



2024 Hurricane Preparedness Guide

FOR THE HOUSTON-GALVESTON REGION

Hurricanes bring destructive winds, heavy rains, and storm surge, posing serious threats to property and lives throughout the Houston-Galveston region. Armed with the right information and proactive measures, we can weather the storm together and keep ourselves and our loved ones safe. Let this guide empower you to face the storm with confidence and resilience.



Together
Against the Weather



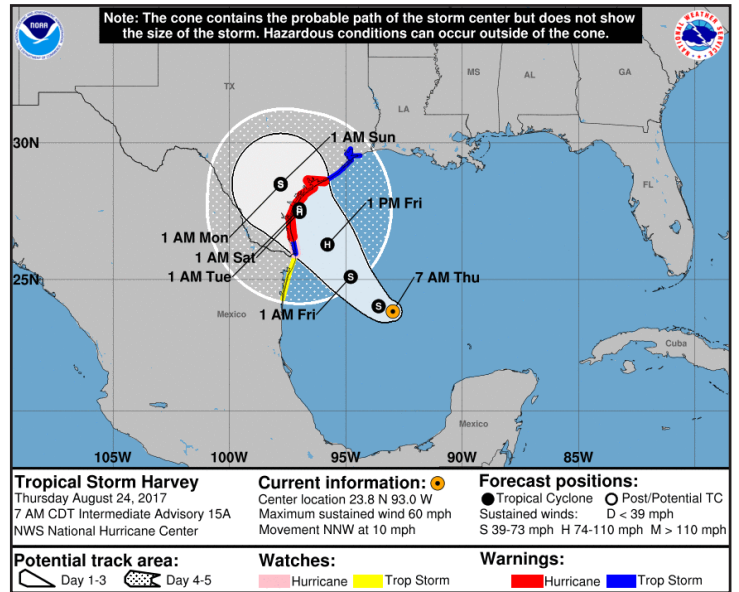
Houston-Galveston
Area Council

Hurricane Forecasting

Cone of Error

You may have heard meteorologists talk about a “cone of error” and show a cone-shaped graphic. The cone of error is a visual aid used to show the anticipated path of a storm’s circulation center three to five days into the future.

The cone does not represent impacts, or even who will be most at risk. It only illustrates a range of error for where the storm’s center will be over the next three to five days. In general, a storm will make landfall within the cone of error about 70 percent of the time. Only 30 percent of the time will a storm make landfall outside of the cone. A storm’s effects are not isolated to one particular place and tend to have far-reaching impacts hundreds of miles away from the location of landfall.



Hurricane Harvey Cone of Error (NOAA/National Weather Service)



Watches & Warnings

The National Hurricane Center begins issuing detailed storm information to threatened residents 48 hours in advance of an approaching tropical storm or hurricane. It is important to know the difference between “watches” and “warnings” to help you and your family can prepare.

- **Tropical Storm Watch** – Tropical storm conditions pose a potential threat to an area within 36 hours.
- **Tropical Storm Warning** – Tropical storm conditions are expected to affect an area within 36 hours.
- **Hurricane Watch** – Hurricane conditions are possible within 48 hours. You and your family should activate your disaster preparedness plan (see page 6) and take measures to secure your home and property.

- **Hurricane Warning** – Hurricane conditions are expected within 36 hours. You and your family should be completing storm preparations and begin to shelter in place or move to a safer location.
- **Evacuation Order** – The decision to order evacuations is based on information provided by the National Weather Service in coordination with local emergency management offices.

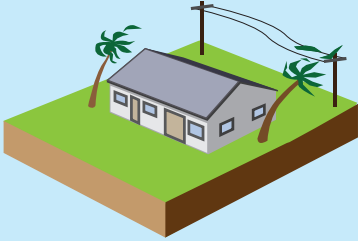
An evacuation order is issued by an emergency management official, mayor, or county judge.

It is the most important instruction you will receive and should be followed closely and promptly.

Hurricane Categories

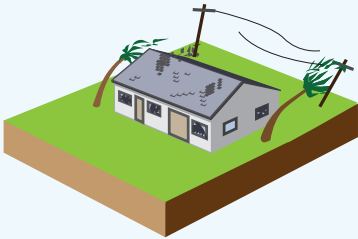
Meteorologists use the Saffir-Simpson Hurricane Wind Scale to assign categories of hurricanes based on wind speed and potential property damage. Tropical systems still can intensify or weaken unexpectedly prior to landfall, but you should always plan for one category higher than the storm being forecasted.

It is important to note that a hurricane's category does not determine or correlate with the height of storm surge, which is the gradual rise in sea level above the predicted tide caused by a tropical storm or hurricane, nor does a hurricane's category correlate with the amount of rain the storm can produce.



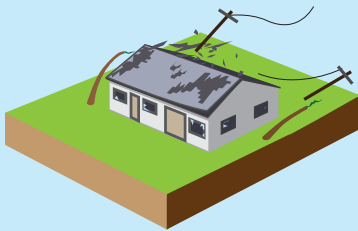
CATEGORY 1 – Winds of 74 to 95 mph

Damage to mobile homes and some homes of frame construction. Numerous trees down and widespread power outages. Roads blocked by downed trees and power lines. Loose outdoor items will become airborne hazards.



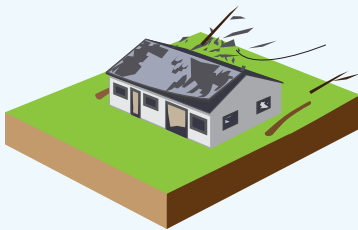
CATEGORY 2 – Winds of 96 to 110 mph

Severe damage to the majority of mobile homes and homes of frame construction. Many trees down. Well-constructed homes will have damage to shingles, siding, and gutters. Extensive damage to power lines and widespread power outages. Airborne debris could injure or kill, and damage could extend well inland.



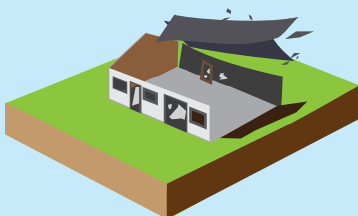
CATEGORY 3 – Winds of 111 to 129 mph

Nearly all mobile homes destroyed. Severe damage to most homes, including structural collapse. Airborne debris could injure or kill. Severe damage to most low-rise apartment buildings with partial roof and wall failures. Damage could extend well inland.



CATEGORY 4 – Winds of 130 to 156 mph

Catastrophic damage will occur: Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted, and power poles downed. Fallen trees and power poles will isolate residential areas with many being uninhabitable for weeks or months.



CATEGORY 5 – Winds greater than 156 mph

Catastrophic damage will occur: A high percentage of framed homes will be destroyed from total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Should I Evacuate?

When a tropical storm or hurricane threatens the Houston-Galveston region, the National Weather Service will forecast the expected height of storm surge and wave action. This information is used by emergency management officials to order evacuations.

Local emergency officials use a zip zone system to order evacuations based on the anticipated heights and extent of storm surge with the goal of removing residents in danger of being flooded by storm surge.

Know Your Evacuation Zone

To understand your storm surge risk and determine if you live in an evacuation zone, locate your zip code on the chart on the next page.

In an evacuation zone? Have a plan and be prepared to leave if your zip zone or zip code is called to evacuate.

For residents whose zip zones are not listed on the chart or who live inland, you should shelter in place, keeping roadways clear and allowing those in danger to evacuate further inland.



FACT:

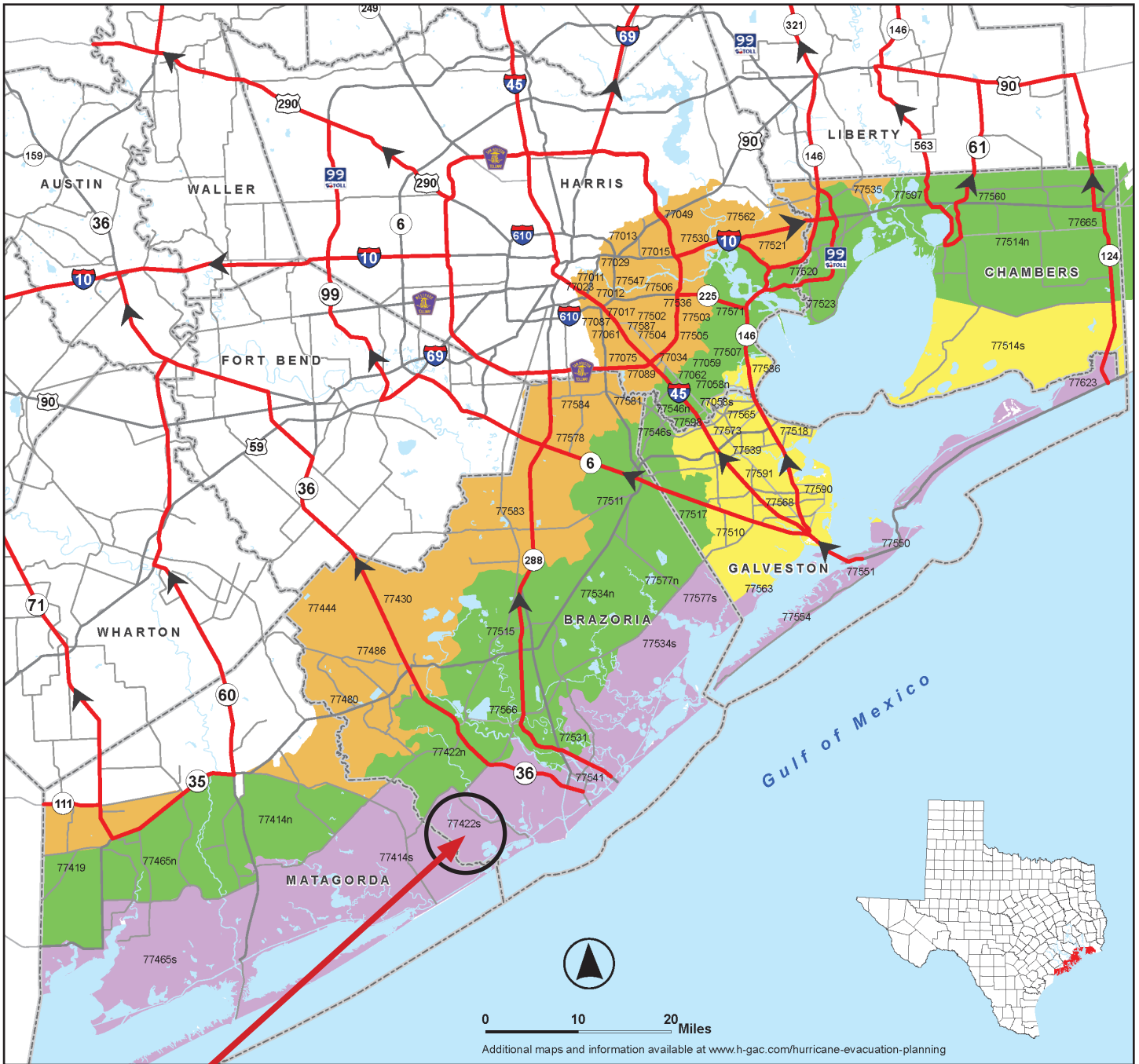
Hurricane Rita in 2005, resulted in the largest evacuation in U.S. history! An estimated 2.5 to 3.7 million people fled the Texas Gulf Coast prior to Rita's landfall. Approximately two-thirds of evacuees were not required to evacuate.

John L. Beven (2006) Blown Away: The 2005 Atlantic Hurricane Season, *Weatherwise*, 59:4, 32-44, DOI: 10.3200/WEWI.59.4.32-44

YOU SHOULD ONLY EVACUATE IF YOU LIVE IN A HURRICANE EVACUATION ZONE AND YOU ARE ORDERED TO EVACUATE.



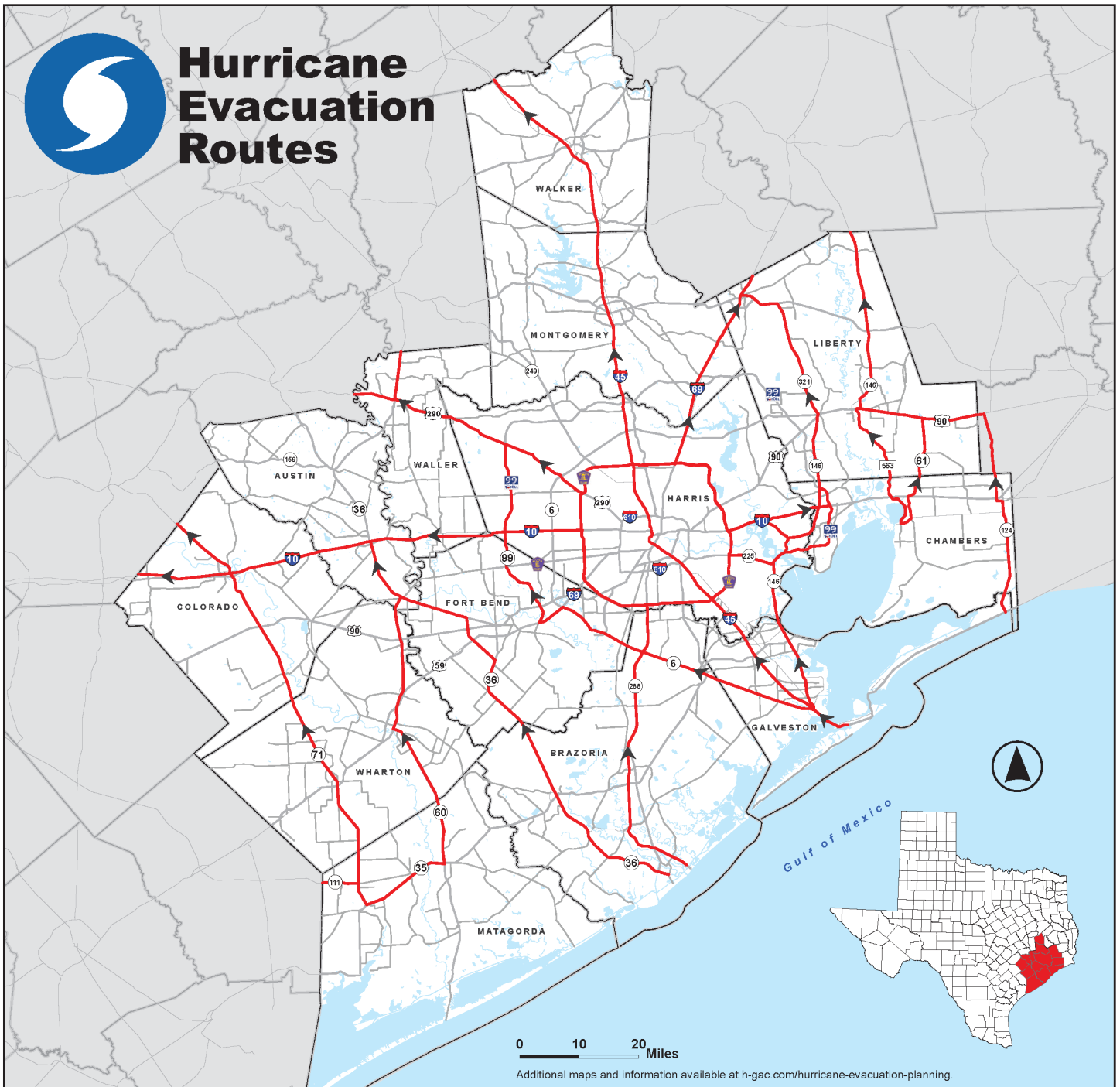
2024 Hurricane Evacuation Zones



Find your zip code on the table below, then locate it on the above map.

ZIP ZONE COASTAL														
77414s	77422s	77465s	77534s	77541	77550	77551	77554	77563	77577s	77623				
ZIP ZONE A														
77058s	77510	77514s	77518	77539	77563	77565	77568	77573	77586	77590	77591			
ZIP ZONE B														
77058n	77059	77062	77414n	77419	77422n	77465n	77507	77511	77514n	77515	77517	77520	77523	77531
77534n	77546n	77546s	77560	77566	77571	77577n	77597	77598	77665					
ZIP ZONE C														
77011	77012	77013	77015	77017	77023	77029	77034	77049	77061	77075	77087	77089	77430	77444
77480	77486	77502	77503	77504	77505	77506	77521	77530	77535	77536	77547	77562	77578	77581
77583	77584	77587												

2024 Hurricane Evacuation Routes






Once you are familiar with your evacuation zone, it is important to know the best route to take.

During an ordered evacuation by a county judge, mayor or other emergency management official, residents in coastal areas should follow the hurricane evacuation routes, as shown on the map above. These specially designated routes are updated each year to provide the safest and most timely evacuation when the region is threatened by a hurricane.

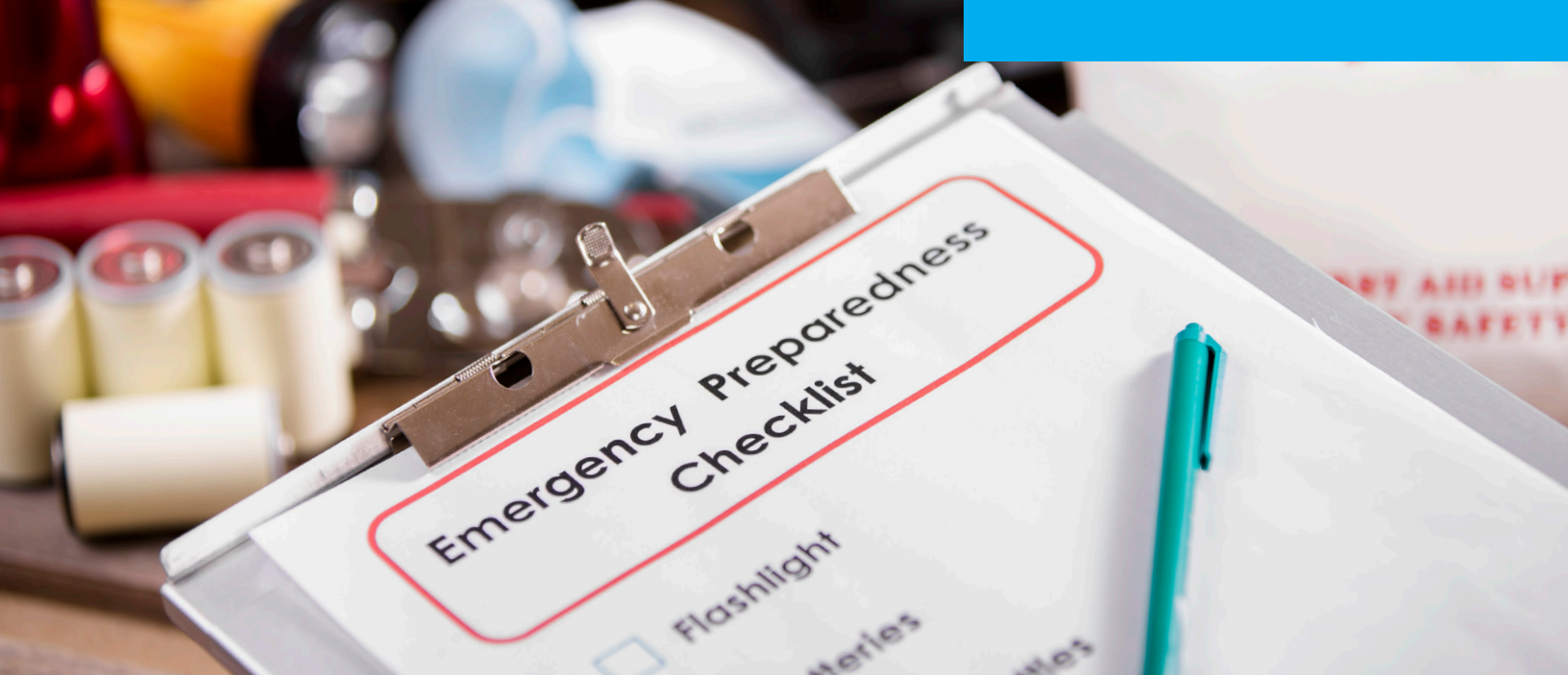
Scan the QR code to download and save a copy of the evacuation zone and route maps to know how to safely leave the area.

Route Designation

-  Evacuation Corridors
-  Other Roads
-  County Boundary



h-gac.com/hurricane-evacuation-planning



Disaster Preparedness

The best time to prepare for a hurricane is before hurricane season begins on June 1. Knowing what to do, what to have, and when to take action is your best protection and the first step in creating your family's disaster preparedness plan. By creating your plan before hurricane seasons arrives, you will have time to plan and consider alternatives to better prepare your family and your home.

Steps to Create Your Disaster Preparedness Plan

- Learn about the disaster plans at your workplace, your children's schools or daycares, and other places where you or your family spend time.
- Discuss with your family why you need to prepare for a storm and its dangers and pick a place to meet outside of your neighborhood if you cannot return home. Make sure all family members know this location.
- Know and prepare for the special needs of yourself, infants, the elderly, the medically fragile, or individuals who are disabled and will be either staying with you, evacuating with you, or going with you to a shelter after the storm.
- Make a plan for your pets as most emergency shelters do not allow animals.
- Know how to turn off the electricity to your residence at the main breaker or switch in case of downed power lines.
- Keep your flood insurance policy current. Once a storm enters the gulf, it is too late as insurance companies will not write new policies during an impending hurricane. Homeowners insurance does not cover damage from flooding.
- To learn more about flood insurance contact the National Flood Insurance Program at www.floodsmart.gov or call 1-888-379-9531. You can also request information from your insurance agent.
- Prepare and maintain a disaster preparedness kit replacing items as necessary. Use our checklist as a guide.
- Practice your plan with family members and care givers.
- Pay attention to all National Weather Service watches and advisories, and to evacuation orders announced by local officials.

YOUR DISASTER PREPAREDNESS PLAN WILL HELP GUIDE YOU AND YOUR FAMILY'S RESPONSE AND ACTIONS DURING A HURRICANE, TROPICAL STORM, FLOOD, OR OTHER NATURAL DISASTER.



Clothing & Bedding

- ❑ Blankets or sleeping bags
- ❑ Sturdy shoes or work boots
- ❑ Clothing for wet and/or dirty conditions
- ❑ Rain gear – including umbrella, raincoat/poncho, and rain boots

Vehicle Supplies

- ❑ White distress flag
- ❑ Fully gassed vehicles
- ❑ Flashlight or camping lantern, extra batteries, and a roadmap
- ❑ Tire repair kit and spare tire in good condition, jumper cables, pump, and flares

Misc. Tools & Supplies

- ❑ Whistle
- ❑ Needles, thread
- ❑ Fuel for generator
- ❑ Mosquito repellent
- ❑ Telephone with a cord
- ❑ Cash or traveler's checks
- ❑ Plastic garbage bags, ties
- ❑ Cell phone with charger or extra battery
- ❑ Battery-powered radio and extra batteries
- ❑ Books, games, paper, pencils, crayons for kids
- ❑ Sunscreen and shade items (umbrella, wide-brimmed hat)

FACT:

Only four Category 5 hurricanes have struck the U.S. in recorded history:

- 1935 Labor Day Hurricane (Florida Keys landfall)
- 1969 Hurricane Camille (Mississippi landfall)
- 1992 Hurricane Andrew (South Florida landfall)
- 2018 Hurricane Michael (Florida Panhandle landfall)

EMERGENCY FIRST RESPONDERS WILL NOT RESPOND TO EMERGENCY CALLS DURING A STORM ONCE WIND SPEEDS REACH 40 MPH.



Special Considerations for Vulnerable Populations

The following are additional considerations for older individuals, those with disabilities or medically fragile, as well as those who may have these individuals in your families or homes.

- Talk with a family member or other trusted individual about being your hurricane helper. Also, consider your neighbors whom you know and trust. Often they are the closest and most available to you during an emergency. A hurricane helper is someone you can depend on to help you prepare for a storm, help you evacuate should an evacuation order be called, or help you after the storm should you lose power or other utilities.
- Consider this when choosing a helper:
 - Who can you count on in an emergency?
 - What are the different ways you have to communicate with each other?
 - Will your hurricane helper be with you during a storm?
 - Will you travel together if your zip code must be evacuated?
- Tell your Hurricane Helper where your Disaster Preparedness Kit is stored.
- Make sure your designated Hurricane Helper (one person) has a key to your home
- Include in your support network someone who is far enough away that they are unlikely to be affected by the same emergency.
- Practice your emergency plan with your Hurricane Helper and others in your support network. If applicable, show them how your special needs equipment works.
- Use our Emergency Contact Card to list important contact information. It is important to print and place the card by your telephone or keep it with you should cell service be disabled during the storm.



Cut out the emergency contact card below and keep it in your wallet or purse for safe keeping.

EMERGENCY CONTACT CARD	MY CONTACT INFO
Hurricane Helper:	Name:
Phone:	Address:
Trusted Neighbor:	Phone:
Phone:	Medical Needs:
Primary Care Physician:	
Phone:	

Are you a Hurricane Helper?

Below are tips for how best you can help seniors and individuals with disabilities and other medical conditions.

Assisting Individuals with Disabilities and Medical Conditions

- Follow instructions posted on special needs equipment.
- Ask if the person wants your help, and how you may best help them.
- If someone refuses your help, wait for first responders to arrive, unless it is a matter of life or death.
- Do not try to move someone unless you have training in the proper techniques.
- If a person is unconscious or unresponsive do not administer any liquids or food.
- Ask the person if areas of their body have reduced sensation and if they want you to check those areas for injuries.
- You may be asked to use latex-free gloves to reduce the spread of viral infection or to prevent an allergic reaction to latex.
- If providing sighted assistance, the first responder or caregiver should confirm that the service animal is not working and is off duty.
- Do not touch the person, their service animal, or equipment without their permission, unless it is a matter of life or death.
- If the person has a service animal, it is the animal owner's responsibility to assess whether it is safe for the animal to work through the emergency.
- To make this decision, the service animal owner will need information as to the nature of the hazards their animal is expected to face and any changes to the physical environment.

Assisting Individuals with Limited Mobility

- If possible, use latex-free gloves when providing personal care.
- Ensure that the person's wheelchair is transported with the person.
- Do not push or pull a person's wheelchair without their permission, unless it is a matter of life or death.
- If this is not possible, employ other evacuation techniques such as the use of the evacuation chair, shelter-in-place (if instructed to do so), or wheelchair lifts used by trained personnel.

Assisting Individuals with Non-visible Disabilities

- Repeat instructions (if needed).
- Allow the person to describe the help they need.
- Maintain eye contact when speaking to the person.
- If a person needs to take medication, ask if they need help (never offer medicine not prescribed by a physician).
- Find effective ways to communicate, such as drawn or written instructions, and landmarks instead of general terms such as "go left" or "turn right."



Assisting Individuals with Hearing Impairments

- Note that some people may be deaf-blind.
- Try to rephrase, rather than repeat yourself.
- Use gestures to help illustrate your meaning.
- If there is time, it may be helpful to write a message.
- Speak clearly and naturally. Do not shout or speak unnaturally slowly.
- Face the person, make eye contact when speaking to them as they may rely on lip reading and communicate in close proximity.
- Hearing aids amplify sounds and can create a physical shock to the user, so do not make loud noises.
- Get the person's attention using a visual cue or a gentle touch on their arm. Do not approach the person from behind.

Assisting Individuals with Visual Impairments

- Do not assume that the person cannot see you.
- Watch for obstacles that the person could walk into.
- Never grab a person with vision loss, unless it is a matter of life or death.
- Provide advance warning of upcoming stairs, major obstacles, or changes in direction.
- To guide a person, keep half a step ahead, offer them your arm, and walk at their pace.
- To communicate with someone who is deaf-blind, trace letters in their hand with your finger.
- Do not shout at a person who is blind or has reduced vision. Speak clearly and provide specific directions.
- If the person has a service animal on duty, ask them where you should walk to avoid distracting the animal. Do not separate the service animal from its owner.
- Avoid the term "over there;" describe positions such as, "to your right/left/straight ahead/behind you," or by using the clock face positions (i.e., the exit is at 12 o'clock).
- For people who are deaf-blind, draw an "X" on their back with your finger to let them know you can help them.

Assisting Seniors with Disabilities/ Special Needs

- Check on neighbors to find out if there are seniors who would need your help during an emergency.
- Always speak calmly and provide assurance that you are there to help. Avoid shouting or speaking unnaturally slowly.
- Let the person tell you how you can help.
- Know the location of emergency buttons (many seniors' buildings have emergency buttons located in bedrooms and washrooms).
- Follow instructions posted on special needs equipment and/or assistive devices.



High Rise Safety

Residents living in and individuals who work in high-rise buildings should make themselves aware of:

- Members of the Building Safety Committee.
- Location of emergency evacuation device(s).
- Building superintendent's name and phone number.
- The names of residents or employees responsible for evacuation drills and how often those drills are conducted.
- Locations of fire extinguishers, automated external defibrillator units, and oxygen tanks.

Your Emergency Plan

- Know your building's evacuation plan and escape routes.
- Advise your building superintendent of your requirements during an emergency.
- Know the location of emergency buttons in the building and exits that are wheelchair accessible (if applicable).
- If you will need help during an emergency, obtain large, printed signs from the building manager that you can place in your window/door, indicating that you need assistance.
- If applicable, request that an emergency evacuation chair be installed close to the stairwell on the floor where you work or live. If you cannot have an evacuation chair, have a backup plan for evacuating without one.

Assisting Individuals with Special Needs in High-Rise Building

- Offer to carry the person's emergency kit along with any special equipment.
- Check on neighbors and/or co-workers with special needs to find out if they need your help.
- Do not use elevators in the event of fire or smoke, or if the emergency is likely to lead to a power outage.
- Avoid trying to lift, support, or assist the movement of someone down stairways unless you are familiar with safe techniques.

For more information, including special instructions for seniors and individuals with disabilities, look for our Hurricane Guide Supplement for Seniors and Special Populations where you received this guide, or visit our website or scan the QR code below.

h-gac.com/hurricane-evacuation-planning



Regional County Offices of Homeland Security & Emergency Management

Austin County

ac-oem.com
979-865-6463

Brazoria County

brazoriacountytx.gov/departments/emergency-management
979-849-5711

Chambers County

chamberscountytx.gov/200/Emergency-Management
409-267-2445

Colorado County

co.colorado.tx.us/page/colorado.emergency
979-733-0184

Fort Bend County

fortbendcountytx.gov/homeland-security-emergency-management
281-342-3411

Galveston County

gcoem.org
281-309-5002

Harris County

readyharris.org
713-881-3100

Liberty County

co.liberty.tx.us/page/liberty.emergency
936-334-3219

Matagorda County

co.matagorda.tx.us/page/matagorda.emergency
979-323-0707

Montgomery County

ohsem-moco.hub.arcgis.com
936-523-3910

Walker County

co.walker.tx.us/department/index.php?structureid=17
936-435-8035

Waller County

co.waller.tx.us/page/OEM
979-826-7785

Wharton County

co.wharton.tx.us
979-532-1123

The STEAR Program

The STEAR, or State of Texas Emergency Assistance Registry, is a voluntary, free registry that provides local emergency planners and responders with additional information on the needs of their communities.

PARTICIPANTS MUST REGISTER FOR STEAR EACH YEAR!

Different communities use the registry in various ways. For more information on how your community will use information in the STEAR registry, contact your **local emergency management office**.

Who Should Register?

- People with disabilities
- People who are medically fragile
- People with access and functional needs such as:
 - Limited mobility
 - Communications barriers
- People who require additional medical assistance during an emergency event
- People who require transportation assistance
- People who require personal care assistance

How to Register?

- Phone: Dial 2-1-1 or use your video telephone relay option to contact 2-1-1 at 877-541-7905 (Texas Information Referral Network)
- Online: stear.tdem.texas.gov or scan the QR code below

Information to Provide

The following information is required to register:

- Name
- Address
- Phone number
- Primary language

You may also be asked to provide the following vital information for use by local emergency planners and responders:

- Pet information
- Caregiver information
- Communication barriers
- Emergency contact information
- Disability, functional, or medical needs
- Transportation assistance for home evacuation

REGISTERING FOR STEAR DOES NOT GUARANTEE THAT YOU WILL RECEIVE ASSISTANCE IN AN EMERGENCY.

Visit stear.tdem.texas.gov
or scan the QR code



Checklist for Your Pets

Put together a kit with these essential items that can be used if you evacuate with your pet or if you need to board your pet. Keep it ready to go in case you have to evacuate.

Documents

- ❑ Prescriptions for medications
- ❑ Photocopied veterinary records
 - Rabies certificate
 - Vaccinations
 - Medical summary
 - Most recent FeLV/FIV (cats) test result
 - Most recent heartworm (dogs) test result
- ❑ Recent photographs of each pet
- ❑ Waterproof container for documents
- ❑ Pet description(s) (name, breed, sex, color, weight)
- ❑ Bandages (a dog's paws could get cut on rough terrain)
- ❑ Important contact information for you (name, phone, address)
- ❑ Photocopied registration information (proof of ownership, adoption records)
- ❑ Microchip information including microchip number, and name and number of the microchip company
- ❑ Pet boarding instructions should you need to board your pet once you arrive at a shelter or other location
- ❑ Up-to-date ID tag with your phone number and the name/phone number of your veterinarian (a microchip is also recommended)

Service Animals

- ❑ Name of the animal's training center and qualifying number (for identification purposes)
- ❑ Copy of license (if required)
- ❑ Other:

Food, Water, and Medications

- ❑ Manual can opener
- ❑ Non-spill food and water dishes
- ❑ Feeding instructions for each animal
- ❑ 2-week supply of water for each animal
- ❑ 1-month supply of flea, tick, and heartworm preventative
- ❑ 2-week supply of any medications along with medication instructions
- ❑ 2-week supply of food for each animal stored in waterproof containers

Other Supplies

- ❑ Toys
- ❑ Litterbox and litter (cats)
- ❑ Leash, collar with ID, and harness
- ❑ Appropriate-sized pet carrier with bedding, blanket, or towel
- ❑ Cleaning supplies for accidents (paper towels, plastic bags, and disinfectant)
- ❑ Pet first aid book and first aid kit (Pet first aid books and kits can be purchased at a pet-supply store or ask your veterinarian)

For easy-to-fill-out Pet Boarding Instructions, you can provide to your veterinarian or boarder, visit:

h-gac.com/hurricane-evacuation-planning or scan the QR code



H-GAC Resources

- Together Against the Weather
togetheragainsttheweather.com
- Hurricane Evacuation Maps
h-gac.com/hurricane-evacuation-planning

Additional State and Federal Resources

- American Red Cross, Greater Houston Area Chapter
houstonredcross.org
713-526-8300
- Federal Emergency Management Agency, Region VI
fema.gov/region-6-contact-us
940-898-5399
- FloodSafety.com
floodsafety.com
- National Flood Insurance Program
floodsmart.gov
1-888-379-9531
- National Hurricane Center
nhc.noaa.gov
- National Weather Service - Houston/Galveston
srh.noaa.gov/hgx
- Texas Department of Insurance
tdi.state.tx.us
1-800-252-3439
- The Texas Department of Transportation
txdot.gov/travel/hurricane.htm
1-800-452-9292
- Texas Division of Emergency Management
txdps.state.tx.us/dem
- Texas Windstorm Insurance Association
twia.org

Local & Regional News Stations

Monitor local news reports to learn of weather and road conditions, school closures and to receive important instructions from emergency management officials.

Television Stations

- KHOU/CBS – Channel 11
khou.com
- KIAH/CW – Channel 39
cw39.com
- KPRC/NBC – Channel 2
click2houston.com
- KRIV/FOX – Channel 26
myfoxxhouston.com
- KTMD/Telemundo – Channel 47
elemundodallas.com/houston
- KTRK/ABC – Channel 13
abclocal.go.com/ktrk
- KXLN/Univision – Channel 45
univisionhouston.com

Radio Stations

- Houston: KUHF 88.7 FM, KTRH 740 AM
- Austin: KLBJ 590 AM
- Beaumont: KLVI 560 AM
- College Station: KAMU 90.9 FM, KAGC 1510 AM
- Dallas: KRLD 1080 AM
- Huntsville: KSAM 101.7 FM
- Lufkin/Nacogdoches: KYKS 105.1 FM, KRBA 1340 AM
- San Antonio: WOAI 1200 AM

