



weather.gov/corpuschristi

Coastal Bend Edition



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The Official Texas **HURRICANE** Guide

ARE YOU WEATHER-READY?

STORM SURGE



kiii tv
Serving Texas



Bill Vessey

Kristin Diaz

Alan Holt

info@coastalguardiansoutreach.org | © copyright 2014 Coastal Guardians Outreach

TEXAS DEPARTMENT OF PUBLIC SAFETY

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Dear Colleagues:

Hurricanes are nature's most destructive and deadliest threat to communities along Texas' coastline. Storm surge, high winds, tornados, and flooding generated by a tropical system can ravage coastal and inland areas. It is crucial to plan and prepare for each type of hazard to prevent and reduce the loss of life and property, and develop community resilience.

For the past nine years, the National Weather Service has collaborated with local nonprofit organizations and the Texas Division of Emergency Management of the Texas Department of Public Safety to bring you the Official Texas Hurricane Guide. This comprehensive guide is user-friendly and provides step-by-step guidance on what to do before, during, and after a storm to assist you with crucial advanced planning.

As a coastal resident, it is imperative for you to take time to develop a family disaster plan, review emergency preparations and checklists regularly, build disaster supply kits in waterproof, easy-to-carry containers, and stay aware of current weather situations. Monitor statements issued by the National Hurricane Center, watches and warnings issued by Texas National Weather Service offices, and listen to NOAA weather radio and local media broadcasts.

The emergency management community and its partners are committed to keeping Texans safe when tropical systems threaten our coastal areas. We ask for your help as well. I urge you to read and study this guide to plan and prepare for this hurricane season, and for those to come. You may also visit Weather-Ready Nation at www.nws.noaa.gov/com/weatherreadynation to learn more about NOAA's initiative about building community resilience in the face of increasing vulnerability to extreme weather events. I also encourage you to visit Texas Prepares at www.texasprepares.org for valuable information on how you can start preparing today.

I thank you for your continued dedication to personal preparedness. I fervently hope that for the 2014 hurricane season you will have no need for the preparations you will make.

Be informed. Be prepared. Be involved.

Respectfully,

W. Nim Kidd, CEM®, TEM®
Chief
Texas Division of Emergency Management
Assistant Director
Texas Homeland Security
Texas Department of Public Safety
@chiefkidd on Twitter

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About Hurricanes



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

Hurricanes 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.



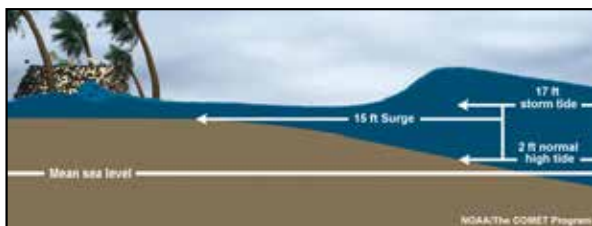
Above: Historical perspective of hurricane landfalls in Texas since 1851.

Since 1851, 63 hurricanes have struck the Texas coast. That is one every three years on average.

Storm Surge

Storm Surge Defined

Storm surge is an abnormal rise of water generated by a storm, over and above the predicted astronomical tides. Storm surge should not be confused with storm tide, which is defined as the water level rise due to the combination of storm surge and the astronomical tide. This rise in water level can cause extreme flooding in coastal areas resulting in storm tides reaching up to 20 feet or more in some cases. On the Texas coast these flood waters can penetrate far inland in some cases and depends on the land elevation. If the storm tide is greater than the land elevation (even if well inland) then storm surge flooding will be possible.

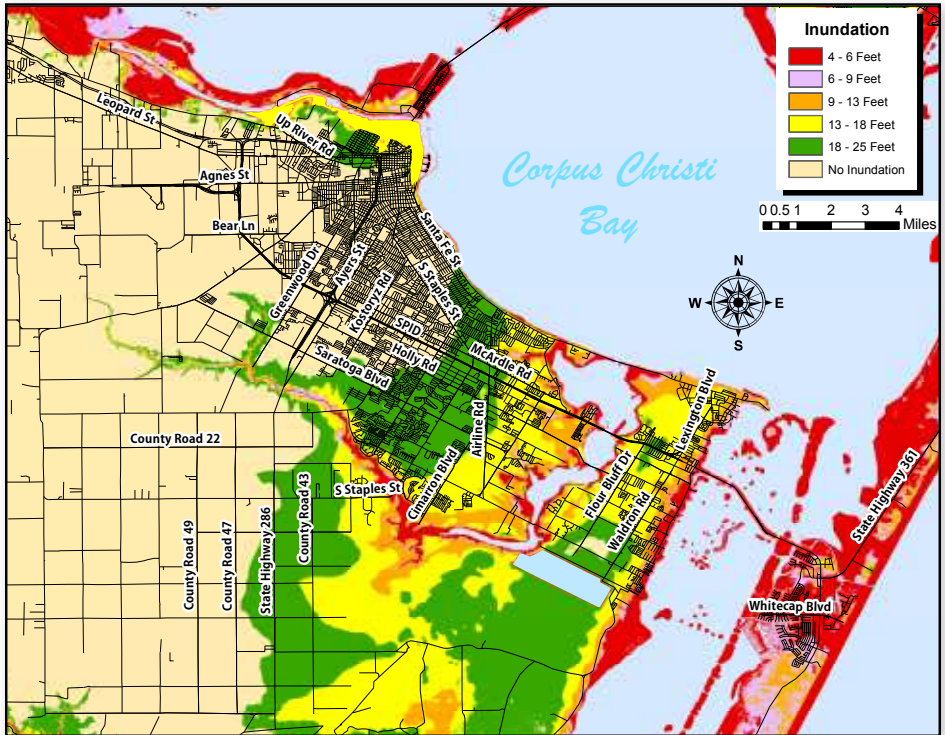


Storm Surge Can Be Deadly! Here are 8 Tips to be Ready

1. Storm surge flooding is often the greatest threat to life and property from a hurricane. It poses a significant threat for drowning. A mere six inches of fast-moving flood water can knock over an adult. It takes only two feet of rushing water to carry away most vehicles-including pickups and SUVs.
2. Storm surge can cause water levels to rise quickly and flood large areas-sometimes in just minutes, and you could be left with no time to take action if you haven't already evacuated as instructed.
3. Storm surge values do not correspond well to the hurricane wind categories that range from 1 to 5. These categories are based only on winds and do not account for storm surge.
4. Tropical storms and hurricanes of any wind category (1-5) can all cause life-threatening storm surge.
5. Many Gulf Coast areas are vulnerable to storm surge including areas many miles inland from the coastline depending on elevation of the coastal plain. Find out today if you live in a storm surge zone (see pages 5-7 in this guide).
6. Storm surge can occur before, during and after the center of the storm passes through an area, and can sometimes cutoff evacuation routes. The water can also rise well in advance of the coming storm, in some cases 36 hours or greater. Do not wait until the last minute to leave when an evacuation is ordered.
7. During the peak of a storm surge event, it is unlikely that emergency responders will be able to reach you if you are in danger.
8. Weather conditions and the forecast can change. Your Mayor and/or County Judge could issue evacuation or other instructions for many reasons. Always follow the instructions of these local officials.

Storm Surge

Corpus Christi



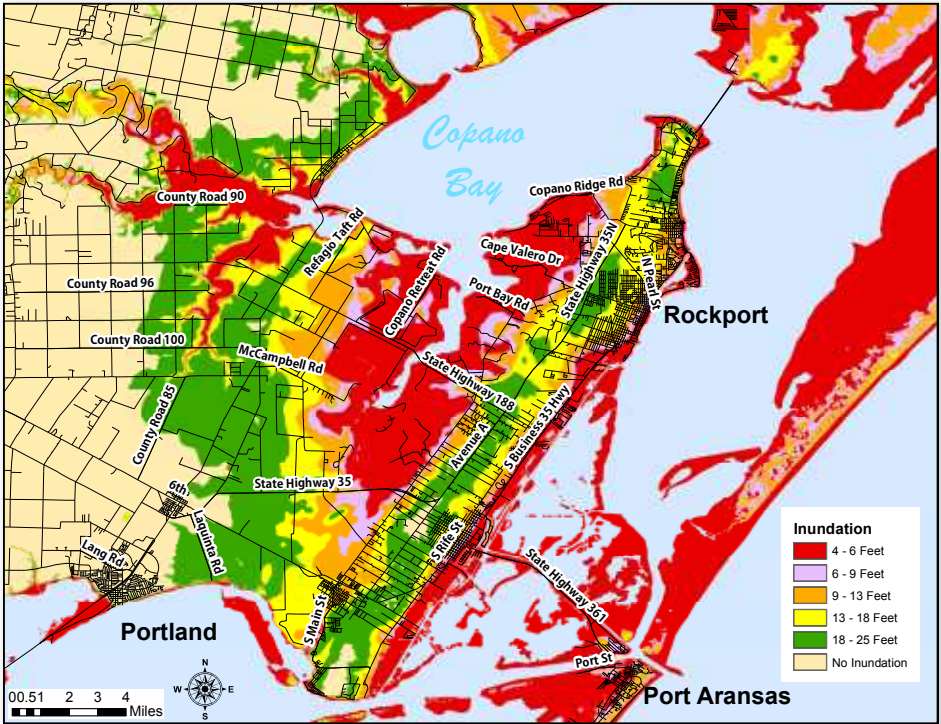
Above: This map indicates the potential inundation from a storm surge of the listed height. To determine water depth you must subtract your elevation. Accuracy is +/- 20%.

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

- National Hurricane Center

Storm Surge

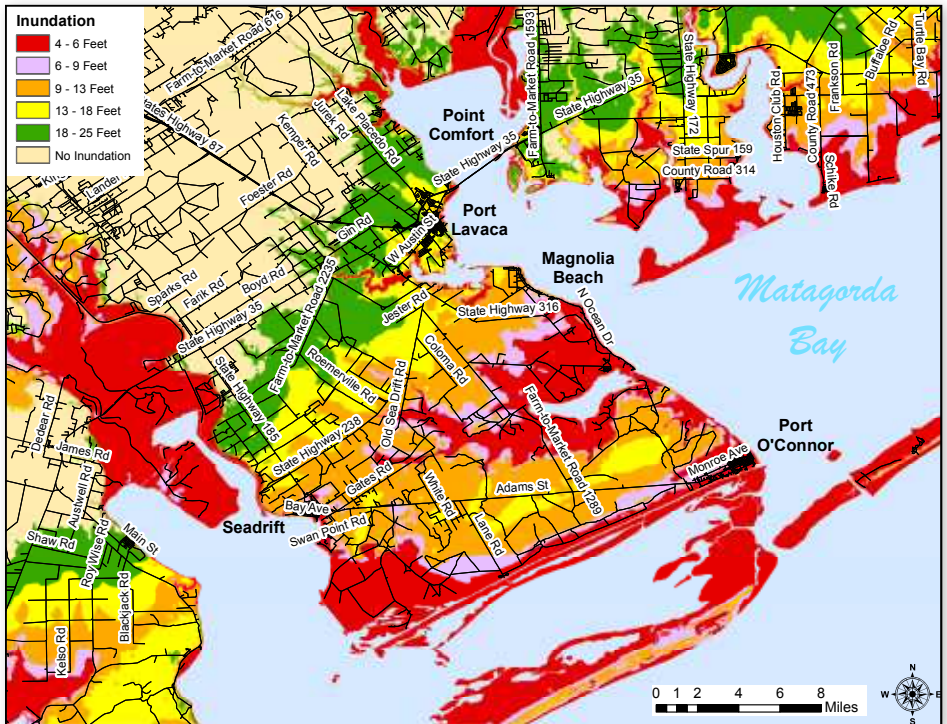
Rockport/Port Aransas



These maps show the potential inundation from a storm surge of the listed height. Red and pink colors indicate the highest danger. To determine water depth you must subtract your elevation. All of these maps have an accuracy of +/- 20 percent.

Storm Surge

Port O'Connor



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

Inland Flooding

There are numerous examples of significant flooding caused by land-falling tropical cyclones in Texas. Storms with a slow forward motion are the most dangerous as heavy rains persist for a longer period of time.

Five Practical Ways to Protect Yourself and Others From the Dangers of Inland Flooding

Protect Your Personal Documents and Special Items

- Store valuables in plastic tubs with locking tops
- In case of evacuation, you should be able to secure and move all your valuables within 15 minutes

Buy Flood Insurance: A Plan for Replaceable Items

- The National Flood Insurance Program (NFIP) is available from an insurance agent or the NFIP
- For more information see www.floodsmart.gov

Flood Proof Your Home - Take Steps to Minimize Flood Damage

- Shut off the main circuit breaker to prevent short circuiting and eliminate the threat of electrocution
- Raise outside air conditioning units onto platforms above ground level
- Store rarely used or expensive items in the attic or on high shelves

Develop a Family Flood Plan

- Develop a plan of action to keep from panicking during an emergency
- Have an evacuation route and alternatives planned in the event you are asked to evacuate
- Communicate your plans with friends or family outside of your home area
- Battery powered radios or televisions can be used in the event of a power outage

Never Drive on Flooded Roads

- Driving into flooded roadways puts your life and the lives of others at risk
- Unless told to evacuate, you are probably safest staying at your current location
- If you encounter flood waters when driving, Turn Around, Don't Drown!



Tornadoes and Destructive Winds

Tropical cyclones also produce tornadoes. 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. Tornadoes produced by tropical cyclones are relatively weak and short-lived, but still pose a threat.

Hurricane 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.



Above: Wind damage to a billboard from Hurricane Lili in October 2002.



MOBILE HOME RESIDENTS MUST EVACUATE!

- No mobile home or manufactured home - no matter how new it is - can provide safe shelter from hurricane force winds.
- Straps or other tie-downs will not 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.

Saffir Simpson Hurricane Wind Scale

- Category 1 - Winds 74 to 95 mph
- Category 2 - Winds 96 to 110 mph
- Category 3 - Winds 111 to 129 mph
- Category 4 - Winds 130 to 156 mph
- Category 5 - Winds 157 mph or higher

Hurricane Preparation

Home Preparation

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 must evacuate 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.



Roofing

- Inspect the roof for loose tiles, shingles or debris. Consider replacing old or damaged shingles with new ones rated for hurricane force winds.
- Clear loose and clogged rain gutters and downspouts.

Doors

- Reinforce garage doors and tracks or replace with a hurricane tested door.
- Reinforce double entry doors with heavy duty foot and head bolts.
- Use a security dead bolt with a one inch minimum bolt length.

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, pre-drill holes and place anchors on homes.

Additional Preparation

Business and Employee Preparation

- 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.
 - 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.
 - 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.
-

Marine Preparations

- Check with the manufacturer for proper ways to secure your boat during a storm.
 - 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 capsize boats in this type of anchorage.
-

Preparing for Your Pet's Safety

Your 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. DO NOT 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.
- Pack enough food and bottled water for the duration of your evacuation. DO NOT 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.
- Make sure your pet has a proper ID collar.

Additional Preparation

General Preparations for People with Special Needs

Preparation 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 last resort 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 becomes necessary.
 - Make arrangements for transportation in the event you evacuate. Make sure your transportation can accommodate any equipment or other supplies that need to be taken with you.
 - 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.
-

Transportation Assistance Registry (Dial 2-1-1 as soon as possible...)

- Before the start of hurricane season (June 1)
- If you have a disability or special health care need and require assistance to get out
- If you cannot drive and cannot arrange transportation
- If you do not have a vehicle and you have no one else to help you evacuate

Is someone going to pick me up or call me when a hurricane threatens?

Emergency evacuations are handled different in every community. When a major hurricane threatens, local emergency managers will make every attempt to evacuate someone who does not have the ability to evacuate themselves, if there is enough time to do so safely. Once a hurricane enters the Gulf, individuals should pay close attention to local media to determine when and how evacuations will occur.

Before the Storm

- 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.
 - Determine whether your policy covers additional living expenses for a temporary residence if you are unable to live in your home because of damage from a disaster.
 - Before hurricane season, prepare detailed written and/or photographic inventory of your home's contents and store it in a safe place with your policy.
 - 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.
-

After the Storm

- Give prompt written notice to your insurance company.
- Photograph or videotape damaged structures and all damaged property. Make a list of damaged or lost items.
- DO NOT 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.

Important Online Insurance Information

- National Flood Insurance Program
www.floodsmart.gov
- Texas Windstorm Insurance Association
www.twia.org
- Texas Department of Insurance
www.tdi.state.tx.us/consumer
1-800-252-3539 (Consumer Help Line)

Contact Info and Supplies

Your local 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.



**American
Red Cross**

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: _____

Insurance Company Information: _____

**Whatever comes your way,
you'll know what to do.**

**Red Cross mobile apps
put help in your hand.**



First Aid App



Hurricane App



Earthquake App



Wildfire App



Tornado App



Pet First Aid App



**24 hour number to
call for assistance**

**1-800-RED CROSS
(1-800-733-2767)**

Download our preparedness apps today. Call "REDCROSS" from your mobile phone and we'll send you a link to download the apps, or search the iTunes app store or Google Play for American Red Cross.

Hurricane Supply Kit

Your chapter of the American Red Cross recommends that you have the following items in your Hurricane Supply Kit.

- At least a 7-day supply of non-perishable food and water. One gallon of water 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
- Whistle
- Kitchen accessories, cooking utensils, and manual can opener
- Cash
- Extra clothing, blankets, and sleeping bags
- Matches in a waterproof container
- 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, leashes, shot records, and food 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

Hurricane Names

Hurricane Names

2014

- | | |
|------------------------------------|-----------------------------------|
| <input type="checkbox"/> Arthur | <input type="checkbox"/> Laura |
| <input type="checkbox"/> Bertha | <input type="checkbox"/> Marco |
| <input type="checkbox"/> Cristobal | <input type="checkbox"/> Nana |
| <input type="checkbox"/> Dolly | <input type="checkbox"/> Omar |
| <input type="checkbox"/> Edouard | <input type="checkbox"/> Paulette |
| <input type="checkbox"/> Fay | <input type="checkbox"/> Rene |
| <input type="checkbox"/> Gonzalo | <input type="checkbox"/> Sally |
| <input type="checkbox"/> Hanna | <input type="checkbox"/> Teddy |
| <input type="checkbox"/> Isaias | <input type="checkbox"/> Vicky |
| <input type="checkbox"/> Josephine | <input type="checkbox"/> Wilfred |
| <input type="checkbox"/> Kyle | |

2015

- | | |
|------------------------------------|-----------------------------------|
| <input type="checkbox"/> Ana | <input type="checkbox"/> Larry |
| <input type="checkbox"/> Bill | <input type="checkbox"/> Mindy |
| <input type="checkbox"/> Claudette | <input type="checkbox"/> Nicholas |
| <input type="checkbox"/> Danny | <input type="checkbox"/> Odette |
| <input type="checkbox"/> Erika | <input type="checkbox"/> Peter |
| <input type="checkbox"/> Fred | <input type="checkbox"/> Rose |
| <input type="checkbox"/> Grace | <input type="checkbox"/> Sam |
| <input type="checkbox"/> Henri | <input type="checkbox"/> Teresa |
| <input type="checkbox"/> Ida | <input type="checkbox"/> Victor |
| <input type="checkbox"/> Joaquin | <input type="checkbox"/> Wanda |
| <input type="checkbox"/> Kate | |

2016

- | | |
|-----------------------------------|-----------------------------------|
| <input type="checkbox"/> Alex | <input type="checkbox"/> Lisa |
| <input type="checkbox"/> Bonnie | <input type="checkbox"/> Matthew |
| <input type="checkbox"/> Colin | <input type="checkbox"/> Nicole |
| <input type="checkbox"/> Danielle | <input type="checkbox"/> Otto |
| <input type="checkbox"/> Earl | <input type="checkbox"/> Paula |
| <input type="checkbox"/> Fiona | <input type="checkbox"/> Richard |
| <input type="checkbox"/> Gaston | <input type="checkbox"/> Shary |
| <input type="checkbox"/> Hermine | <input type="checkbox"/> Tobias |
| <input type="checkbox"/> Ian | <input type="checkbox"/> Virginie |
| <input type="checkbox"/> Julia | <input type="checkbox"/> Walter |
| <input type="checkbox"/> Karl | |



This chart is marked with vertical(longitude) and horizontal (latitude) lines.
Follow it up where it intersects with the

Stay Connected:



Hurricane Tracking Map



Each grid square represents 1 degree. A storm's position is given in these degrees. Find the given longitudinal number at the bottom of the chart. Then find the given latitudinal line. Place a mark on the intersection point (this is the hurricane's current position).



or Call: 814-WIND

Hurricane Forecast

Weather Information

- National Weather Service
weather.gov/corpuschristi
24 Hour Phone Recording:
361-289-1861
- National Hurricane Center
www.hurricanes.gov
- Facebook: US National Weather Service Corpus Christi
- Twitter: @NWSCorpus

The 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.

Graphical Tropical Weather Outlook

- NHC product provides an overview of all tropical cyclone activity, indicates areas of interest that have potential for tropical cyclone development.

NHC Forecast Advisory

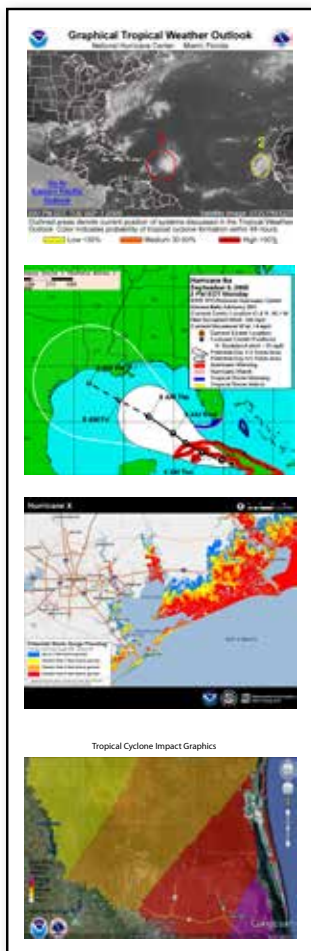
- Most recent position for a storm along with all coastline watches and warnings. Includes a 3 or 5 day track with error cone.
- Error cone represents a 5 year average error. Storms only stay within the error cone 67% of the time.
- DO NOT focus too closely on the exact track forecast - the little black line.

Potential Storm Surge Flooding

- If a tropical storm or hurricane is threatening your community, go to www.hurricanes.gov to see a map like this, which will show potential storm surge flooding for your area.

Tropical Cyclone Impact Graphics

- Issued by local NWS offices to summarize potential impacts expected from the tropical cyclone.
- Click on each colored area to pop up text that describes potential impact.
- weather.gov/tcig



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.
- Board up windows (if shutters do not exist) in case storm moves quickly and you have to leave!

TAPE PROVIDES NO PROTECTION!

- Store lawn furniture and other loose, light weight objects, such as garbage cans and garden tools.
- 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.
- Lock home securely.
- Take pets with you.



Final Actions to Take if Staying

- Close storm shutters.
- Notify family members of your evacuation plans.
- Lower water level in swimming pool by one foot.
- 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.
- **DO NOT EXPECT EMERGENCY RESPONDERS TO BE OF ANY ASSISTANCE DURING A LANDFALLING HURRICANE!**

Hurricane Bret

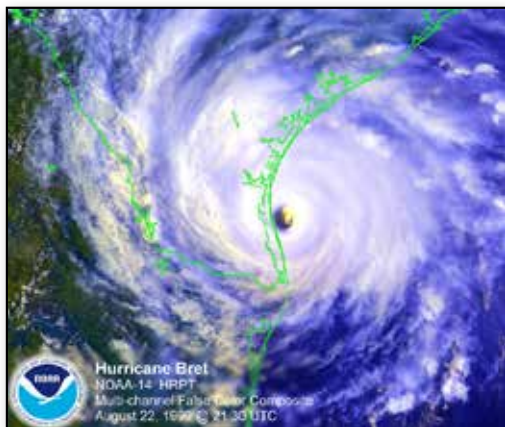
A Look back at Hurricane Bret 15 Years Later

On the evening of August 22nd, 1999, Hurricane Bret made landfall over rural sections of the Padre Island National Seashore in Kenedy County, Texas. Bret was the first major hurricane during the 1999 Atlantic tropical season and the only tropical system that intensified into a hurricane over the Gulf of Mexico that year. According to the National Hurricane Center, at the time Bret was the first hurricane to hit Texas since Hurricane Jerry in October 1989 and the first hurricane to strike South Texas since Hurricane Allen in August 1980. Bret made landfall as a small category 3 hurricane with sustained winds of 115 mph. Despite being a major hurricane, damage and impacts from Bret were fairly minimal due the landfall location and its small size.

Hurricane Bret's origin can be traced to a tropical wave that moved off the coast of Africa into the Atlantic Ocean on August 5th. By August 18th, this tropical wave was located near the Yucatan Peninsula. The tropical wave combined with a weak surface low pressure system to produce an area of disturbed weather over the Bay of Campeche. By midday on the 18th, the system had obtained tropical characteristics and was classified as a tropical depression. Wind shear remained present of the western Gulf of Mexico which initially prevented a rapid intensification of the system. However, the wind shear subsided on the 19th allowing the depression to begin drifting to the north and strengthen into Tropical Storm Bret. Further strengthening occurred and Bret became a hurricane with winds of 75 mph on the evening of August 20th. Bret continued its northerly track

across the southwestern Gulf of Mexico and eventually strengthened into a Category 4 hurricane with sustained winds near 145 mph on the morning of the 22nd. By midday, a more west northwesterly track had been established. Bret then weakened to a 115 mph Category 3 hurricane before making landfall at 7:00 p.m. on August 22nd, nearly halfway between Brownsville and Corpus Christi over rural parts of Kenedy County.

Computer output suggested that Hurricane Bret produced between 8 and 10 feet of storm surge on Padre Island. Bret produced twelve new cuts that



Satellite image of Hurricane Bret



Track and Intensity of Hurricane Bret at Landfall

Hurricane Bret

connected the Gulf of Mexico to the Laguna Madre. The largest of these cuts, near where the eye came ashore, at first was mistaken by aerial surveyors as Mansfield Pass. Wind damage

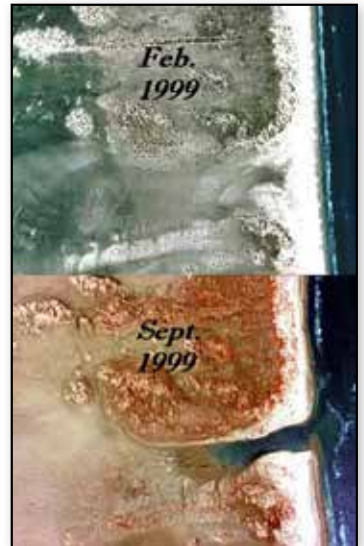
from Hurricane Bret was relatively minor as the hurricane made landfall over a mostly uninhabited part of South Texas. Damage was confined mostly to trees, fences, and power lines. Heavy rains also accompanied Bret and produced widespread flash flooding and some river flooding across South Texas. The highest rainfall total in Texas in association with Hurricane Bret was 13.18 inches in Sarita. In addition, four weak tornadoes were documented across South Texas from Hurricane Bret. It is quite possible more tornadoes occurred over unpopulated area, but no additional reports were received.



FEMA Photo – Hurricane Bret Evacuation on I-37.

Hurricane Bret made landfall over one of the least populated counties in Texas and was a small storm. These factors resulted in relatively minor damage even though Hurricane Bret was a powerful category 3 storm. However, what if the track of Bret was 60 to 70 miles north or south of its Kenedy County landfall? The major coastal cities of Corpus Christi or Brownsville would have been greatly affected.

So if Hurricane Bret had struck Corpus Christi, what impacts could residents of the Coastal Bend experienced? Widespread wind damage would have occurred due to the sustained wind speeds of 125 mph. The sustained winds combined with gusts would have caused great structural damage with many buildings either destroyed or heavily damaged. The heavier rain amounts would be shifted to the north as well with widespread significant flashing flooding and river flooding from 10 to 15 inches of rain. A storm surge of 8 to 10 feet impacting Corpus Christi would create many issues for the Coastal Bend. Most of Mustang Island would be inundated with water. The Corpus Christi Marina and North Beach would be completely underwater. In addition, various parts of other coastal communities such as Port Aransas, Rockport, and Fulton would be flooded as well. These are just a few of the numerous impacts that would occur if a hurricane like Bret hit Corpus Christi.



Washover area on South Padre Island before and after Hurricane Bret

Hurricane Surf & Rip Currents

Hurricane Surf

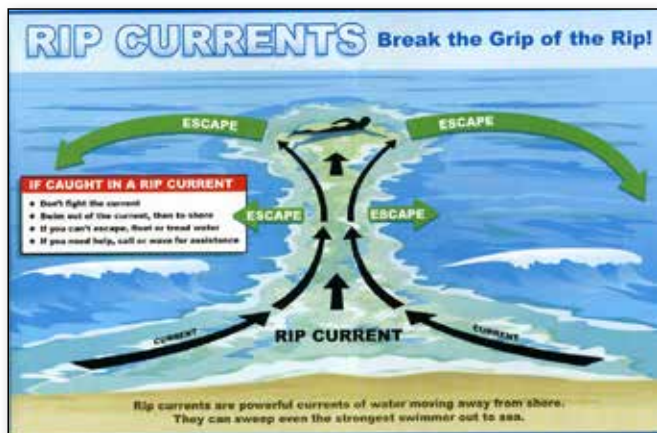


Photo: gscottimaging.com

Along with big surf come strong rip currents. Rip currents are the leading surf hazard for all beach goers and result in over 100 drownings every year in the United States. The strength and size of rip currents are related to the size of the surf and wave period. Rip currents typically form at the low spots in the surf, at the breaks in the sandbars, and near jetties and piers.

Rip Currents

If caught in a rip current, don't panic, but swim parallel to the shore. The current is usually only about 50 feet wide and you should be able to swim out of it. At that point, you can swim back to shore. If you are still unable to reach the shore, draw attention to yourself: face the shore, wave your arms, and yell for help.



Student Information Checklist

- | |
|---|
| <ul style="list-style-type: none"> Assure that all contact information and emergency contact information is accurate with your campus' registrar's office. |
| <ul style="list-style-type: none"> If your campus offers an emergency management communication system, register as a user of the system. |
| <ul style="list-style-type: none"> Plan your method of evacuation and your destination before a storm enters the gulf. |
| <ul style="list-style-type: none"> Monitor local radio and TV stations for updates. |
| <ul style="list-style-type: none"> Contact your campus Student Affairs Office if you need assistance with evacuation. |
| <ul style="list-style-type: none"> If you require any assistance due to a disability-related accommodation, please contact your campus Disability Services Office to make necessary arrangements. |
| <ul style="list-style-type: none"> Communicate with your family regarding status and location |
| <ul style="list-style-type: none"> 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. |
| <ul style="list-style-type: none"> 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. |
| <ul style="list-style-type: none"> 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. |
| <ul style="list-style-type: none"> International students must take passports with US student visa inside, I-20, I-94, student I.D. and class schedule. |
| <ul style="list-style-type: none"> If using personal transportation, take as many of your valuable or irreplaceable items as you are able. |
| <ul style="list-style-type: none"> 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.txdot.gov |
| <ul style="list-style-type: none"> Follow baggage limits if participating in an assisted evacuation program. |
| <ul style="list-style-type: none"> Take a 30-day supply of medications in original pharmacy containers. |
| <ul style="list-style-type: none"> Make a record of any valuables left behind (description, serial numbers, etc). Take pictures of all belongings. |
| <ul style="list-style-type: none"> If you are evacuating to a shelter, make appropriate arrangements for pets. Most shelters do not accept pets. |
| <ul style="list-style-type: none"> Do not plan to return to campus until an all-clear is given (monitor media and campus web-site). |

Evacuation Routes

Evacuees need to consider the projected path of the hurricane when choosing an evacuation route and destination. When evacuating, be sure to check local weather and highway conditions before departing. When local authorities order an evacuation of your area, leave immediately!

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.
- Leave as early as possible to avoid heavy traffic and hazardous weather.
- 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 local bridges and causeways 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 Routes



Texas Road Information

- TXDOT Highway Conditions
1-800-452-9292 or
www.drivetexas.org
- TXDOT Corpus Christi Office
1-361-808-2300
- Emergency Broadcast Information
KLUX Radio 89.5 FM
- Twitter @TxDOTalert

Evacuation Notes

[illegible]

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.



Corpus Christi

- RTA Bus Stop
- Evacuation Hub - C.C. Gym on Saratoga
- Richard M. Borchard Regional Fairgrounds, Robstown



Victoria

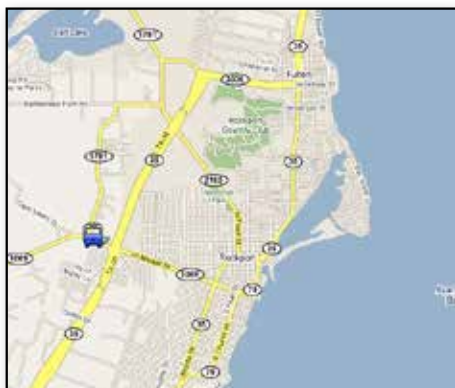
- Victoria Community Center

Bus Evacuation



Kingsville

- Kleberg County Courthouse
- National Guard Army Parking Lot



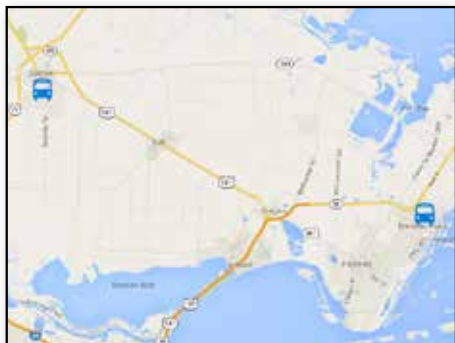
Rockport

- Live Oak Elementary



Port Lavaca

- Bauer Community Center



San Patricio County

- San Patricio County Fairgrounds
- Aransas Pass Civic Center

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

- 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 not be safe 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.

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.

Returning Home

Utility 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.
- 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 cannot turn the service back on. Only your electric company can actually turn the power back on to your house.



Sewage Cleanup

- 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!

Emergency Information

ARANSAS COUNTY

- Rockport Police - 361-729-1111
- County Sheriff - 361-729-2222
- Fulton Police - 361-729-5533

BEE COUNTY

- County Emergency Management
361-621-1550 - www.co.bee.tx.us
- County Sheriff - 361-362-3221

CALHOUN COUNTY

- County Emergency Management
361-553-4400
website: www.calhouncotx.org
- County Sheriff - 361-553-4646

GOLIAD COUNTY

- Goliad County Judge - 361-645-3337
- County Sheriff - 361-645-3451

JIM WELLS COUNTY

- County Emergency Management
361-668-1018
- Alice Emergency Management
361-664-3111
- Jim Wells County Sheriff
361-668-0341

KLEBERG COUNTY

- County Emergency Management
361-595-8527
- County Sheriff - 361-595-8500

LIVE OAK COUNTY

- County Sheriff - 361-449-2271

NUECES COUNTY

- County Emergency Management
361-888-0513 - www.co.nueces.tx.us

- City of Corpus Christi
361-826-1100 - www.cctexas.com
- Port Aransas City Hall
361-749-4111
cityofportaransas.org
- City of Robstown
361-387-2522
www.rfd@cityofrobstown.com
- Bishop Police - 361-584-2443
- Driscoll Police - 361-221-2902

REFUGIO COUNTY

- County Emergency Management
361-526-2820
- County Sheriff - 361-526-1698

SAN PATRICIO COUNTY

- County Emergency Management
361-364-9650
- Ingleside Police - 361-776-2531
- Portland Police - 361-777-4444
- County Sheriff - 361-364-9600
- Aransas Pass Police - 361-758-5224

VICTORIA COUNTY

- City/County Emergency Management
361-580-5770

Additional Information

- US Department of Homeland Security
www.ready.gov
- American Red Cross
www.redcross.org
(enter zip code for local office)
24 hour number to call for assistance
1-800-RED CROSS (1-800-733-2767)

Do Not Call 911 for Non-Emergencies!

Emergency Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Coloring Contest Photo Winner





The South Texas News Leader.



Bill Vessey

Kristin Diaz



Alan Holt

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