HURRICANE SURVIVAL GUIDE





45TH SPACE WING
READINESS AND EMERGENCY
MANAGEMENT FLIGHT
PATRICK AFB, FLORIDA
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This guide is designed to assist military and civilian personnel and their families to be prepared in the event of hurricane strike. This guide is applicable to 45th Space Wing military and civilian employees and their families residing either on or off base to include all personnel assigned, attached, or associated to Patrick Air Force Base and Cape Canaveral Air Station. For additional information, contact the 45th Space Wing Readiness and Emergency Management Flight at 321-494-4224 or DSN 854-4224.

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45th Space Wing Readiness and Emergency Management Flight wishes to gratefully acknowledge content contributions from the Federal Emergency Management Agency (FEMA), The American Red Cross (ARC) and National Oceanic and Atmospheric Administration's National Weather Service, National Hurricane Center, and the Brevard County Emergency Management Office. Please visit their websites for more information.

HURRICANE BASICS

What is a Hurricane?

Hurricanes are tropical cyclones/storms that rotate counterclockwise with wind speeds in excess of 74 mph (64 kts). Most hurricanes form over warm seas near the equator. They are created when the sun heats the ocean surface, causing heated water vapor to rise, condense and form clouds. These clouds begin to spiral as the earth rotates. More air is pulled underneath and a large vortex is formed.

Each year, an average of 10 tropical storms develop over the Atlantic Ocean, Caribbean Sea, and the Gulf of Mexico. Many of these storms remain over the ocean and never impact the U.S. coastline. Six Atlantic hurricanes develop each year. Hurricanes cause severe damage as it moves towards populated coastal areas. Strong winds create storm surges, floods, rip tides, and even spawn tornadoes. As the hurricane moves forward, its right front quadrant is typically where the most devastation occurs. Over land, hurricanes lose their strength as the heated water that sustains it is no longer available to support it.

The official hurricane season for the Atlantic Basin is from 1 June to 30 November. The peak months of the season is mid-August to late October.

Tropical Cyclone Development Classifications.

Tropical Disturbance: A low-pressure center or tropical wave.

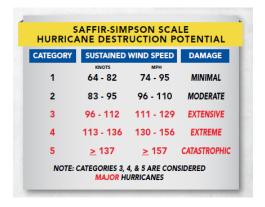
Tropical Depression: A low-pressure area that produces some rotary circulation on the ocean's surface with sustained winds of 38 mph (33 kts) or less. Numbered warnings begin.

Tropical Storm: A low-pressure area with a distinct rotary circulation and sustained winds of 39 to 73 mph (34 to 63 kts). Naming begins.

Hurricane: A low-pressure area with a pronounced rotary circulation and sustained winds of 74 mph (64 kts) or more.

Categorizing a Hurricane's Strength.

The Saffir-Simpson Hurricane Scale is used internationally to determine a hurricane's strength and predict the amount of damage it might cause. A Category 1 hurricane has the lowest wind speeds and minimal damage, while a Category 5 hurricane has the strongest wind speeds and catastrophic damage.



Brevard County Advisory Notices.

Tropical Storm Watch: Issued when wind speeds are 39 to 73 mph are possible within 48 hours.

Tropical Storm Warning: Issued when wind speeds are 39 to 73 mph are expected within 36 hours.

Hurricane Watch: Issued when wind speeds are 74 mph or higher and are possible within 48 hours.

Hurricane Warning: Issued when wind speeds are 74 mph or higher and are expected within 36 hours.

Hurricane Conditions (HURCONs).

A tool utilized by 45th Space Wing to ensure pre-disaster information and actions are disseminated and implemented throughout the installations. These conditions provide sufficient preparation time to safeguard personnel, aircraft, equipment, and facilities. HURCONs are based upon forecast on-set of destructive winds 58 mph (50 kts) or more at a specific time. The timeframes listed below are defined in AFMAN 10-2504, *Air Force Incident Management Guidance for Major Accidents and Natural Disasters*, and 45th Space Wing Installation Emergency Management Plan (IEMP) 10-2. The 45th Space Wing Command or designated representative declares HURCONs as appropriate. HURCONs descend from HURCON 5 to HURCON 1.

96 HRS	HURCON 5 Indicates sustained surface winds in excess of 50 knots (58 mph) could arrive within 96 hours.		
72 HRS	HURCON 4 Indicates sustained surface winds in excess of 50 knots (58 mph) could arrive within 72 hours.		
48 HRS	HURCON3 Indicates sustained surface winds in excess of 50 knots (58 mph) could arrive within 48 hours.		
24 HRS	HURCON 2 Indicates sustained surface winds in excess of 50 knots (58 mph) could arrive within 24 hours.		
12 HRS	HURCON 1 Indicates surface winds in excess of 50 knots (58 mph) could arrive within 12 hours.		
Caution: HURCON Emergen occurring	HURCON 1C Caution: Winds of 35-49 knots (40-57 mph) sustained are occurring. HURCON 1E Emergency: Winds of 50 knots (58 mph) sustained and/or gusts of 60 knots (69 mph) or greater are occurring and other dangerous condition associated with the storm are present. All outside activity is strictly prohibited.		
HURCON 1R Indicates life-threatening storm hazards have passed but damage may persist and only emergency responders and damage assessment personnel are released to move about. In the 45 SW this requires a "Weather Safe" declaration (a joint decision with NASA-KC Director). Weather Safe (Hurcon 1R) can only be declared when winds in excess of 35 knots (40 mph) have subsided for a sustained period of two hours or more.			

HURCON	45 SW ACTIVITIES
HURCON 5 (96 hrs)	 Unit Commanders validate evacuation plans of affected personnel Base begins infrastructure & equipment prep Monitor storm tracks and finalize evacuation preparations Ensure vehicles fueled up and prepared
HURCON 4 (72 hrs)	 45 SW/CC sets evacuation radius, coordinates with Brevard County Conduct full HRT personnel and equipment prep Unit commanders begin release or all non-essential personnel & HRT members to make personal preparations
HURCON 3 (48 hrs)	 45 SW/CC publish evacuation order in coordination with Brevard County All non-essential personnel evacuate Unit Commanders begin release of essential personnel Ensure vehicles fueled up and prepared Base finishes infrastructure & equipment prep Prepare homes as appropriate Withdraw cash in case EFT systems crash Pack clothing and evacuation kit into vehicle
HURCON 2 (24 hrs)	 Ensure all non-essential/essential personnel evacuate HRT, Silver & Blue teams move to ride out locations 45 SW Liaison Officer to Brevard County Emergency Operations Center Silver & Blue teams maintain collateral comm with HRT & contact with 14 AF & HQ AFSPC
HURCON 1 (12 hrs)	Maintain contact with chain of command CE/SFS close and secure base

Recovery Conditions (RECONs).

A tool utilized by 45th Space Wing to ensure post-disaster recovery of the installations. RECONs are based on capabilities (not time based) and is directed at the discretion of the 45th Space Wing Command or designated representative as appropriate. RECON 1 is initiated when "weather safe" conditions have been declared. Unit Commanders assign personnel to RECONs. Ensure you know what RECON you're assigned to (as applicable). RECONs ascend from RECON 1 to RECON 4.

RECON	PERSONNEL ALLOWED ON BASE
RECON 1	<u>Critical Infrastructure:</u> Concentrates on securing installations/mission assets, safety assessment, and initial storm damage assessments. Only personnel allowed back to both bases will be personnel assigned to the Hurricane Recovery Team (HRT) & 45 SW Senior Leadership
RECON 2	Mission Essential: Concentrates on restoring facilities and services essential to the mission. Only personnel designated mission essential by their commander will be allowed back to base (e.g. Commanders, Facility Managers, & UCC personnel)
RECON 3	Non-Mission Essential: Concentrates on restoring functions and services that support the mission and people. All assigned military, civilians, and AAFES/DECA/CDC/Financial Institution etc. are allowed back to base
RECON 4	<u>Full Mission Capability:</u> Concentrates on base beautification, debris removal, and morale. Anyone with access to base will be permitted to return at this time.

Notifications and Instructions.

Instructions and notifications of HURCONs, RECONs, and evacuation orders will be provided over 45th Space Wing personnel through the following means:

- Base Giant Voice System
- AtHOC System
- Pyramid Notification System (telephone)
- Base Marquee
- Patrolling Security Forces Personnel
- AFPC Evacuation Hotline (1-800-435-9941)
- PAFB Evacuation Hotline (321-494-INFO)
- CCAFS Evacuation Hotline (1-800-470-7232)
- Social Media "45th Space Wing at Patrick Air Force Base" Facebook Page
- Hurricane Weather Updates (text 40404 and type "45SWAlert")
- Brevard County Emergency Operations Center (www.brevardfl.gov/emergencymanagement)

Hurricane Hazards.

The intensity of a hurricane is an indicator of the damage potential; however impacts are dependent upon when and where the storm trikes. The main hazards associated with tropical cyclones and hurricanes are the following:



- Storm Surge. Is water pushed toward the shore by the force of the winds swirling around the storm. The level of surge is determined by the slope of the continental shelf. A shallow coastal slope will allow a greater surge. Sea, Lake, and Overland Surges from Hurricanes (SLOSH) maps are computerized models operated by the National Weather Service (NWS) to estimate storm surge heights utilizing historical, hypothetical, or predicted hurricane data with an accuracy of within 20 percent. Refer to the SLOSH model to determine the potential maximum surge for your location. Visit the National Hurricane Center website: http://www.nhc.noaa.gov/HAW2/english/surge/slosh.shtml.
 - High Winds
 - Heavy Rain
 - Flooding
 - Tornadoes

For more information concerning hazards associated with hurricanes, please visit www.beready.af.mil/, and www.brevardfl.gov/EmergencyManagement/Preparedness.

HURRICANE PREPAREDNESS & RESPONSE

Prepare for known hazards in your local areas such as hurricanes and associated hazards as outlined throughout this guide. Disaster preparedness includes both being prepared as well as reducing potential damage though mitigation efforts. Preparedness can reduce fear and increase resiliency from the impacts of disaster. The most important thing you can do is be informed and prepared. Communities, families, and individuals should know what to do during an emergency situation. All 45th Space Wing personnel are required to review/validate/update Air Force Personnel Accountability and Assessment System (AFPAAS) annually and when changes occur. To update go to: https://afpaas.af.mil.

Hurricane Preparedness Steps:

- **1. Know Your Risks.** Determine your level risk in relations to associated hurricane hazards. Know your home's vulnerability to storm surge, flooding, and high winds. Review SLOSH maps, flood zones, and evacuation zones (e.g. A, B, C etc.). Visit www.EMBrevard.com for more information.
- Coastal Areas and Barrier Islands. All Atlantic and Gulf coastal areas are subject to hurricanes or tropical storms. Due to the limited number of evacuation routes, barrier islands are especially vulnerable to hurricanes. People on barrier islands and in vulnerable coastal areas may be ordered by local officials to evacuate well in advance of a hurricane landfall. If you are ordered to evacuate, do so immediately! PAFB and CCAFS are considered part of the Barrier Island chain.
- Inland Areas. Hurricanes affect inland areas with high winds, floods, and tornadoes. Listen carefully to local authorities to determine what threats you can expect and take the necessary precautions to protect yourself, your family, and your property. Personnel in mobile/manufactured homes are at risk. Evacuate if/when directed by local officials.
- **2. Have a Personal Plan of Action.** Your personal plan of action details who does what, where you go and what you take along. Practice drills will help prepare you in the event you need to implement your plan. Consider the following when developing your plan of action:
 - Determine how you'll receive emergency notifications.
 - Review local procedures (installation and county)
- Determine your destination if ordered to evacuate (to relative, friend, motel, hotel, or public shelter). **If you have pets, locate pet-friendly hotels/shelters**.
- Outline the quickest and safest routes needed to get to your destination on a map. Identify multiple routes. Avoid bridges and low-lying areas when traveling during a storm.
 - Review your insurance policies/coverage.
- Take photos and/or video footage of your property. Store this information with your important papers. Make copies of documents and photographs and leave them with someone you trust.
- Visually inspect your home and property. Make any repairs necessary. Secure loose outdoor items and bring indoors, if possible.

- Purchase plywood, rope, extra nails and tarps for protecting windows, doors, and personal property. Install storm shutters, if available.
 - Review and explain personal plan of actions to all household members.
 - Include pets and personnel with special needs in evacuation planning.
 - Contact a caregiver if in-home care is required.
 - Obtain cash in case electronic funds transfer (ETF) systems fail
 - Ensure vehicle(s) are in good operating condition and fill up tanks
 - Ensure to stock up on non-perishable food items/water to last for several days
- (MILITARY MEMBERS ONLY) Ensure government travel cards (GTC) are not expired.
- (MILITARY MEMBERS ONLY) Ensure your Family Care Plans are current and updated in case you are assigned to a team during hurricane season. See your First Sergeant.
 - Build an Emergency Supply Kit (e.g. At-Home Kit and Evacuation Kit)

To obtain a Family Care Plan Template, visit https://www.ready.gov/make-a-plan

3. Build a Disaster Supply Kit. A disaster supply kit is a collection of essential items your household may need in the event of an emergency. Assemble and review contents annually. Ensure to consider items needed for infants, pets, and special needs personnel. This consists of two kits: At-Home Kit in case you stay at home during the storm and Evacuation Kit in case you are ordered to evacuate. The items listed to the right are not all-inclusive.

Basic

Additional

- Water: one gallon of water per person, per day, for at least three days, for drinking and sanitation
- Food: at least a three-day supply of non-perishable food
- Battery-powered or hand crank radio, a weather radio, and extra batteries
- Flashlight and extra batteries
- First aid kit
- Moist towelettes, garbage bags, & plastic ties
- Feminine supplies and personal hygiene items
- Manual can opener for food
- Local maps
- Cell phone with chargers, inverter, or solar charger
- Cash
- Important family documents such as copies of insurance policies, identification, etc.

- Prescription medications and glasses
- Infant formula and diapers
- Pet food and extra water for your pet
- Shot records for pet(s)
- A carrier for each pet
- Sleeping bag or warm blanket for each person
- Complete change of clothing
- Matches in a waterproof container
- Mess kits, paper cups, plates, paper towels and plastic utensils
- Whistle to signal for help
- Wrench or pliers to turn off utilities
- Books, games, puzzles, or other activities for children
- Paper and pen/pencil

For more information, visit http://www.brevardfl.gov/EmergencyManagement/BuildAKit.

- **Storing Food.** Ideally, have enough non-perishable food and drink items on hand to sustain your family for up to two weeks. If the power goes out, eat the foods in the refrigerator first, before eating food in the freezer. Only open the refrigerator and freezer doors when needed. Eat non-perishable food items primarily after consuming perishable items.
- **Storing Water.** Ensure to have enough drinking water available to sustain each family member for up to two weeks (14 gallons per person) when possible. A hurricane causes severe flooding which enables local water supply contamination with various kinds of bacteria that may be life threatening to people and pets. Here are ways to ensure safe supply of water if remaining at-home for the storm:
 - o Fill bathtub(s) and sinks with water.
- o Fill clean plastic/glass containers with water. Store bottled water in a cool, dark area.
- O Vigorous boil water for one minute before consuming will kill any disease-causing microorganisms present in water after the storm.
- Generators. Depending on wattage, gas-operated generators can power lights, fans, and even run a refrigerator. Ensure generators are stored and operated in a well-ventilated area and run only when needed to conserve fuel. Connect devices **DIRECTLY** to the generator. **DO NOT** connect generator directly to your home's wiring nor store where fuel is near.
- **4.** Have a Place to Go. Ensure you identify and have a place to go whether you are weathering the storm at home or ordered to evacuate.
- Weathering the Storm at Home. If you do not live within the "evacuation area," **DO NOT** leave your home (unless you live in a mobile home). The following are recommended actions to implement as you prepare to stay home during the storm:
 - Secure all windows and doors with plywood or hurricane shutters
 - Keep updated on storm's status and HURCONs
 - Open home as refuge to friends/family whose homes may not be adequate protection or asked to evacuate
 - ➤ Remove all loose items from the yard
 - ➤ Keep flashlights/candles handy
 - ➤ Have Emergency Supply Kit at hand
 - Stay away from windows/any glasscovered openings during storm. Go to lowest floor of home and located a room that is structurally reinforced (e.g. bathroom or closet.

- ➤ If power goes out, turn off water heater, air conditioner and heater to reduce the chance of damage
- Unplug all electronic devices and do not use during the storm
- ➤ If flooding occurs, turn off all electricity at the main breaker box
- Ensure your care has a full tank of gas
- Withdraw money beforehand as ATMs may not be operational
- ➤ Stay indoors. Do not leave your house until it has been confirmed that it is safe to do so as the "calm eye" of the storm is deceptive
- Be alert for tornadoes

• Ordered to Evacuate. Implement your evacuation plan. DO NOT wait or delay your departure once the evacuation order has been given. Plan for delays and give yourself plenty of time. Keep in mind traffic exiting the area will be heave/slow moving.

Identify a safe place ahead of time as your evacuation destination. Contact friends, family, hotels, and motels outside your immediate area to check on availability and policies on accepting pets. Make reservations ahead of time and before you leave if you're evacuating to a hotel or motel. Ensure you have enough fuel to get you to your destination and prepared for traffic delays.

• Brevard County Shelters. If you're unable to stay with friends or family and have no hotel or motel reservations, then go to the nearest shelter as a LAST RESORT. NEVER go to a shelter UNLESS local officials have announced

Actions to Take Prior to Evacuating

- ➤ Take Evacuation Kits
- > Gather important documents
 - o Insurance papers
 - o Medical records
 - o Driver's license
 - o Property photos
 - o Etc.
- Turn off water, gas, and electricity
- > Lock all windows and doors
- Call someone located at your evacuation destination to confirm reservations, check vacancy, or let them know you're on your way
- Call friends/family to inform them of your destination.
- ➤ 45th SW personnel, ensure to inform leadership and update AFPAAS of your destination
- > Stay away of flood waters

its opening. Shelter openings are announced through local television, radio stations, social media, and the Brevard County Emergency Management website:

http://www.brevardfl.gov/EmergencyManagement/HaveAPlan/Evacuation.

Remember, shelters are not designed for comfort and do not usually accept pets. You must ensure to bring your own evacuation supply kit.

• **Sheltering Pets.** Considerations should be made for pet owners. Make prior arrangements for sheltering pets during emergencies. Review information listed below. For more information on disaster preparedness for large animals or livestock, visit: http://www.brevardfl.gov/EmergencyManagement/HaveAPlan/Pets.

Pet-Friendly Hotels

Make a list of all potential hotels & include backup options in case you cannot care for pets. Pets should not be left behind unattended.

To find more information on hotels that will accept pets, visit the following:

- http://www.petswelcome.com
- http://www.dogfriendly.com
- http://www.bringfido.com

Pet-Friendly Shelters

Designed to accommodate household pets.

Owners are responsible for feeding, care, clean-up, and behavior of pets

Openings are incidentspecific. **NEVER** go to a shelter unless local officials have announced it is open. Bring Supply Kit.

Pet Disaster Supply Kit

- Rabies vaccination cert
- Shot records
- ➤ Leash/collar
- > County animal license tags
- Medications
- Crate/cage
- Pet food
- Cleaning supplies
- Newspaper/pet pad
- Comfort items

- Individuals with Special Needs. Brevard County Special Needs program is for residents with specific health/medical conditions needing assistance with sheltering in times of an emergency or evacuation. Residents who meet the criteria and have no alternative options should register with Brevard County Emergency Management and provide annual updates once registered. Applications are available through www.embrevard.com or by calling 321-637-6670. Transportation assistance to a shelter is free.
- Lacking Funds to Evacuate (MILITARY MEMBERS ONLY). 45th Comptroller Squadron (CPTS) provides emergency funds to military families if the proper actions for support are proven inadequate and the following criteria is met: evacuation order given and live in evacuation zone. Funds are issued based on case by case and are distributed typically in cash. You must file a travel voucher post-evacuation. All military members are expected to use their government travel card (GTC) before deferring to the finance office. Military members will be notified of finance hours, locations, and further instructions for funds assistance. You will not be reimbursed for evacuating if the 45 SW/CC has <u>not</u> issued an evacuation order and/or you do not live in an evacuation zone.
- **5. Stay Informed.** Seek information from various agency websites, hotlines, radio, TV, cell phone, or social media avenues throughout the storm (before, during, and after). For more information visit: http://www.brevardfl.gov/EmergencyManagement/StayInformed and "45th Space Wing at Patrick Air Force Base" Facebook page.

HURRICANE RECOVERY

Recovering from a hurricane, or any natural disaster, is usually a gradual process. Safety is a primary issue, as are mental and physical well-being. If assistance is available, knowing how to access it makes the process faster and less stressful. This section offers some general advice on steps to take after disaster strikes in order to begin getting your home, your community, and your life back to normal.

Aiding the Injured. Check for injuries. Do not attempt to move seriously injured persons unless they are in immediate danger of death or further injury. If you must move an unconscious person, first stabilize the neck and back, then call for help immediately. If the victim is not breathing, carefully position the victim for artificial respiration, clear the airway, and commence mouth-to-mouth resuscitation. Maintain body temperature with blankets. Be sure the victim does not become overheated. Never try to feed liquids to an unconscious person.

Health. Be aware of exhaustion. Don't try to do too much at once. Set priorities and pace yourself. Get enough rest. Drink plenty of clean water. Eat well. Wear sturdy work boots and gloves. Wash your hands thoroughly with soap and clean water often when working in debris.

Safety Issues. Be aware of new safety issues created by the disaster. Watch for washed out roads, contaminated buildings, contaminated water, gas leaks, broken glass, damaged electrical wiring, and slippery floors. Inform local authorities about health and safety issues, including chemical spills, downed power lines, washed out roads, smoldering insulation, and dead animals.

Returning Home. Please be patient when trying to get back to your home or business. You may not be able to return until safety hazards, such as debris and downed power lines, are cleared. If you live on a barrier island, you may need to wait until the bridges are inspected. When returning home, it is important to carry these key items:

- Residents Carry a valid ID with your current address
- Businesses Have a valid picture ID, and documents showing proof of ownership or rental, a County or City business tax receipt, and names of individuals authorized to be given access to your business on business letterhead

Avoid driving, especially through water. Turn around, don't drown! Roads may have debris which can puncture your tires.

Once Back Home. Once you arrive back home, walk around the outside first to survey damage. Enter your home with caution, and check for damage. Open the windows and doors to ventilate and dry your home. If your home has been flooded, have a licensed electrician complete an inspection. The following items are other things to check inside your home:

- If you smell gas or hear a hissing or blowing sound, open a window and leave immediately.
 - If appliances are wet, turn off the electricity at the main fuse box or circuit breaker.
 - If water or sewage pipes are damaged, turn off the main water valve.
- Throw out all food and other supplies that you suspect may have become contaminated or come into contact with floodwater.
- Clean up household chemical spills. Disinfect items that may have been contaminated by raw sewage, bacteria, or chemicals. Also clean any salvageable items.

Once you have made sure your home is safe, take pictures of the damages and call your insurance agent. Keep good records of all repair and cleaning costs.

Insurance Claims. File insurance claims for damages incurred as applicable.

RESOURCES/WEBSITES FOR INFORMATION

- ➤ Brevard County Emergency Management http://www.brevardfl.gov/emergencymanagement/home/ and www.embrevard.com
- ➤ Brevard County Special Needs Shelter Registration www.embrevard.com
- ➤ American Red Cross www.redcross.org
- Federal Disaster Planning www.ready.gov
- ➤ USAF Disaster Planning http://www.beready.af.mil/
- ➤ National Weather Service Melbourne www.srh.noaa.gov
- ➤ ASPCA www.aspca.org/pet-care/disaster-preparedness
- ➤ 45SW SharkBites SharePoint https://eis2.afspc.af.mil/sites/45sw/sharkbites/SitePages/Home.aspx
- ➤ 45SW Weather Support Hurricane Information Section http://www.patrick.af.mil/About-Us/Weather/