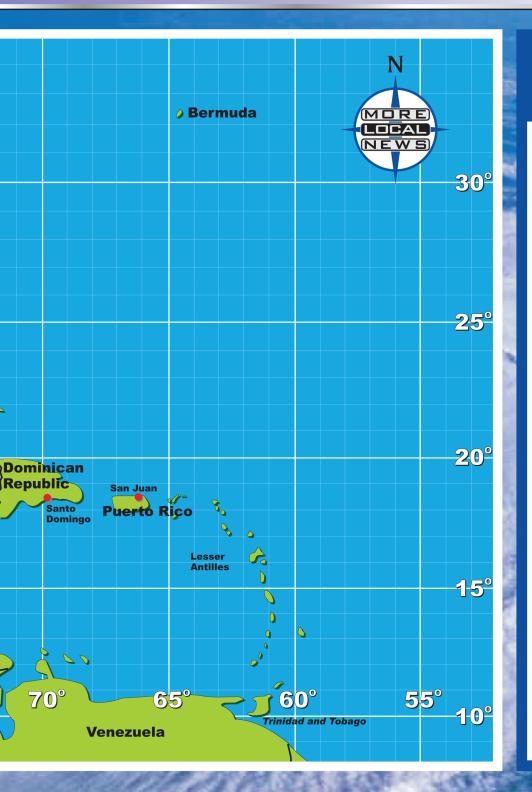




American Red Cross

2008

Hurricane



Names □ Arthur □ Bertha □ Cristobal □ Edouard □ Gustav □ Hanna □ Josephine □ Marco 🗆 Nana □ Omar Paloma □ Rene □ Sally □ Teddy □ Wilfred



Hurricane Forecasts

he National Hurricane Center (NHC) in Miami, FL is the official source for tropical cyclone advisories and forecasts and is responsible for issuing tropical cyclone watches and warnings for the United States.

NCEP

Additional Weather Information National Weather Service

www.weather.gov/corpuschristi

National Hurricane Center www.nhc.noaa.gov

NWS 24 Hour Phone Recording (361) 289-1861

Tropical Cyclone Products

- Public Advisories
- Forecast Advisories
- Forecast Discussions
- Wind Speed Probability Forecasts

Hurricane Local Statements

Inland Hurricane Watches and Warnings

Intermediate Public Advisories (every 2 to 3 hours close to landfall)



Utilizing and Interpreting NHC's Forecast Advisory

The white uncertainty cone on the forecast advisory represents the 10-year average error. The center of the tropical cyclone will remain in the white error cone only 67% of the time.

Remember that hurricane conditions can be felt hundreds of miles away from the center of the storm. DO NOT focus solely on the exact forecast track!

<u>DO NOT</u> wait for a hurricane watch or warning before implementing your initial preparations, as it may be too late to complete them.

Final Checklists



Actions to Take When a Storm is in the Gulf

- Listen frequently to radio, TV, or NOAA weather radio for bulletins and forecasts of the storm's progress.
 Double check items in your emergency supply kit.
- Fuel and service your vehicles.
- Inspect and secure mobile home tie-downs.
- Make sure you have supplies to survive on your own for at least one week if you plan on staying.
- Board up windows (if shutters do not exist) in case storm moves quickly and you have to leave. DO NOT USE TAPE! IT PROVIDES NO PROTECTION!
- Store lawn furniture and other loose, light weight objects, such as garbage cans and garden tools.
- Get plenty of extra cash in case power goes out and ATMs do not work.
- Garage or store vehicles that are not being used.
- Follow instructions issued by local officials. EVACUATE IMMEDIATELY IF ORDERED TO DO SO!

Final Actions to Take if Leaving

- Turn off propane tanks.
- Unplug small appliances.
- Empty refrigerator and freezer.
- Turn off utilities if ordered to do so.
- Notify family members of your evacuation plans.
- Lower water level in swimming pool by one foot.
- Lock home securely.
- Board up remaining doors and brace garage door.
- Take pets with you.

Final Actions to Take if Staying

- Close storm shutters.
- Turn refrigerator or freezer to coldest setting and open only if necessary.
- (25 pounds of dry ice will keep a 10-cubic foot freezer below freezing for 3-4 days.)
- Follow instructions from emergency managers and be prepared to turn off utilities if ordered to do so. Board up remaining doors, brace garage door, and remain inside. Stay away from boarded up windows. Take refuge in a predetermined safe room, such as an interior closet, bathroom, or hallway.
- Beware of the calm winds in the eye of the storm and do not venture outside. Some of the strongest winds may occur shortly after the eye passes.
- DO NOT EXPECT EMERGENCY RESPONDERS TO BE OF ANY ASSISTANCE DURING A LANDFALLING HURRICANE!







A South Texas Hurricane History

ince 1851, 61 hurricanes have impacted the coastline of Texas. Only 12 hurricanes have made landfall over the Lower and Middle Texas Coasts as major hurricanes. Major hurricanes have sustained winds exceeding 110 mph. On the Saffir-Simpson scale, major hurricanes are a Category 3 or higher. No Category 5 hurricane has made landfall in Texas.

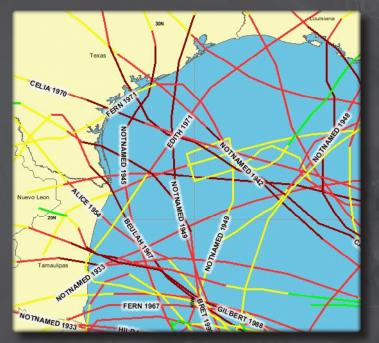


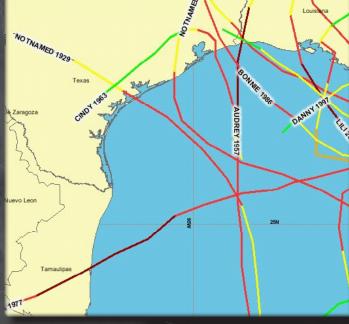
- **1875–FirstIndianola:** First major hurricane to strike Indianola produced wind gusts estimated to be up to 150 mph. A storm surge of 15 feet inundated the town. 176 people perished in the storm.
- 1886 Second Indianola: The second hurricane to strike within 11 years dealt a fatal blow to the once thriving port of Indianola. This hurricane is the strongest to hit the Texas coast with a central pressure of 925 millibars and sustained winds of 155 mph.
- 1916 Baffin Bay: Hurricane with estimated winds of 140 mph made landfall just south of Baffin Bay. Limited damage and small death toll created a false sense of security in Corpus Christi.
- **1919-Corpus Christi:** Hurricane with sustained winds of 125 mph devastates Corpus Christi. A storm surge of 16 feet killed 284 people, second only to the catastrophic 1900 Galveston hurricane. The death toll was likely underestimated, with fatalities probably between 600 and 1000 people.
- 1942-Matagorda Bay: Large hurricane made landfall at Matagorda Bay with a storm surge of 14 feet at Port O'Connor. Sustained winds of 115 mph were recorded at Seadrift.
- 1961 Carla: Last Category 4 hurricane to strike the Texas coast made landfall near Port Lavaca with gusts up to 170 mph. It produced a storm surge of 22 feet at Port Lavaca, the highest on record for Texas.
- Igor Beulah: Hurricane Beulah slowly weakened over the Brush Country of South Texas after making landfall just north of Brownsville. Excessive rains produced widespread flooding across South Texas and record flood levels on the Nueces, Frio, and San Antonio Rivers. Also, at least 115 tornadoes were recorded with Beulah across South Texas.
- 1970 Celia: Hurricane Celia rapidly deepened before making landfall north of Corpus Christi. An unusual aspect of Celia was excessive wind gusting up to 170 mph in the northwest quadrant of the storm.
- 9 1980 Allen: Large hurricane weakened before making landfall near Port Mansfield. Allen produced a storm surge of 9 feet at Corpus Christi and 34 tornadoes across South Texas.
- Iggs Bret: Last major hurricane to make landfall in Texas moved inland between Baffin Bay and Port Mansfield. Rainfall amounts between 15 and 25 inches occurred over King Ranch.

Hurricanes and El Niño

tudies have shown the coupled ocean-atmosphere phenomenon known as the El Niño-Southern Oscillation (ENSO) has an effect on tropical cyclone formation in the Atlantic Basin, including the Northwest Gulf of Mexico. When the near-surface water temperatures are above normal across the eastern Pacific Ocean, the warm phase of the ENSO or El Niño occurs. Tropical cyclone activity in the Atlantic Basin is usually suppressed during El Niño conditions. When the near-surface water temperatures are temperatures are below normal in the eastern Pacific Ocean, the cool phase of the ENSO or La Niña occurs. Tropical cyclone activity is normally enhanced during La Niña years.

The figures below show hurricane activity over the Northwest Gulf of Mexico since 1925 during La Niña and El Niño years, respectively. It is clearly evident that more hurricanes affect South Texas and the Northwest Gulf of Mexico during La Niña years. With La Niña conditions expected to persist during the summer months of 2008, tropical cyclone activity is expected to be above normal.





Hurricanes During La Niña

Hurricanes During El Niño

For El Niño years since 1925, only 10 hurricanes have moved into the Northwest Gulf of Mexico. Only 3 of these hurricanes were major hurricanes and none of them made landfall in Texas.

During La Niña years, 25 hurricanes moved into the Northwest Gulf of Mexico. Of the 7 major hurricanes to affect South Texas since 1925, 6 of them were during La Niña conditions. (Only major Hurricane Allen occurred during neutral conditions, neither warm or cold in the eastern Pacific Ocean.) Additionally, two hurricanes, that made landfall just east of Matagorda Bay, approached major hurricane status in August of 1945 and October of 1949. Both were during La Niña conditions.



The P-3 Hurricane Hunter

pecially equipped NOAA aircraft play an integral role in hurricane forecasting. Data collected during hurricanes by these high-flying meteorological stations are fed into numerical computer models to help forecasters predict hurricane track and intensity. These computer models also help hurricane researchers achieve a better understanding of storm processes, thereby improving their forecast models.

When a hurricane threatens the U.S. or islands around the Caribbean Sea, men and women of the U.S. Air Force reserve and the National Oceanic and Atmospheric Administration (NOAA) begin flying into the storm. Research scientists from colleges, universities, and other organizations sometimes join them, especially on NOAA flights. NOAA's two P-3 turboprops probe the hurricane about a half dozen times during the course of a grueling ten-hour mission. Scientists aboard the aircraft deploy instruments called GPS (Global Positioning System) dropwindsondes as the P-3 flies through the hurricane. These devices continuously radio back measurements of pressure, humidity, temperature, wind direction and wind speed as they fall toward the sea, providing a detailed look at the structure of the storm and its intensity.



The P-3 Hurricane Hunter Aircraft

Right: View of a hurricane eye from the P-3 aircraft

In addition to flying hurricane research and reconnaissance missions, NOAA's P-3s participate in a wide variety of national and international meteorological and oceanographic research programs each year. Recently, these aircraft have been used in major studies on storms approaching the continents of Europe and North America to improve forecasts and study the effects of El Niño, atmospheric gases and aerosols over the North Atlantic, large-scale convective severe storm complexes in the Midwest, and winter storms battering U.S. Pacific coastal states.



College Student Preparation

Student Information Checklist

- Assure that all contact information and emergency contact information is accurate with your campus's registrar's office.
- Ifyourcampusoffersanemergencymanagementcommunication system, register as a user of the system.
- Plan your method of evacuation and your destination before a storm enters the gulf.
- Monitor local radio and TV stations for updates.
- Contact your campus Student Affairs Office if you need assistance with evacuation.
- If you require any assistance due to a disability-related accommodation, please contact your campus Disability Services Office to make necessary arrangements.



- Communicate with your family regarding status and location
- If your campus is evacuating, you will not be allowed to remain on-campus and it is highly recommended that you leave the city. Do not go to a coastal location.
- Take your driver's license, student I.D. card, and a copy of your housing lease as well as medical insurance cards and other important documents when you evacuate.
- If you bank with a local bank or credit union whose infrastructure may be damaged by the storm, withdraw some funds as you may not have access to them once you leave the area.
- International students must take passports with US student visa inside, I-20, I-94, student I.D. and class schedule.
- If using personal transportation, take as many of your valuable or irreplaceable items as you are able.
- If driving, make sure all roads that you are driving are open and safe. You can call the Department of Transportation at 1-800-452-9292 or check on-line for conditions at www.dot.state.tx.us
- *Follow baggage limits if participating in an assisted evacuation program.*
- Take a 30-day supply of medications in original pharmacy containers.
- Make a record of any valuables that are left behind (description, serial numbers, etc..). Take pictures of all belongings.
- If you have a pet and are evacuating to a shelter, make appropriate arrangements as most shelter's do not accept pets.
- Do not plan to return to campus until an all-clear is given (monitor media and campus web-site).

Preparing Your Room

Unplug all electronics and cover them in plastic
 Shut and lock your window and close your blinds
 Store items off the floor and away from windows
 Take all items off balconies and out of yards

Empty refrigerator Take valuables Follow any additional instructions by your landlord





Evacuation

vacuees need to consider the projected path of the hurricane when choosing an evacuation route and destination. Evacuation studies estimate that it takes between 18 and 30 hours to evacuate the coastal bend in advance of tropical storm force winds. This underscores the need for coastal residents to have an evacuation plan. When evacuating, be sure to check local weather and highway conditions before departing. When local authorities order an evacuation of your area, leave immediately! **Texas Road Information**

TXDOT Road Conditions 1-800-452-9292 or www.dot.state.tx.us

TXDOT Corpus Christi Office 1-361-808-2300

Emergency Broadcast Information KLUX Radio 89.5 FM



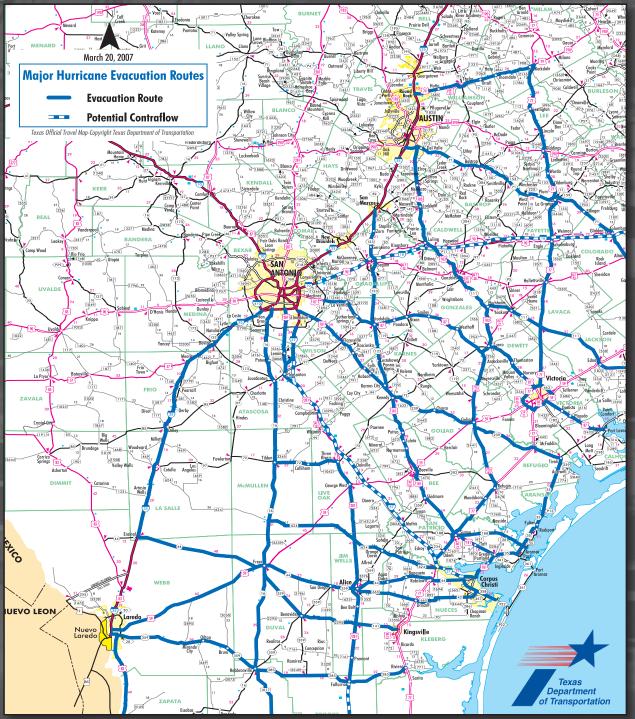
Final Actions before Evacuating

- Follow evacuation orders provided by your local officials. Once the evacuation order has been given, LEAVE IMMEDIATELY!
- Take your Hurricane Supply Kit with you (as described on page 13).
- Leave as early as possible to avoid heavy traffic and hazardous weather.
- See TXDOT map on the next page for an illustration of primary and alternate evacuation routes. Remember that the primary routes often become congested quickly.
- Do not stay in a mobile home near the coast under any circumstance.
- Remember that large boats and travel trailers may not be allowed to cross the JFK causeway or Harbor Bridge once high winds commence.
 - Prepare to stay at your evacuation destination for a week or more, as re-entry into the affected area may be restricted.

Evacuation



Suggested Evacuation Routes from TXDOT



TXDOT will have courtesy patrols along hurricane evacuation routes to assist motorists.

City Bus Evacuation

Bus Loading Points will open on an as-needed basis. Do not go to Bus Loading Points unless directed by public officials. Call 2-1-1 and register every year if you will need bus transportation One piece of luggage per person! Have ID and any medications!



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Corpus Christi

Any RTA Bus Stop
 C. C. Natatorium near Cabaniss Field
 Special Needs - Oveal Williams Senior Center
 Robstown Fairgrounds



Victoria Victoria Community Center



Kingsville Kleberg County Courthouse National Guard Army Parking Lot



Rockport Live Oak Elementary



Port Lavaca Bauer Community Center

Emergency Information

ARANSAS COUNTY

Rockport Police 361-729-1111

County Sheriff 361-729-2222

BEE COUNTY

County Emergency Management 361-362-3271 www.co.bee.tx.us

County Sheriff 361-362-3221

CALHOUN COUNTY

County Emergency Management 361-553-4400

County Sheriff 361-563-4646

GOLIAD COUNTY

County Emergency Management 361-645-1729 County Sheriff

361-645-3451

JIM WELLS COUNTY

- County Emergency Management 361-668-1018
- Alice Emergency Management 361-664-3111

KLEBERG COUNTY

County Emergency Management 361-595-8527

2-1-1

County Sheriff

361-595-8500

LIVE OAK COUNTY

County Sheriff 361-729-2222

NUECES COUNTY

- County Emergency Management 361-888-0513
- City of Corpus Christi 361-826-1100 www.cceoc.com
- Port Aransas City Hall 361-749-4111 www.cityofportaransas.org

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REFUGIO COUNTY

County Sheriff 361-526-1698

SAN PATRICIO COUNTY

- County Emergency Management 361-364-6144
- Ingleside Police 361-776-2531 Portland Police
 - 361-643-2546

VICTORIA COUNTY

- City/County Emergency Management 361-485-3362
- City/County Emergency Hotline 361-485-3020

Additional Information

US Department of Homeland Security www.ready.gov

National Red Cross www.redcross.org

FEMA www.fema.gov

2-1-1

Community Resource Information: Do Not Call 911 for Non-Emergencies!

Returning Home

IF YOU EVACUATED THE AREA, WAIT FOR AN ALL CLEAR FROM THE CITY OR COUNTY BEFORE ATTEMPTING TO RETURN TO YOUR HOME. BE PREPARED TO SHOW PROOF OF RESIDENCE BY HAVING A COPY OF YOUR LATEST UTILITY BILL.



Debris Cleanup

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- Cities and counties will publish a schedule for debris pick-up and removal. Debris cannot be removed from private property.
- Construction materials, vegetative debris, household hazardous waste and household appliances will need to be placed into separate piles and moved to the curbside for pick-up.



General Cleanup

- Be cautious of structural damage and downed power lines. Do not attempt to move structural supports or large pieces of debris.
- DO NOT run power generators indoors. Inhalation of carbon monoxide from the exhaust can cause death. Ensure exhaust is well ventilated.
- DO NOT use open flames indoors.
- Restrict your driving to emergency use only. Road conditions may be unsafe until road debris is cleared.



Water

Listen for instructions regarding public water supply. Use only bottled, boiled or treated water until you know that your water supply is safe.

You can use household chlorine bleach to treat water for drinking or cleaning. Add 1/8 teaspoon of bleach per gallon of clear water or 1/4 teaspoon of bleach per gallon if water is cloudy. Allow water to stand for 30 minutes before using.

Returning Home





Sewage Cleanup

Check for gas leaks. If you smell or hear gas leaking, leave immediately. DO NOT use the phone or turn on lights in your home. Call the gas company from a neighbor's phone.

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- Report any visible damage of power lines to the electric company. Turn off power at main breaker if any electrical equipment or circuits have been exposed to water.
- DO NOT connect generators to your home's electrical circuits. If a generator is on line when electrical service is restored, it can become a major fire hazard. Also, line workers working to restore power will be endangered if a generator is hooked up to the home's circuits.

It is likely that an electric company other than your own will reconnect the lines to your home; however, they can not turn the service back on. Only your electric company can actually turn the power back on to your house.

If you suspect water or sewage lines are damaged, do not use your plumbing (toilets, sinks, etc.). Contact the water company or a plumber for repairs.

A chemical portable commode can be created by the following:



Use 5 gallon buckets with tight lids, lined with heavy duty plastic garbage bags.

Add kitty litter to the bucket as a disinfectant and deodorizer. Keep lids on firmly.

Keep buckets in a cool, dark place. Clean and disinfect buckets immediately.

Your toilet can also be used by flushing until the bowl has no water. Then, line with heavy duty trash bags and disinfect with chlorine bleach after each use. Remove waste to an outside location.

If significant sewer outages have occurred, instructions for disposal of human wastes will be announced.

DO NOT dispose of human waste through your regular trash!

Interior Cleanup

- Disinfect and dry interior buildings and items inside. This will prevent growth of some bacteria, viruses, mold, and mildew that can cause illness.
- Clean walls, floors, and counter tops with soap and water. Disinfect them with a solution of 1 cup of bleach to 5 gallons of water.
- Wash all clothes and linens in hot water. Air dry and spray all unwashable items with disinfectant. Steam clean carpets. Throw away all items touched by water that cannot be disinfected.

At Wal-Mart, helping communities is what we do every day. When a crisis strikes, that charge becomes an even greater priority. Though we operate more than 3,900 stores in the U.S. and 2,700 more abroad, we truly believe every emergency is a local emergency. From hurricanes in the Southeast, to brush fires in the Southwest; from earthquakes in the West to snow storms in the Northeast, we have assisted with numerous response and relief efforts over the years.

WAL*MART[®]



Our Focus

- 1. Take care of our associates
- 2. Take care of our operations
- 3. Take care of our communities

Impact of Wal-Mart

Globally:

- 6,792 Facilities
- 1.9 million Associates

<u>In Texas:</u>

- 423 Facilities
- 147,180 Associates



At Wal-Mart, we believe that the key to swift, effective response is focusing on the development of resources and the fostering of relationships <u>before</u> a disaster strikes. In each and every of the communities we serve, our stores stand ready to help and work with local leaders, community organizations and elected officials in the instance of a disaster.

Due to the size of our company, we can touch people from coast to coast and help communities in times of need in so many ways. We recognize that basic needs become paramount in times of crisis and that many of the products on our shelves, as well as the systems by which we get them there, can literally save lives in traumatic times.





Community sustainability in times of crisis is very important to us because we know unforeseen events allow us to use our strengths as a business to serve those in need.

Following Hurricane Katrina's catastrophic impact on the Gulf Coast region; Wal-Mart was there to give a helping hand through the days, weeks and months.

How to work with Wal-Mart/Sam's

- Cities/Counties/Parishes: contact local store or club Manager
- State and Federal Agencies: work through the Corporate Emergency Management Department EOC: (479-277-1001)



