

2023 Hurricane Preparedness Guide

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 be your compass, empowering you to face the storm with confidence and resilience.



Together

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TogetherAgainstTheWeather.com



Houston-Galveston
Area Council

Hurricane Forecasting

Cone of Error

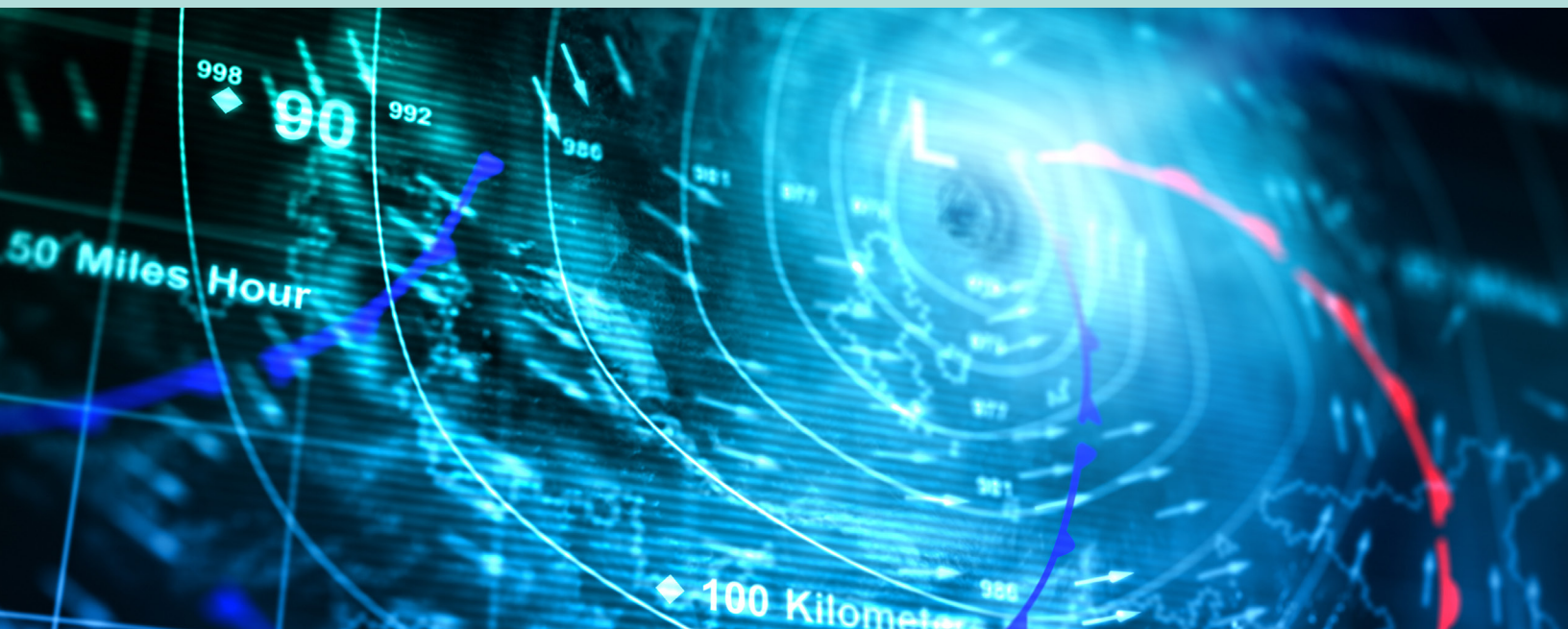
You may have heard meteorologists talk about a Cone of Error and show a cone-shaped graphic. The Cone of Error is a visual aid used to show the anticipated path of a storm three to five days into the future.

All locations within the Cone of Error are at risk and preparations for landfall should be made across the entire cone area. Most of the time, a storm will make landfall within the Cone of Error, and only one-third of the time a storm will 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 be prepared.

- **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 and take measures to secure your home and property.

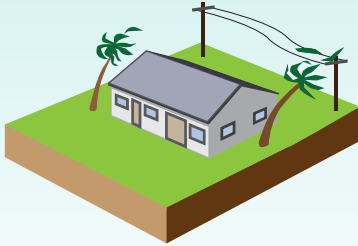
- **Hurricane Warning** – Hurricane conditions are expected within 36 hours. You and your family should be completing storm preparations and begin to shelter in place or move to a safer location.
- **Evacuation Order** – The decision to order evacuations is based on information provided by the National Weather Services 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. You should evacuate only when and if instructed.

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.

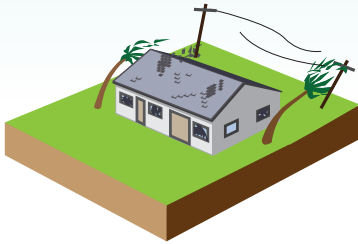
It is important to note that a hurricane's category does not determine or correlate with the height of storm surge, which is the gradual rise in sea level above the predicted tide caused by a tropical storm or hurricane, nor does a hurricane's category correlate with the amount of rain the storm can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



CATEGORY 1

Winds of 74 to 95 mph

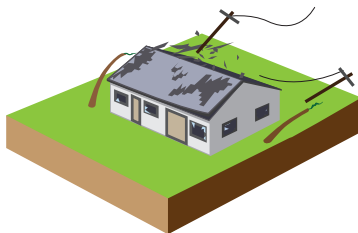
Damage to mobile homes and some homes of frame construction. Numerous trees down and widespread power outages. Roads blocked by downed trees and power lines. Loose outdoor items will become airborne hazards.



CATEGORY 2

Winds of 96 to 110 mph

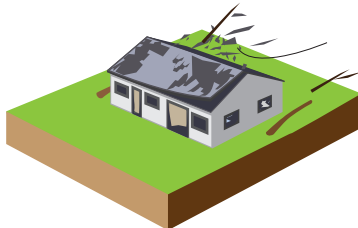
Severe damage to the majority of mobile homes and homes of frame construction. Many trees down. Well-constructed homes will have damage to shingles, siding, and gutters. Extensive damage to power lines and widespread power outages. Airborne debris could injure or kill, and damage could extend well inland.



CATEGORY 3

Winds of 111 to 129 mph

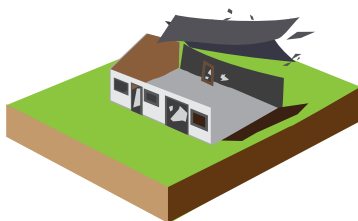
Nearly all mobile homes destroyed. Severe damage to most homes, including structural collapse. Airborne debris could injure or kill. Severe damage to most low-rise apartment buildings with partial roof and wall failures. Damage could extend well inland.



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.

You should only evacuate if you live in a storm surge evacuation zone AND are ordered to evacuate.

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

Photos:
Harris County Flood Control District
Houston Chronicle

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 Zip Zone

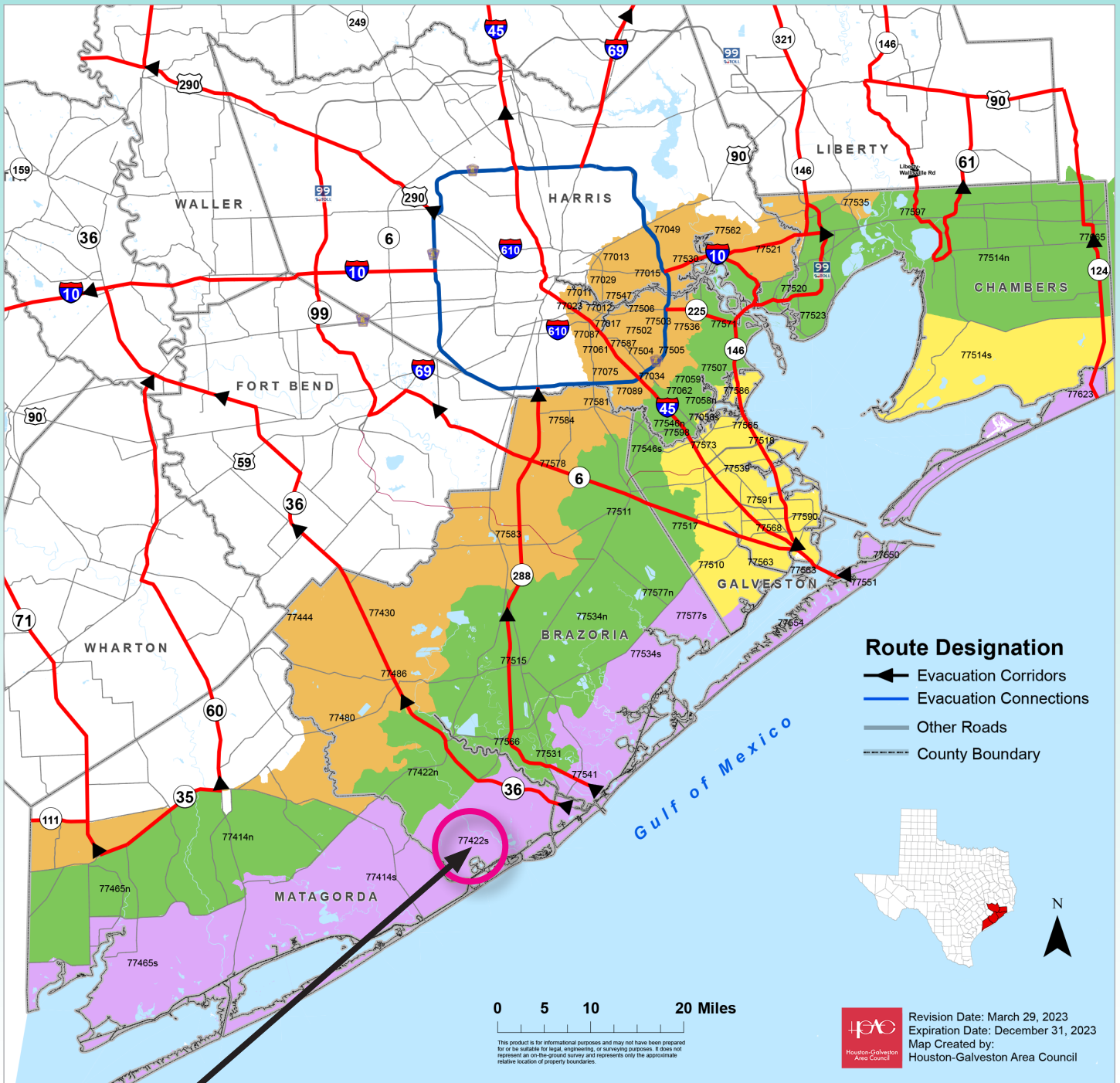
To understand your storm surge risk and determine if you live in an evacuation zone, locate your zip code on the chart the right.

In a zip 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.



2023 Hurricane Zip Zone Map



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	77422n	77465n	77507	77511	77514n	77515	77517	77520	77523	77531	77534n	77546n
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
77502	77503	77504	77505	77506	77521	77530	77535	77536	77547	77562	77578	77581	77583	77584	77587



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.

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. It is best to create a plan before hurricane season when you have time to plan and consider alternatives. If you wait until a hurricane arrives, you will be rushing to prepare your family as well as 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 ill, or other 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.

Disaster Preparedness Kit

Use the following checklists as a guide to help include items you, your family, and your pet may need as part of your Disaster Preparedness Kit.

PERSONAL/FAMILY CHECKLIST

Home or Property Recovery

- ❑ Utility knife
- ❑ Work gloves
- ❑ Duct tape (to secure coverings)
- ❑ Hammer and nails or construction stapler
- ❑ Fire extinguisher – small canister (ABC type)
- ❑ Plywood (pre-cut) to cover windows and doors
- ❑ Plastic sheeting/bags (to cover electronic devices)
- ❑ Pliers and/or wrench (to turn off gas and water, if needed)
- ❑ Flood Insurance – this is a separate policy as most homeowners insurance policies do not cover flood damage

Personal Health & Safety

- ❑ Important telephone numbers
- ❑ Eyeglasses and contact lens solution
- ❑ Inventory of valuable household items
- ❑ Prescription and over-the-counter medications
- ❑ Items for infants, such as formula, diapers, bottles, and pacifiers
- ❑ Hurricane evacuation/zip zone map and area map for shelter locations

- Antibacterial wipes, masks, moist towelettes, toilet paper, soap, and liquid detergent
- Important family documents in a waterproof, portable container; include items such as:
 - Birth, marriage, and death certificates
 - Wills, insurance policies, deeds, contracts
 - Homeowners and flood insurance policies
 - Passports, social security cards, immunization records
 - Bank and credit account numbers and contact information
- First aid kits for your home and cars with items recommended by the American Red Cross (first aid books and kits can be purchased by the American Red Cross)

Food & Water

- ❑ Camping stove
- ❑ Cooking tools/fuel
- ❑ Manual can opener
- ❑ Matches in a waterproof container
- ❑ Paper plates, plastic cups, and utensils
- ❑ Water – at least one gallon daily per person (and pet) for three to seven days – two quarts for drinking/two quarts for food preparation and cleaning
- ❑ Food – at least enough for three to seven days including non-perishable packaged or canned food (such as meat, soup, and fruit) and juices; special food for infants, the elderly, or those with food allergies or illness



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

- Emergency first responders will not respond to emergency calls during a storm once wind speeds reach 40 mph.



- 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

- ❑ 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

- ❑ 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)



Special Considerations for Vulnerable Populations

The following are additional considerations for older individuals, those with disabilities or critically ill, 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 as 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 LIST	MY CONTACT INFO
Hurricane Helper:	Name:
Phone:	Address:
Trusted Neighbor:	Phone:
Phone:	Medical Needs:
Primary Care Physician:	
Phone:	

Local County Offices of Homeland Security and Emergency Management:

Austin County

ac-oem.com
979-865-6463

Brazoria County

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

Chambers County

co.chambers.tx.us/page/emergency_mgt
409-267-2445

Colorado County

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

Fort Bend County

fortbendcountytx.gov/government/
departments/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

Waller County

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

Walker County

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

Wharton County

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

211 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. Different communities use the registry in various ways.

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 211 or use your video telephone relay option to contact 211 at 877-541-7905 (Texas Information Referral Network)
- Online: stear.tdem.texas.gov/login.aspx

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:

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

Available services will vary by community. Registering in the STEAR registry DOES NOT guarantee that you will receive a specific service during an emergency. For more information on how your community will use information in the STEAR registry, contact your local emergency management office.

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)



For 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)

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
39online.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