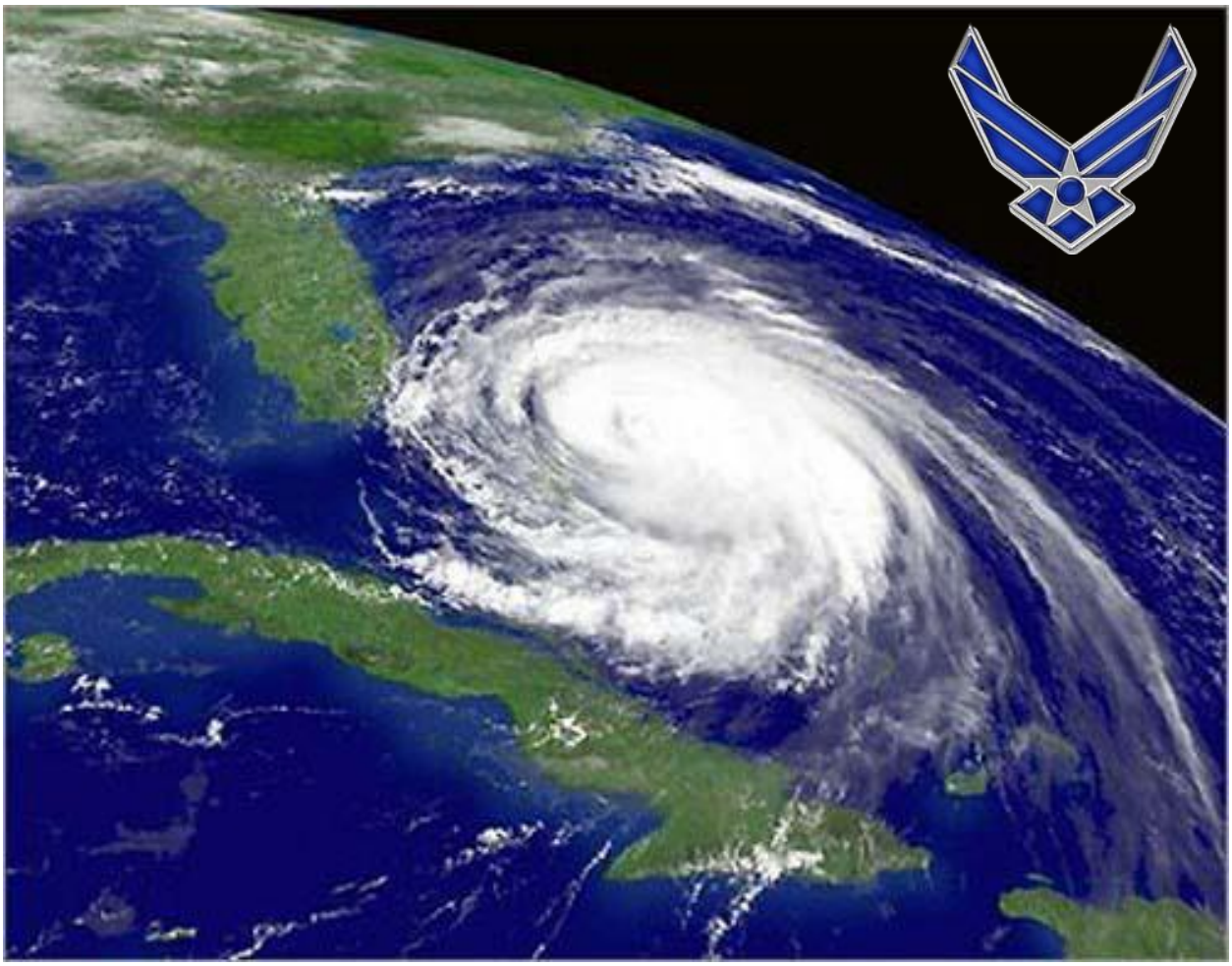
Hurricane Survival Guide

Your Pathway to Preparedness



45th Space Wing
Readiness and Emergency Management Flight
Patrick Air Force Base, Florida

2015 SEASON

This guide is designed to assist military and civilian personnel and their families to be prepared in the event a hurricane were to strike Patrick AFB. This guide is applicable to Patrick Air Force Base military and civilian employees and their families residing either on or off base and includes all personnel assigned, attached, or associated to Patrick AFB. 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 and National Hurricane Center. Please visit their websites for more information.

Chapter 1 - HURRICANE BASICS

The ingredients for a hurricane include a pre- existing weather disturbance, warm tropical oceans, moisture, and relatively light winds aloft. If the right conditions persist long enough, they can combine to produce the violent winds, incredible waves, torrential rains, and floods we associate with this phenomenon.

Each year, an average of ten tropical storms develops over the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico. Many of these remain over the ocean and never impact the U.S. coastline. Six of these storms become hurricanes each year.

In an average 3-year period, roughly five hurricanes strike the US coastline, killing approximately 50 to 100 people anywhere from Texas to Maine. Of these, two are typically **"major"** or **"intense"** hurricanes (a category 3 or higher storm on the Saffir-Simpson Hurricane Scale).

Hurricane Ivan, 2004

What is a Hurricane?

A hurricane is a type of tropical cyclone, which is a generic term for a low pressure system that generally forms in the tropics. The cyclone is accompanied by thunderstorms and, in the Northern Hemisphere, a counterclockwise circulation of winds near the earth's surface. Tropical cyclones are classified as follows:

Tropical Depression
An organized system of clouds and thunderstorms with a defined surface circulation and maximum sustained winds of 38 mph (33 knots) or less.

Tropical Storm
An organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 39-73 mph (34-63 knots).

Hurricane
An intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 74 mph (64 knots) or higher.

Saffir/Simpson Hurricane Scale [Simpson, R.H. (1974)].

Scale Number (Category)	Central Pressure (Millibars)	Central Pressure (Inches)	Winds (Mph)	Surge (Feet)	Damage
1	>979	>28.91	74-95	4 to 5	Minimal
2	965-979	28.50-28.91	96-110	6 to 8	Moderate
3	945-964	27.91-28.47	111-130	9 to 12	Extensive
4	920-944	27.17-27.88	131-155	13 to 18	Extreme
5	< 920	< 27.17	> 155	> 18	Catastrophic

Hurricanes are categorized according to the strength of their winds using the Saffir-Simpson Hurricane Scale. A Category 1 storm has the lowest wind speeds, while a Category 5 hurricane has the strongest. These are relative terms, because lower category storms can sometimes inflict greater damage than higher category storms, depending on where they strike and the particular hazards they bring. In fact, tropical storms can also produce significant damage and loss of life, mainly due to flooding.

Areas at Risk

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 asked by local officials to evacuate well in advance of a hurricane landfall. If you are asked to evacuate, do so immediately!

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.

Basic Hurricane Safety Actions

- Know if you live in an evacuation area.
- Know your home's vulnerability to **storm surge**, **flooding** and **wind**.
- Have a written plan.
- At the beginning of hurricane season (June 1st), check the supplies for your disaster supply kit, replace batteries and use food stocks on a rotating basis.
- During hurricane season, monitor the tropics.
- Monitor NOAA Weather Radio. It is an excellent / official source for real-time weather information and warnings.
- If a storm threatens, heed the advice from local authorities.
- **Evacuate if ordered**!
- Execute your family plan.

Watch vs. Warning

HURRICANE WATCH issued for your part of the coast indicates the possibility that you could experience hurricane conditions within 36 hours. This watch should trigger your family's disaster plan, and protective measures should be initiated, especially those actions that require extra time such as securing a boat, leaving a barrier island, etc.

HURRICANE WARNING issued for your part of the coast indicates that sustained winds of at least 74 mph are expected within 24 hours or less. Once this warning has been issued, your family should be in the process of completing protective actions and deciding the safest location to be during the storm.

Hurricane Conditions (HURCONs)

The prerequisite for any preparatory and survival situation is a positive means of relaying warning or disaster information. HURCONS is the tool Patrick AFB uses to ensure pre-disaster information is passed and are disseminated throughout the base. These conditions give sufficient preparation time to safeguard personnel, aircraft, equipment, and facilities. Expected arrival times shown are strictly estimates. Hurricanes are known for their erratic weather patterns and can change speed and course very quickly.

HURRICANE CONDITIONS (HURCONS)	
HURCON 5	General Hurricane Season, 1 June to 30 November.
HURCON 4	Destructive winds of 58 mph or greater are possible within 96 hours.
HURCON 3	Destructive winds of 58 mph or greater are possible within 72 hours.
HURCON 2	Destructive winds of 58 mph or greater are possible within 48 hours.
HURCON 1	Destructive winds of 58 mph or greater are possible within 24 hours.
HURCON 1E	Indicates surface winds in excess of 58 mph 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.
RECOVERY CONDITIONS (RECONS)	
RECON I	Only personnel allowed back to PAFB will be personnel assigned to the Hurricane Recovery Team (HRT) and the 45 SW Senior Leadership teams.
RECON II	Only personnel designated mission essential by their commander will be allowed back to PAFB. CCAFS badge holders will be allowed on CCAFS as recalled by unit commanders.
RECON III	This Condition concentrates on restoring functions and services that support the mission and people. Personnel allowed back to PAFB will be most assigned military, civilians, and many contractors (CAC holders only).
RECON IV	This condition concentrates on base beautification, debris removal, and morale functions. Anyone normally allowed access to PAFB will be permitted to return.

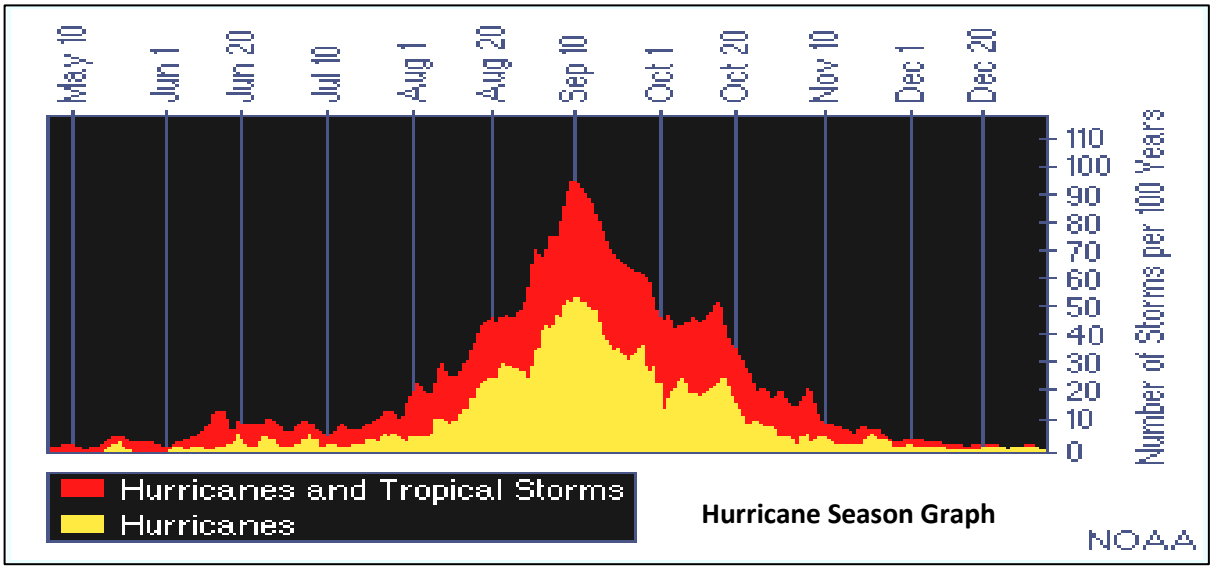
**Personnel will be assigned to RECONs by unit commanders entry access list will be kept by 45 Security Forces Squadron for verification.

Follow instructions given by proper authorities
These instructions will be given over the local radio and television stations. Police and emergency management officers will be patrolling off-base areas. People on base will be given instructions through the following means:

- Pyramid Notification System
- Global E-mail
- Commanders Channel (Channel 99)
- AtHoc Notification
- Special briefings
- Patrick Marquee
- Base Paper – Shark Pride
- AFPC Evacuation Hotline (1-800-435-9941)
- Patrolling Security Police vehicles
- Patrick Evacuation Hotline – (1-800-470-7232)
- CCAFS Evacuation Hotline – (1-800-861-7900)

Hurricane Season

The official hurricane season for the Atlantic Basin (the Atlantic Ocean, the Caribbean Sea, and the Gulf of Mexico) is from 1 June to 30 November. As seen in the graph to the right. **The peak of the season is mid-August through late October**. However, deadly hurricanes can occur anytime in the hurricane season.



Hurricane Season Graph

Hurricane Hazards

The main hazards associated with tropical cyclones and especially hurricanes are storm surge, high winds, heavy rain, and flooding, as well as tornadoes. The intensity of a hurricane is an indicator of damage potential. However, impacts are a function of where and when the storm strikes.

Storm Surge

Storm surge is simply water that is pushed toward the shore by the force of the winds swirling around the storm. This advancing surge combines with the normal tides to create the hurricane storm tide, which can increase the mean water level 15 feet or more. In addition, wind driven waves are superimposed on the storm tide. This rise in water level can cause severe flooding in coastal areas, particularly when the storm tide coincides with the normal high tides.

The level of surge in a particular area is also determined by the slope of the continental shelf. A shallow slope off the coast will allow a greater surge to inundate coastal communities. Communities with a steeper continental shelf will not see as much surge inundation, although large breaking waves can still present major problems. Storm tides, waves, and currents in confined harbors severely damage ships, marinas, and privately owned boats.

In general, the more intense the storm, and the closer a community is to the right-front quadrant, the larger the area that must be evacuated. The problem is always the uncertainty about how intense the storm will be when it finally makes landfall. Emergency managers and local officials balance that uncertainty with the human and economic risks to their community. A rule of thumb for emergency managers is to plan for a storm one category higher than what is forecast. This is a reasonable precaution to minimize the loss of life from hurricanes.

Wave and current action associated with the tide also causes extensive damage. Water weighs approximately 1,700 pounds per cubic yard; extended pounding by frequent waves can demolish any structure not specifically designed to withstand such forces. The currents created by the tide combine with the action of the waves to severely erode beaches and coastal highways. Many buildings withstand hurricane force winds until their foundations, undermined by erosion, are weakened and fail.

One tool used to evaluate the threat from storm surge is the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model. SLOSH is a computerized model run by the National Weather Service to estimate storm surge heights resulting from historical, hypothetical, or predicted hurricanes. The model creates its estimates by assessing the pressure, size, forward speed, track, and wind data from a storm. Graphical output from the model displays color-coded storm surge heights for a particular area. The SLOSH model is generally accurate within 20 percent. The SLOSH model, therefore, is best used for defining the potential maximum surge for a location.

For more information on storm surge and the SLOSH model, visit the National Hurricane Center website: **http://www.nhc.noaa.gov/HAW2/english/surge/slosh.shtml**.

Storm Surge Safety Actions

- Minimize the distance you must travel to reach a safe location; the further you drive the higher the likelihood of encountering traffic congestion and other problems on the roadways.
- Select the nearest possible evacuation destination, preferably within your local area, and map out your route. Do not get on the road without a planned route, or a place to go.
- Choose the home of the closest friend or relative outside a designated evacuation zone and discuss your plan with them before hurricane season. You may also choose a hotel/motel outside of the vulnerable area.
- If neither of these options is available, consider the closest possible public shelter, preferably within your local area.
- Use the evacuation routes designated by authorities and, if possible, become familiar with your route by driving it before an evacuation order is issued.
- Contact your local emergency management office to register or get information regarding anyone in your household whom may require special assistance in order to evacuate.

- Prepare a separate pet plan; most public shelters do not accept pets.
- Prepare your home prior to leaving by boarding up doors and windows, securing or moving indoors all yard objects, and turning off all utilities.
- Before leaving, fill your car with gas and withdraw extra money from the ATM.
- Take all prescription medicines and special medical items, such as glasses and diapers.
- If your family evacuation plan includes an RV, boat or trailer, leave early. Do not wait until the evacuation order or exodus is well underway to start your trip.
- If you live in an evacuation zone and are ordered to evacuate by state or local officials, do so as quickly as possible. Do not wait or delay your departure, to do so will only increase your chances of being stuck in traffic, or even worse, not being able to get out at all.
- Expect traffic congestion and delays during evacuations. Expect and plan for significantly longer travel times than normal to reach your family's intended destination.
- Stay tuned to a local radio or television station and listen carefully for any advisories or specific instructions from local officials. Monitor your NOAA Weather Radio.

High Winds

Tropical storm-force winds are strong enough to be dangerous to those caught in them. For this reason, emergency managers plan on having their evacuations complete and their personnel sheltered before the onset of tropical storm-force winds, not hurricane force winds.

Hurricane force winds can easily destroy poorly constructed buildings and mobile homes. Debris such as signs, roofing material, and small items left outside become flying missiles in hurricanes. Extensive damage to trees, towers, water and underground utility lines (from uprooted trees), and fallen poles cause considerable disruption. The strongest winds usually occur in the right side of the eye wall of the hurricane. Wind speed usually decreases significantly within 12 hours after landfall. Nonetheless, winds can stay above hurricane strength well inland.

High Wind Safety Actions - *Before Hurricane Season*

- Protect all windows by installing commercial shutters or preparing 5/8 inch plywood panels.
- Reinforce all garage doors so that they are able to withstand high winds.
- If you do not live in an evacuation zone or a mobile home, designate an interior room with no windows or external doors as a “Safe Room”.
- Before hurricane season, prepare your property for high winds.
- Secure loose items such as lawn furniture, outdoor decorations or ornaments, trash cans, hanging plants, etc. to bring inside in the event of a storm. Making a list will help you remember anything that can be broken or picked up by strong winds.
- Keep trees and shrubbery trimmed.
- Remove any debris from your yard.
- Clear loose and clogged rain gutters and downspouts.
- Moor boat securely or move it to a designated safe place. Use rope or chain to secure boat to trailer. Use tie-downs to anchor trailer to the ground or house.

High Wind Safety Actions - *As a Hurricane Approaches*

Most mobile/manufactured homes are not built to withstand hurricane force winds. Residents of homes not meeting that level of safety should relocate to a nearby safer structure once local officials issue a hurricane evacuation order for their community.

- Once a hurricane warning is issued, install your window shutters or plywood panels. Secure or bring inside all lawn furniture and other outside objects that could become projectiles.
- Listen carefully for safety instructions from local officials, and go to your designated “Safe Room” when directed to do so.
- Monitor NOAA Weather Radio.
- Do not leave your “Safe Room” until directed to do so by local officials, even if it appears that the winds calmed. Remember that there is little to no wind in the eye of a hurricane.

○

Tornadoes

Hurricanes can also produce tornadoes that add to the storm's destructive power. Tornadoes are most likely to occur in the leading, right edge of the hurricane. However, they are also often found elsewhere embedded in the rain bands, well away from the center of the hurricane.

Some hurricanes seem to produce no tornadoes, while others develop multiple ones. Studies have shown that more than half of the land falling hurricanes produce at least one tornado; Hurricane Buelah (1967) spawned 141 according to one study. In general, tornadoes associated with hurricanes are less intense than those that occur in the Great Plains (see the Enhanced Fujita Scale below). Nonetheless, the effects of tornadoes, added to the larger area of hurricane-force winds, can produce substantial damage.

We have no way at present to predict exactly which storms will spawn tornadoes or where they will touch down. The new Doppler radar systems have greatly improved the forecaster's warning capability, but the technology usually provides lead times from only a few minutes up to about 30 minutes.

Tornado Facts

When associated with hurricanes, tornadoes are not usually accompanied by hail or a lot of lightning, clues that citizens in other parts of the country watch for. Tornado production can occur for days after landfall when the tropical cyclone remnants maintain an identifiable low pressure circulation. They can also develop at any time of the day or night during landfall. However, by 12 hours after landfall, tornadoes tend to occur mainly during daytime hours.

Enhanced Fujita Scale

Enhanced Fujita Rating	Enhanced Fujita 3-second gust Wind speed (mph)	Intensity Phrase	Damage
EF 0	65-85	Gale tornado	Light: Some chimney damage, broken tree branches, damaged sign boards.
EF 1	86-109	Moderate tornado	Moderate: Mobile homes moved or overturned, roofing stripped off houses, moving autos pushed off roads.
EF 2	110-137	Significant tornado	Considerable: Mobile homes demolished; roofs torn from frame houses; large trees snapped or uprooted.
EF 3	138-167	Severe tornado	Severe: Roofs and most outer walls torn off even well-built houses; trains overturned.
EF 4	168-199	Devastating tornado	Devastating: All houses leveled and some are blown some distance from their foundations; autos thrown through the air.
EF 5	over 200	Incredible tornado	Incredible: Houses picked up and carried considerable distance in pieces, automobiles fly through the air farther than 100 yards; pavement removed from highways.

Inland Flooding

Consider the following:

When it comes to hurricanes, wind speeds do not tell the whole story. Hurricanes produce storm surges, tornadoes, and often the most deadly of all inland flooding.

While storm surge is always a potential threat, more people have died from inland flooding from 1970 up to 2000. Intense rainfall is not directly related to the wind speed of tropical cyclones. In fact, some of the greatest rainfall amounts occur from weaker storms that drift slowly or stall over an area.

Inland flooding can be a major threat to communities hundreds of miles from the coast as intense rain falls from these huge tropical air masses.

Tropical Storm Fay (2008) produced extremely heavy rainfall and catastrophic floods throughout Florida and especially in Brevard County where at least one rain gauge read 27 inches. Official rainfall totals were 23 inches of rainfall at Patrick AFB and 24 inches at Cape Canaveral AFS.

At least 23% of U.S. tropical cyclone deaths occur to people who drown in, or attempting to abandon, their cars. 78% of children killed by tropical cyclones drowned in freshwater floods. So, the next time you hear hurricane -- think inland flooding!

What can you do?

- When you hear hurricane, think inland flooding.
- Determine whether you live in a potential flood zone.
- If advised to evacuate, do so immediately.
- Keep abreast of road conditions through the news media.
- Move to a safe area before access is cut off by flood water.
- Do not attempt to cross flowing water. As little as six inches of water may cause you to lose control of your vehicle.
- Develop a flood emergency action plan.
- Have flood insurance. Flood damage is not usually covered by homeowners insurance; do not make assumptions, check your policy.

The National Flood Insurance Program is a pre-disaster flood mitigation and insurance protection program. The National Flood Insurance Program makes federally backed flood insurance available to residents and business owners. To contact the National Flood Insurance Program call 1-888-CALL- FLOOD ext. 445, TDD# 1-800-427-5593.

Chapter 2 - HURRICANE PREPAREDNESS

Throughout this guide, information has been provided regarding actions that you can take based on specific hurricane hazards. The most important thing that you can do is to be informed and prepared. Disaster prevention includes both being prepared as well as reducing potential damage (mitigation).

Disaster Prevention should include:

- Developing a Family Plan
- Creating a Disaster Supply Kit
- Having a Place to Go
- Securing your Home
- Having a Pet Plan

One of the most important decisions you will have to make is "Should I Evacuate?"

If you are asked to evacuate, you should do so without delay. But unless you live in a coastal or low- lying area, an area that floods frequently, or in manufactured housing, it is unlikely that emergency managers will ask you to evacuate. That means that it is important for you and your family to **HAVE A PLAN** that makes you as safe as possible in your home.

Your unit Emergency Management (EM) representative can provide you with a copy of the 45 Space Wing Installation Emergency Management Plan 10-2. Appendix 6 to Annex B of this plan details hurricane operations for the installation. Downtown, your local emergency management office or local chapter of the American Red Cross should be able to provide you with details of this plan. This plan should include information on the safest evacuation routes, nearby shelters, advice on when schools would be closed and what conditions are necessary for recommended evacuation of certain areas.

Disaster prevention includes modifying your home to strengthen it against storms so that you can be as safe as possible. It also includes having the supplies on hand to weather the storm. The suggestions provided here are only guides. You should use common sense in your disaster prevention.

Family Disaster Plan

The threat of hurricanes requires that everyone be prepared to respond. Hurricanes can force you to evacuate your neighborhood or confine you to your home. What would you do if basic services, such as water, gas, electricity, or telephones were cut off? Local officials and relief workers will be on the scene after a disaster, but they cannot reach everyone right away. Families can and do cope with disaster by preparing in advance and working together as a team. Planning ahead is your best protection and your responsibility. A more in depth family disaster plan is located in attachment 2.

Have A Place To Go

Develop a family disaster plan before an actual storm threatens your area. If your family disaster plan includes evacuation to a safer location for any of reason, then it is important to consider the following points:

If ordered to evacuate, do not wait or delay your departure. Once an evacuation order is given, leave as soon as possible (if possible, in daylight). Follow the steps pre-identified in your family disaster plan. Even a slight delay in starting your evacuation will result in significantly longer travel times as traffic congestion worsens. Evacuation will probably take longer than expected. Give yourself plenty of time.

Select an evacuation destination that is nearest to your home, preferably in the same county, or at least minimize the distance over which you must travel in order to reach your intended shelter location. In choosing your destination, keep in mind that the hotels and other sheltering options in most inland metropolitan areas are likely to be filled very quickly in a large, multi-county hurricane evacuation event.

If you decide to evacuate to another county or region, be prepared to wait in traffic. The large number of people in this state who must evacuate during a hurricane will probably cause massive delays and major congestion along most designated evacuation routes; the larger the storm, the greater the probability of traffic jams and extended travel times. If possible, make arrangements to stay with the friend or relative who resides closest to your home and who will not have to evacuate. Discuss with your intended host the details of your family evacuation plan well before the beginning of the hurricane season.

If a hotel or motel is your final intended destination during an evacuation, make reservations before you leave. Most hotel and motels will fill quickly once evacuations begin. The longer you wait to make reservations, even if an official evacuation order has not been issued for your area or county, the less likely you are to find hotel/motel room vacancies, especially along interstate highways and in major metropolitan areas.

If you are unable to stay with friends or family and no hotels/motels rooms are available, then as a last resort go to a shelter. Remember, shelters are not designed for comfort and do not usually accept pets. Bring your disaster supply kit with you to the shelter. **Make sure that you fill up your car with gas, before you leave.**

Secure Your Home

There are things that you can do to make your home more secure and able to withstand stronger storms.

Retrofitting Your Home

The most important precaution you can take to reduce damage to your home and property is to protect the areas where wind can enter. According to recent wind technology research, it's important to strengthen the exterior of your house so wind and debris do not tear large openings in it. You can do this by protecting and reinforcing these five critical areas: ROOF, STRAPS, SHUTTERS, DOORS, and GARAGE DOORS.

A great time to start securing - or retrofitting - your house is when you are making other improvements. Remember, building codes reflect the lessons experts have learned from past catastrophes. Contact the local building code official to find out what requirements are necessary for your home improvement projects.

Roof Retrofitting

Gabled Roofs

Does your home have a gabled roof? If so, the end wall of your home takes a tremendous beating during a hurricane. If not properly braced, it can collapse, causing significant damage. However, *gable end walls* are easy to strengthen and deserve to be a high priority on your *retrofit* list.

Typically, gable end trusses are directly attached to the top of *gable end walls*. The bottom of the truss must be securely nailed to the top of the wall and braced to adjacent trusses. This prevents wind from pushing or pulling the gable end at its critical point, where the gable truss is connected along the gable wall. Without adequate bracing, the end wall may be destroyed during hurricane winds.

To secure your gable end wall, fasten eight-foot long braces to the bottom chord of the gable truss and the adjacent trusses with sixteen-penny (16d) nails. The braces should be perpendicular to the truss, spaced at a maximum of four feet on center. In addition, be sure to tie back the gable truss with at least one eight-foot long brace, along the ridge of the roof, to several of the interior trusses.

Shingles

Shingles are usually not designed to resist hurricane force winds. They come with integral locking tabs or factory-applied adhesives that on occasion do not adhere properly to the underlying shingle because of cold weather installation, uneven surfaces or any number of other reasons.

For increased wind resistance, have a qualified person inspect several shingle tabs to see if the adhesive has engaged. If not, use a quick-setting asphalt cement to bond them together.

To cement the shingle tabs to the underlying shingles, place two spots of quick-setting asphalt cement about the size of a quarter under each tab with a putty knife or caulking gun. Press the tab into the adhesive. Be sure to cement all the tabs throughout the roof, being careful not to bend them farther than necessary when applying the adhesive. Replace any damaged shingles immediately. Attach Roof Sheathing with Adhesive.

You can also improve the uplift resistance of the roof deck from the attic -- without removing the roof covering. This is how:

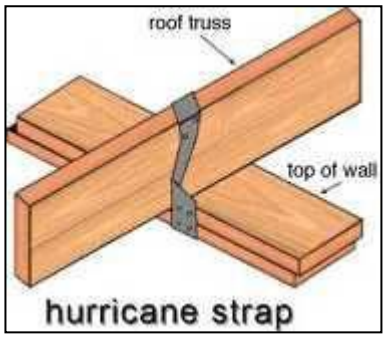
- Using a caulking gun, apply a 1/4 inch bead of wood adhesive along the intersection of the roof deck and the roof support element (rafter or truss chord) on both sides.
- At places where you have limited access, such as where the roof meets exterior walls, use quarter round pieces of wood approximately two to three feet long and apply the adhesive along the two adjacent sides of the block. The length of the quarter round pieces can be longer or shorter to suit your installation needs.
- Press the wood pieces in the intersection making sure the adhesive has made solid contact with the sheathing and roof support elements.

According to static pressure tests, using the wood adhesive can increase the wind uplift resistance of the plywood roof sheathing by as much as three times the conventional method of securing the sheathing with nails. It should be available at your local hardware and building supply stores. Please ask your local hardware expert if other products are available that could provide the same strength and properties as a wood adhesive.

Hurricane Straps

Roof to Top of Wall Connection

Metal hurricane straps or clips provide the proper measure of strength and safety for the roof-to-wall connection. The common practice of toenailing the trusses or rafters often is not sufficient to hold a roof in place in high winds. These clips or straps are usually very difficult to see from the attic because of insulation.



Areas where the roof framing meets the top of stud walls are normally covered by dry wall on the inside and by wall cladding and soffit board on the outside. To install *hurricane straps and clips*, remove the roof *sheathing* around the perimeter of the roof to reveal the top of the wall. You may also need to remove the soffit and exterior cladding to reveal the top 12 to 18 inches of the wall. In addition, if the exterior cladding is brick veneer, you may need to remove small sections of brick as needed.

If your roof has trusses, make sure you tie them to the wall by either anchoring to the top plate and then the top plate to the wall stud, or strapping the truss directly to the wall stud.

Shutters

One way to protect a home from damage in wind storms is to install *impact-resistant shutters* over all large windows and glass doors. Not only do they protect doors and windows from wind-borne objects, but they can reduce damage caused by sudden pressure changes when a window or door is broken. *Laminated window systems* (plastic bonded to glass) are another option, and are a particularly good choice for either building a new home or adding to an old one.

The easiest designs are those that simply cover the opening with a structural panel such as plywood. **In past hurricanes, many homeowners upon returning have noticed their temporary plywood shutters blown off because they were not adequately fastened.** If you have a wood-frame house, use adequate fasteners to attach the panels over the openings when a hurricane approaches. Have these temporary shutters stored and ready to use since building supply stores generally sell out of these materials quickly during a hurricane warning. If your home is made with concrete blocks, however, you will have to install anchoring devices well in advance.

Manufactured Shutters

If your residence has permanent shutters, evaluate their effectiveness. Manufacturers are responsible for testing their shutters up to the standards necessary to resist wind forces and wind-borne debris. Some shutters are very flexible, especially those that roll up.

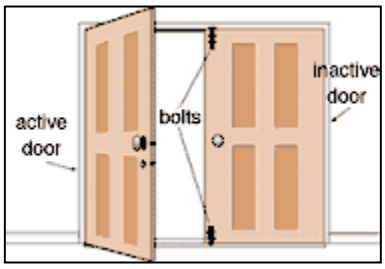
If struck by a rigid piece of debris, shutters may bend and break the window. To determine whether your shutter can resist this impact, gently lean against it and see if it yields. You can also inspect your shutters to see if they are properly attached to the house and will not fly off during a storm by inspecting the shutter connectors for

obvious excessive wear or missing connectors. Ask the shutter manufacturer for proper installation criteria.

Impact-Resistant Windows

Another way to protect your home from damage in windstorms is through the installation of impact- resistant windows and doors. Although these products look no different than standard windows and doors, they offer significantly more protection from wind-borne debris. In fact, these systems are capable of resisting impacts from large objects. For this reason, temporary shutters do not need to be installed before a storm strikes. In general, the frame and glazing work together to protect your home from both the elements and the significant internal pressure changes which lead to structural damage. While large wind-borne debris may crack the impact resistant glass during the course of the storm, the window is designed to retain its integrity and not break apart. Should either the frame or glass be damaged, it can be repaired at your convenience after the storm has passed.

Securing Entry Doors



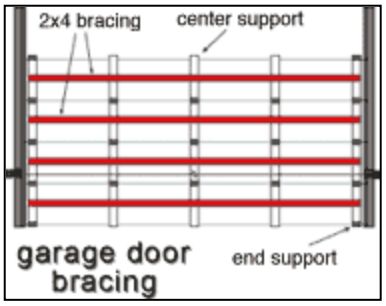
- Your home has either double or single entry doors. If they are solid wood or hollow metal they probably can resist wind pressures and hurricane debris. However, if you are not sure whether they are strong enough, take these precautions:
- Install head and foot bolts on the inactive door of double-entry doors.
- Make sure your doors have at least three hinges and a dead bolt security lock which has a minimum one inch bolt throw length.
- Since double entry doors fail when their surface bolts break at the header trim or threshold, check the connections at both places. Be sure the surface bolt extends into the door header and through the threshold into the subfloor.

Bracing Garage Doors

Because of their width, double-wide garage doors are more susceptible to wind damage than single doors. Unless you have a tested hurricane-resistant door, the wind may force it out of the roller track -- especially if the track is light weight or some of the anchor bolts are not in place. This occurs because the door deflects too much under excessive wind pressure and fails.

To secure your garage door:

- Check with your local government building official to see if there are code requirements for garage doors in your area.
- Check with your local building supplier or garage door retailer to see if a retrofit kit is available for your garage door.



You should probably reinforce your double-wide garage door at its weakest points. This involves installing horizontal and/or vertical bracing onto each panel, using wood or light gauge metal girds bolted to the door mullions. You may also need heavier hinges and stronger end and vertical support for your door.

If you decide to retrofit your garage door with a kit that allows you to operate the door after it is installed, make sure the door is balanced by lowering it about halfway and letting go. If the door goes up or down, the springs will need adjusting. ***Note**: Since the springs are dangerous, only a professional should adjust them.*

If you are unable to retrofit your garage door with a kit specifically designed for your door, you can purchase garage door retrofit kits to withstand hurricane winds at your local building supply store. Also, check to see if the supplier can do the installation.

Flood Insurance

The National Flood Insurance Program is a pre-disaster flood mitigation and insurance protection program designed to reduce the escalating cost of disasters. The National Flood Insurance Program makes federally backed flood insurance available to residents and business owners. Flood damage is not usually covered by homeowners insurance. Do not make assumptions, check your policy. National Flood Insurance Program call **1-888-CALL-FLOOD ext. 445**, **TDD# 1-800-427-5593**.

Chapter 3 – RESPONDING TO A HURRICANE

What to Do During a Hurricane WATCH

- Continue listening regularly to a NOAA Weather Radio or local radio or television stations for updated information. Hurricanes can change direction, intensity, and speed very suddenly.
- Fill your car's gas tank early. If advised to evacuate, you may have to travel long distances or be caught in traffic, idling for long periods of time. Gas stations along the route may be closed.
- Turn refrigerator and freezer to coldest setting. In the event of a power failure, open only when absolutely necessary and close quickly. Keeping the coldest air in will help perishables last longer.
- Turn off utilities if told to do so by authorities.
- Turn off propane tanks. Turning them off reduces the fire potential if they are damaged by the storm.
- Unplug small appliances to reduce potential damage.
- Review evacuation plan. Make sure your planned route is the same as the currently recommended route. Sometimes roads may be closed or blocked, requiring a different route.
- Stay away from floodwaters. If you come upon a flooded road, turn around and go another way.
- When you are caught on a flooded road and waters are rising rapidly around you, if you can do so safely, get out of your vehicle and climb to higher ground.

What to Do During a Hurricane WARNING

- Listen to a NOAA Weather Radio, or portable, battery-powered radio or television for updated information and official instructions. Hurricanes can change direction, intensity, and speed very suddenly.
- If officials announce a hurricane warning and ask you to evacuate; take your disaster supplies kit and go to a shelter or evacuation location.
- If you are not advised to evacuate, stay indoors, on the first floor away from windows, skylights and glass doors, even if they are covered. Stay on the floor least likely to be affected by strong winds and floodwaters. A small interior room without windows on the first floor is usually the safest place. Have as many walls between you and the outside winds as possible. Lie on the floor under a table or other sturdy object.
- Close all interior doors. Secure and brace external doors.
- Have a supply of flashlights and extra batteries handy. Avoid using open flames (candles and kerosene lamps) as a source of light.
- If power is lost, turn off major appliances to reduce the power “surge" when electricity is restored.
- If in a mobile home, check tie-downs and evacuate immediately.
- Be aware that the calm "eye" is deceptive; the storm is not over. The worst part of the storm will happen once the eye passes over and the wind blows from the opposite direction. Stay indoors.
- Be alert for tornadoes. Remain indoors on a lower level, in the center of your home, in a closet or bathroom without windows.

Evacuation

The 45 SW Commander and subordinate commanders will ensure that all personnel evacuate from Patrick AFB if they are in the forecast track of the storm. Wing personnel are encouraged to stay with friends, family members, or in hotels located outside the predicted flooding areas. Personnel are encouraged to use local county shelter. Once the storm has moved to within 24 hours of the forecast arrival of 58 mph knot (50 knots) winds the 45 SW Commander will direct the evacuation of base personnel, including housing.

Special Needs

The Brevard County Special Needs Program is a space-limited program for which people with specific health and medical conditions can register, providing sheltering and transportation with the resources available in Brevard County.

The Special Needs Registry is a confidential listing of those people who meet program criteria, and is updated on an annual basis. Patients with colonoscopies, nebulizers, oxygen, feeding tubes, or Alzheimer's disease are eligible for the registry.

Individuals who elect to use a Special Needs or other public shelter should bring with them items such as cots, bedding, medicine, medical supplies, and food supplies, preparing to be self-sufficient for 72 hours. Special Needs registrants should also be accompanied by at least one caregiver.

Most shelters are located in public schools, and offer neither privacy nor luxuries. Occupants' comfort will be determined by their preparedness. For more information, call (321) 637-6670 or visit:
http://www.brevardcounty.us/EmergencyManagement/Preparedness/Shelters

BREVARD COUNTY PRIMARY EVACUATION SHELTERS	
Office: (321) 637-6670 **Web Page: www.embrevard.com** **Information Line During Disasters Only: (321) 637-6674**	
PRIMARY EVACUATION SHELTERS	
A	PINEWOOD ELEMENTARY SCHOOL - 3654 Lionel Road, Mims
B	APOLLO ELEMENTARY SCHOOL - 3085 Knox McRae Drive, Titusville
C	IMPERIAL ESTATES ELEMENTARY SCHOOL - 5525 Kathy Drive, Titusville
D	BREVARD COMMUNITY COLLEGE - Cocoa Campus – 1519 Clearlake Road, Cocoa
E	ANDERSEN ELEMENTARY SCHOOL - 3011 South Fiske Boulevard, Rockledge
F	BREVARD COMMUNITY COLLEGE - Melbourne Campus – 3865 North Wickham Road, Melbourne
G	EAU GALLIE HIGH SCHOOL - 1400 Commodore Boulevard, Melbourne
H	MELBOURNE HIGH SCHOOL - 74 Bulldog Boulevard, Melbourne
I	CENTRAL MIDDLE SCHOOL - 2600 Wingate Boulevard, West Melbourne
J	RIVIERA ELEMENTARY SCHOOL - 351 Riviera Drive NE, Palm Bay
K	WESTSIDE ELEMENTARY SCHOOL - 2175 DeGroodt Road SW, Palm Bay
L	BAREFOOT BAY COMMUNITY CENTER - Bldg. A, Barefoot Boulevard (Not a Shelter – (See # 9)
EVACUATION AND SHELTER ROUTES	
1	Residents north of Garden St. to north County Line, evacuate west on SR 46, or shelter at Pinewood Elementary School.
2	Residents from Garden St. to SR 50, evacuate to I-95, or west on SR 50, or shelter at Apollo Elementary School.
3	Residents of North Merritt Island, Port St. John and South Titusville, evacuate west on SR 405 to SR 50, or shelter at Imperial Estates Elementary School on Kathy Dr. off Sisson Rd.
4	Merritt Island, Beachside, and mainland residents north of SR 520, evacuate west on SR 528 (Beeline), or shelter at Brevard Community College, Cocoa.
5	Residents north of Patrick AFB and Macaw Ln. on Merritt Island, evacuate west on SR 520, or shelter at Andersen Elementary School. Mainland residents use Barnes Blvd., Eyster Blvd., or Fiske Blvd. to evacuate to I-95, or shelter at Andersen Elementary School.
6	Residents south of Patrick AFB to north limits of Indian Harbor Beach and south of Macaw Ln. on Merritt Island, evacuate west on Pineda Cswy. To Wickham Rd. then north to I-95, or shelter at BCC, Melbourne. Mainland residents north of Aurora Rd to Barnes Blvd., evacuate to I-95, or shelter at BCC, Melbourne.
7	Residents from the north Indian Harbor Beach limits to the Indialantic north limits, evacuate west on SR 518 to I-95. Mainland residents from Aurora Rd. to US 192, evacuate west, or shelter at Eau Gallie High School, new wing.
8	Residents from the north limits of Indialantic to the south County Line, evacuate to and west on US 192, or take Shelter Route north on Babcock St. to Melbourne High School, unless directed south on Babcock St. to Palm Bay Rd. and west to Riviera Dr. then south to Reviera Elementary School. Mainland residents south of US 192 evacuate west on US 192 or report to Riviera Elementary School. Mainland south county residents needing shelter, proceed west on Micco Rd., Grant Rd., or Valkaria Rd., to S. Babcock St., then to Cogan Dr. or Eldron Blvd., west to San Filippo Dr., then south and west to DeGroodt Rd. to Westside Elementary School. Residents of West Melbourne, Melbourne Village and NW Palm Bay needing shelter proceed to Minton Rd. and Wingate Blvd. and shelter at Central Middle School.
9	Residents in the Barefoot Bay/South County area that do not have transportation, report to the Barefoot Bay Community Center for transportation to Westside Elementary School or other designated shelter.

Chapter 4 - Recovering from a Hurricane

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

General Tips
Returning home can be both physically and mentally challenging. Above all, use caution. 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. Keep a battery-powered radio with you so you can listen for emergency updates and news reports. Use a battery-powered flash light to inspect a damaged home.

Note: The flashlight should be turned on outside before entering - the battery may produce a spark that could ignite leaking gas, if present.

- Watch out for animals, especially poisonous snakes. Use a stick to poke through debris.
- Be wary of wildlife and other animals
- Use the phone only to report life-threatening emergencies.
- Stay off the streets. If you must go out, watch for fallen objects; downed electrical wires; and weakened walls, bridges, roads, and sidewalks.

Before You Enter Your Home
Walk carefully around the outside and check for loose power lines, gas leaks, and structural damage. If you have any doubts about safety, have your residence inspected by a qualified building inspector or structural engineer before entering.

Do not enter if:

- You smell gas.
- Floodwaters remain around the building.
- Your home was damaged by fire and the authorities have not declared it safe.

Going Inside Your Home

When you go inside your home, there are certain things you should and should not do. Enter the home carefully and check for damage. Be aware of loose boards and slippery floors. The following items are other things to check inside your home:

- **Natural gas.** If you smell gas or hear a hissing or blowing sound, open a window and leave immediately. Turn off the main gas valve from the outside, if you can. Call the gas company from a neighbor's residence. If you shut off the gas supply at the main valve, you will need a professional to turn it back on. Do not smoke or use oil, gas lanterns, candles, or torches for lighting inside a damaged home until you are sure there is no leaking gas or other flammable materials present.
- **Sparks, broken or frayed wires.** Check the electrical system unless you are wet, standing in water, or unsure of your safety. If possible, turn off the electricity at the main fuse box or circuit breaker. If the situation is unsafe, leave the building and call for help. Do not turn on the lights until you are sure they're safe to use. You may want to have an electrician inspect your wiring.
- **Roof, foundation, and chimney cracks.** If it looks like the building may collapse, leave immediately.
- **Appliances.** If appliances are wet, turn off the electricity at the main fuse box or circuit breaker. Then, unplug appliances and let them dry out. Have appliances checked by a professional before using them again. Also, have the electrical system checked by an electrician before turning the power back on.
- **Water and sewage systems.** If pipes are damaged, turn off the main water valve. Check with local authorities before using any water; the water could be contaminated. Pump out wells and have the water tested by authorities before drinking. Do not flush toilets until you know that sewage lines are intact.
- **Food and other supplies.** Throw out all food and other supplies that you suspect may have become contaminated or come in to contact with floodwater. If your basement has flooded, pump it out gradually (about one third of the water per day) to avoid damage. The walls may collapse and the floor may buckle if the basement is pumped out while the surrounding ground is still waterlogged.
- **Clean up household chemical spills.** Disinfect items that may have been contaminated by raw sewage, bacteria, or chemicals. Also clean salvageable items.
- **Call your insurance agent.** Take pictures of damages. Keep good records of repair and cleaning costs.

Tips for Filing an Insurance Claim

If possible, photograph the outside of the premises, showing the any damage or flooding. Also, photograph the inside of the premises, showing the damaged property and the height of the water if your property was flooded.

Call your insurance agent to report your claim. If you have separate flood insurance, also call your flood insurance agent to report your claim. Your flood insurance agent will prepare a Notice of Loss form and an adjuster will be assigned to assist you.

When the adjuster visits your property, let him or her know if you need an advance or partial payment of loss. Again, good records can assist your insurance companies and the NFIP in giving you an advance payment. Use your inventory to work with the adjuster in

presenting your claim.
Damaged property which presents a health hazard or which may hamper local clean-up operations should be disposed of. Be sure to adequately describe discarded items so that, when the adjuster examines your losses and your records, these article are included in the documentation.

Good records speed up settlement of your claim. Compile a room-by-room inventory of missing or damaged goods, and include manufacturer's names, dates and places of purchases, and prices. Try to locate receipts or proofs of purchase, especially for major appliances, and note manufacturers' names, serial numbers, prices, and dates of purchase.

Is Disaster Help Available if I Have Insurance?

Possibly If you have not already contacted your insurance agent to file a claim, please do this as soon as possible. Failure to file a claim with your insurance company may affect your eligibility for assistance. After filing a claim, if any of the following situations occur FEMA may be able to provide some assistance:

Your insurance settlement is delayed. Delayed means a decision on your insurance settlement has been delayed longer than 30-days from the time you filed the claim. If a decision on your insurance settlement has been delayed, you will need to write a letter to FEMA explaining the circumstance. You should include documentation from the insurance company proving that you filed the claim. If you filed your claim over the telephone, you should include the claim number; date when you applied, and the estimated time of how long it will take to receive your settlement. Any help awarded to you by FEMA would be considered an advance and must be repaid to FEMA once an insurance settlement is received.

Your insurance settlement is insufficient to meet your disaster-related needs. If you have received the maximum settlement from your insurance and still have an unmet disaster-related need, you will need to write a letter to FEMA indicating the unmet disaster-related need. You will also need to send in documentation from your insurance company for review.

You have exhausted the Additional Living Expenses (ALE) provided by your insurance company. If you have received the maximum settlement from your insurance for Additional Living Expenses (Loss of Use) and still need help with your disaster-related temporary housing need, write a letter to FEMA indicating why you continue to have a temporary housing need. You will also need to provide documentation to prove use of ALE from insurance, and a permanent housing plan.

You are unable to locate rental resources in your area. The FEMA Helpline has a list of rental resources in the disaster area. If no resources are available in your county, then the Helpline agent can provide you with resources in an adjacent county. You have up to twelve (12) months from the date you registered with FEMA to submit your insurance information for review. By law, we cannot provide money to individuals or households for losses that are covered by insurance.

Seeking Disaster Assistance

Throughout the recovery period, it is important to monitor local radio or television reports and other media sources for information about where to get emergency housing, food, first aid, clothing, and financial assistance. The following section provides general information about the kinds of assistance that may be available.

Direct Assistance
Direct assistance to individuals and families may come from any number of organizations, including:

- American Red Cross
- Salvation Army
- Other volunteer organizations

These organizations provide food, shelter, supplies and assist in clean-up efforts. Listen to local radio stations for the location of the nearest distribution point. Expect long lines at all of these locations as many folks will not have adequately prepared for the effects of the storm.

The Federal Role
In the most severe disasters, the federal government is also called in to help individuals and families with temporary housing, counseling (for post-disaster trauma), low-interest loans and grants, and other assistance. The federal government also has programs that help small businesses and farmers. Most federal assistance becomes available when the President of the United States declares a "Major Disaster" for the affected area at the request of a state governor. FEMA will provide information through the media and community outreach about federal assistance and how to apply.

Coping with Disaster

The emotional toll that disaster brings can sometimes be even more devastating than the financial strains of damage and loss of home, business, or personal property.

Understand Disaster Events

- Everyone who sees or experiences a disaster is affected by it in some way.
- It is normal to feel anxious about your own safety and that of your family and close friends.
- Profound sadness, grief, and anger are normal reactions to an abnormal event.
- Acknowledging your feelings helps you recover.
- Focusing on your strengths and abilities helps you heal.
- Accepting help from community programs and resources is healthy.
- Everyone has different needs and different ways of coping.
- It is common to want to strike back at people who have caused great pain.

Children and older adults are of special concern in the aftermath of disasters. Even individuals who experience a disaster "second hand" through exposure to extensive media coverage can be affected. Contact local faith-based organizations, voluntary agencies, or professional counselors for counseling. Additionally, FEMA and state and local governments of the affected area may provide crisis counseling assistance.

Recognize Signs of Disaster Related Stress
When adults have the following signs, they might need crisis counseling or stress management assistance:

- Difficulty communicating thoughts.
- Difficulty sleeping.
- Difficulty maintaining balance in their lives.
- Low threshold of frustration.
- Increased use of drugs/alcohol.
- Limited attention span.
- Poor work performance.
- Headaches/stomach problems.
- Tunnel vision/muffled hearing.
- Colds or flu-like symptoms.

- Disorientation or confusion.
- Difficulty concentrating.
- Reluctance to leave home.
- Depression, sadness.
- Feelings of hopelessness.
- Mood-swings and easy bouts of crying.
- Overwhelming guilt and self-doubt.
- Fear of crowds, strangers, or being alone.

Easing Disaster-Related Stress

The following are ways to ease disaster-related stress:

- Talk with someone about your feelings - anger, sorrow, and other emotions.
- Seek help from professional counselors who deal with post-disaster stress.
- Do not hold yourself responsible for the disastrous event or be frustrated because you feel you cannot help directly in the rescue work.
- Take steps to promote your own physical and emotional healing by healthy eating, rest, exercise, relaxation, and meditation.
- Maintain a normal family and daily routine, limiting demanding responsibilities on yourself and your family.
- Spend time with family and friends.
- Participate in memorials.
- Use existing support groups of family, friends, and religious institutions.
- Ensure you are ready for future events by restocking your disaster supplies kits and updating your family disaster plan. Doing these positive actions can be comforting.

Helping Children Cope with Disaster

Disasters can leave children feeling frightened, confused, and insecure. Whether a child has personally experienced trauma, has merely seen the event on television, or has heard it discussed by adults, it is important for parents and teachers to be informed and ready to help if reactions to stress begin to occur.

Children may respond to disaster by demonstrating fears, sadness, or behavioral problems. Younger children may return to earlier behavior patterns, such as bedwetting, sleep problems, and separation anxiety. Older children may also display anger, aggression, school problems, or withdrawal. Some children who have only indirect contact with the disaster but witness it on television may develop distress.

Who is at Risk?

For many children, reactions to disasters are brief and represent normal reactions to "abnormal events." A smaller number of children can be at risk for more enduring psychological distress as a function of three major risk factors:

- Direct exposure to the disaster, such as being evacuated, observing injuries or death of others, or experiencing injury along with fearing one's life is in danger.
- Loss/grief: This relates to the death or serious injury of family or friends.
- On-going stress from the secondary effects of disaster, such as temporarily living elsewhere, loss of friends and social networks, loss of personal property, parental unemployment, and costs incurred during recovery to return the family to pre-disaster life and living conditions.

What Creates Vulnerabilities in Children?

In most cases, depending on the risk factors above, distressing responses are temporary. In the absence of severe threat to life, injury, loss of loved ones, or secondary problems such as loss of home, moves, etc., symptoms usually diminish over time. For those that

were directly exposed to the disaster, reminders of the disaster such as high winds, smoke, cloudy skies, sirens, or other reminders of the disaster may cause upsetting feelings to return. Having a prior history of some type of traumatic event or severe stress may contribute to these feelings.

The way children cope with a disaster or emergencies is often tied to the way parents cope. They can detect adults' fears and sadness. Parents and adults can make disasters less traumatic for children by taking steps to manage their own feelings and plans for coping. Parents are almost always the best source of support for children in disasters. One way to establish a sense of control and to build confidence in children before a disaster is to engage and involve them in preparing a family disaster plan. After a disaster, children can contribute to a family recovery plan.

A Child's Reaction to Disaster by Age
Below are common reactions in children after a disaster or traumatic event.

Birth through 2 years
When children are pre-verbal and experience a trauma, they do not have the words to describe the event or their feelings. However, they can retain memories of particular sights, sounds, or smells. Infants may react to trauma by being irritable, crying more than usual, or wanting to be held and cuddled. The biggest influence on children of this age is how their parents cope. As children get older, their play may involve acting out elements of the traumatic event that occurred several years in the past and was seemingly forgotten.

Preschool 3 through 6 years
Preschool children often feel helpless and powerless in the face of an overwhelming event. Because of their age and small size, they lack the ability to protect themselves or others. As a result, they feel intense fear and insecurity about being separated from caregivers. Preschoolers cannot grasp the concept of permanent loss. They can see consequences as being reversible or permanent. In the weeks following a traumatic event, preschoolers' play activities may reenact the incident or the disaster over and over again.

School age 7 through 10 years
The school-age child has the ability to understand the permanence of loss. Some children become intensely preoccupied with the details of a traumatic event and want to talk about it continually. This preoccupation can interfere with the child's concentration at school and academic performance may decline. At school, children may hear inaccurate information from peers. They may display a wide range of reactions—sadness, generalized fear, or specific fears of the disaster happening again, guilt over action or inaction during the disaster, anger that the event was not prevented, or fantasies of playing rescuer.

Pre-adolescence to adolescence 11 through 18 years
As children grow older, they develop a more sophisticated understanding of the disaster event. Their responses are more similar to adults. Teenagers may become involved in dangerous, risk-taking behaviors, such as reckless driving, or alcohol or drug use. Others can become fearful of leaving home and avoid previous levels of activities. Much of adolescence is focused on moving out into the world. After a trauma, the view of the world can seem more dangerous and unsafe. A teenager may feel overwhelmed by intense emotions and yet feel unable to discuss them with others.

Meeting the Child's Emotional Needs
Children's reactions are influenced by the behavior, thoughts, and feelings of adults. Adults should encourage children and adolescents to share their thoughts and feelings about the incident. Clarify misunderstandings about risk and danger by listening to

children's concerns and answering questions. Maintain a sense of calm by validating children's concerns and perceptions and with discussion of concrete plans for safety.

Listen to what the child is saying. If a young child is asking questions about the event, answer them simply without the elaboration needed for an older child or adult. Some children are comforted by knowing more or less information than others; decide what level of information your particular child needs. If a child has difficulty expressing feelings, allow the child to draw a picture or tell a story of what happened. Try to understand what is causing anxieties and fears. Be aware that following a disaster, children are most afraid that:

- The event will happen again.
- Someone close to them will be killed or injured.
- They will be left alone or separated from the family.

Reassuring Children after a Disaster

Suggestions to help reassure children include the following:

- Personal contact is reassuring. Hug and touch your children.
- Calmly provide factual information about the recent disaster and current plans for insuring their safety along with recovery plans.
- Encourage your children to talk about their feelings.
- Spend extra time with your children such as at bedtime.
- Re-establish your daily routine for work, school, play, meals, and rest.
- Involve your children by giving them specific chores to help them feel they are helping to restore family and community life.
- Praise and recognize responsible behavior.
- Understand that your children will have a range of reactions to disasters.
- Encourage your children to help update your a family disaster plan.

If you have tried to create a reassuring environment by following the steps above, but your child continues to exhibit stress, if the reactions worsen over time, or if they cause interference with daily behavior at school, at home, or with other relationships, it may be appropriate to talk to a professional. You can get professional help from the child's primary care physician, a mental health provider specializing in children's needs, or a member of the clergy.

Monitor and Limit Your Family's Exposure to the Media

News coverage related to a disaster may elicit fear and confusion and arouse anxiety in children. This is particularly true for large-scale disasters or a terrorist event where significant property damage and loss of life has occurred. Particularly for younger children, repeated images of an event may cause them to believe the event is recurring over and over.

If parents allow children to watch television or use the Internet where images or news about the disaster are shown, parents should be with them to encourage communication and provide explanations. This may also include parent's monitoring and appropriately limiting their own exposure to anxiety-provoking information.

Use Support Networks

Parents help their children when they take steps to understand and manage their own feelings and ways of coping. They can do this by building and using social support systems of family, friends, community organizations and agencies, faith-based institutions, or other resources that work for that family. Parents can build their own unique social support systems so that in an emergency situation or when a disaster strikes, they can be supported and helped to manage their reactions. As a result, parents will be more available to their children and better able to support them. Parents are almost always the

best source of support for children in difficult times. But to support their children, parents need to attend to their own needs and have a plan for their own support.

Preparing for disaster helps everyone in the family accept the fact that disasters do happen, and provides an opportunity to identify and collect the resources needed to meet basic needs after disaster. Preparation helps; when people feel prepared, they cope better and so do children.

Helping Others

The compassion and generosity of the American people is never more evident than after a disaster. People want to help. Here are some general guidelines on helping others after a disaster:

- **Volunteer!** Check with local organizations or listen to local news reports for information about where volunteers are needed.
  Note: Until volunteers are specifically requested, stay away from disaster areas.
- **Bring your own food, water, and emergency supplies to a disaster area if you are needed there.** This is especially important in cases where a large area has been affected and emergency items are in short supply.
- **Give a check or money order to a recognized disaster relief organization.** These groups are organized to process checks, purchase what is needed, and get it to the people who need it most.
- **Do not drop off food, clothing, or any other item to a government agency or disaster relief organization unless a particular item has been requested.** Normally, these organizations do not have the resources to sort through the donated items.
- **Donate a quantity of a given item or class of items (such as nonperishable food) rather than a mix of different items.** Determine where your donation is going, how it's going to get there, which is going to unload it, and how it is going to be distributed. Without sufficient planning, much needed supplies will be left unused.

Chapter 5 - A VICTIM'S LEGAL GUIDE TO HURRICANE PREPAREDNESS

This information will greatly assist you in the claims process. Minimizing your property loss may depend on your ability to quickly and accurately file your claim.

Planning

It is imperative that significant preplanning occurs for hurricane season. Planning and being prepared for a hurricane are important factors that increase your chances of being fully compensated for your property loss. Securing important paperwork and legal documents, keeping both a written and photographic inventory and saving receipts for large purchases will make the claims process much easier.

First, prior to evacuating, you must ensure that you have your military ID cards, your dependents' ID cards and any other type of identification cards that you might need during evacuation, such as your driver's license, Tri-care cards, or credit cards.

You should also have a complete inventory of all of your household items. It is a good idea to have a photographic inventory of these items. You can keep these inventories in a three-ring binder or photo album and stored with other important documents for easy access. These inventories provide documentation and proof of ownership in the event you file a claim. For example, if you file a claim for a television or a stereo, which was destroyed during a hurricane, and no proof of purchase is available, a family Christmas picture with the television in the background is often sufficient proof of ownership.

Understanding the Military Claims Process

The Personnel Claims Act authorizes compensation for personal property damage or loss, to include food spoilage, which is caused by a hurricane.

A claim will be allowed only for the amount and quantity of personal property considered reasonable or useful under the attendant circumstances, incident to service or employment. Personal property includes tangible property that is owned by the claimants or their immediate family members. It also includes borrowed property if the claimant borrowed the property for his/her use or the use of his/her immediate family. Personal property includes, but is not limited to, household goods, unaccompanied baggage, privately owned vehicles and mobile homes.

The Personnel Claims Act applies to losses incurred at a member's home on base. Additionally, claims are paid for losses incurred in "quarters" and in "other authorized places."

"Quarters" include the following:

- Housing the government assigns or otherwise provides in kind to the claimant, including substandard housing and trailers.
- Privately owned mobile or manufactured homes parked on base in spaces the government provides.
- Transient housing accommodations, wherever located, such as hotels, motels, guesthouses, transient dormitories, or other lodgings the government furnishes or contracts for.
- Garages, carports, driveways, and parking lots assigned to quarters for the occupants of the quarters to use.
- In the immediate vicinity of quarters or in the area immediately, adjacent to quarters when used for storage of items not commonly stored in living areas. For example: boats, motorcycles, motorbikes, bicycles, lawn mowers, garden equipment, and outdoor furniture.

- Authorized places include:
  - Any place authorized or apparently authorized by the government to receive, hold, or store personal property, such as offices, warehouse, baggage holding areas, and hospitals.
  - Any area on a military installation designated for parking or storing vehicles.
  - A recreation area or any real estate the Air Force or any other DOD element uses or controls.

The Personnel Claims Act does not apply to a member's home off base. Personal insurance is necessary for protection. Keep in mind, the Government is not an insurer of property. Payments under the Personnel Claims Act are generally limited to the fair market value of items damaged or destroyed and, consequently, claimants will ordinarily be compensated only for the depreciated value of such items. If you really want to be protected against property loss, you need to have full replacement cost insurance.

Typically, the maximum amount payable by the Government for a claim is $40,000. However, if the claim arose from an emergency evacuation or from extraordinary circumstances, the amount settled and paid may exceed $40,000, but may not exceed $100,000. A claim allowed under this exception might be paid in money or in kind replacement. A settlement authority may make a partial payment in advance of final settlement when a claimant experiences personal hardship due to extensive property damage or loss.

When to File

You have two years from the date of incident to file your claim. The claim must be received in a claims office by the two-year date. A postmark within the two-year statute does not satisfy this requirement. Prompt filing of claims is highly recommended since it is much easier to verify your claim if you file quickly.

Who May File a Claim?

Proper claimants are:

- Active duty military personnel.
- Civilian employees of the Air Force who are paid from appropriated funds
- DOD school teachers and school administrative personnel who are provided logistic and administrative support by an Air Force installation commander.
- Air Force Reserve/Air National Guard personnel when performing active duty, full time National Guard duty, or inactive duty training.
- Retired or separated Air Force military personnel who suffer damage or loss resulting from the last storage or movement of personal property, or for claims accruing before retirement or separation.
- AFROTC cadets while on active duty for summer training.

False Claims

It is a crime to willfully make a false, fictitious, or fraudulent claim. Section 287 of title 18, United States Code, provides for a maximum fine of $10,000.00 or imprisonment for five years, or both.

Substantiation

The Personnel Claims Act requires substantiation of claims. Normally, this means the claimant must show both that a loss occurred and the value of that loss. Documentary evidence such as purchase receipts, prior appraisals, copies of canceled checks, credit card owner's manuals or photographs showing the type or value of the property damaged or lost should be included with your claim. Photographs of damaged items can also be submitted to show the extent of damage. The claims office may wish to inspect all items being claimed. Do not clean, repair or dispose of any items without approval from the claims office.

Information and Assistance to Claimants

Claims personnel are available to furnish advice as to the evidence required to justify your claim. The burden of gathering the documents and completing the claim forms is the responsibility of the claimant or his agent. If you have any questions, contact the Claims Office at 321-494-7357.

Attachment 1
Additional Information

Informational Resources
For more in-depth information, please contact your unit Emergency Management (EM) representative, 45 SW Office of Emergency Management (OEM), local National Weather Service office, or local American Red Cross chapter. Additional information, brochures, or materials about disaster safety can be obtained through the websites identified in Attachment 1.

Hurricane Information Links

National Hurricane Center Real-Time Forecasts

National Hurricane Center Tropical Prediction Center	http://www.nhc.noaa.gov/

Satellite Imagery

NOAA Geostationary Satellite Server	http://www.goes.noaa.gov/

FEMA, NWS, and other Disaster Organization Links

American Red Cross	http://www.redcross.org/
Federal Emergency Management Agency (FEMA)	http://www.fema.gov/
FEMA Emergency Management Institute	http://training.fema.gov/
National Weather Service (NWS)	http://www.nws.noaa.gov
Florida Department of Emergency Management	http://www.floridadisaster.org/
Brevard County Emergency Management	http://embrevard.com/

Local Emergency Relief Animal Shelters

All county Animal Shelters will be open, unless ordered evacuated, and will receive pets on an Emergency basis. Call the following numbers for information concerning pet sheltering during a disaster:

North Area Animal Center	Titusville	(321) 264-5119
Society for the Prevention of Cruelty to Animals	Titusville	(321) 267-8221
Central Brevard Humane Society	Cocoa	(321) 636-3343
Humane Society South Branch	Melbourne	(321) 253-6608

In the event that all shelters are full, the Melbourne Greyhound Park at 1100 N. Wickham Road Melbourne, has volunteered its facility as a Temporary Disaster Relief Shelter for Pets of people in the evacuation areas only.

It is very important to bring current rabies certificates, medications, and food.

PET FRIENDLY SHELTER PROGRAM
Call outreach offices at (321) 633-2024 or online at http://www.brevardanimalservices.com.

Attachment 2

Family Disaster Planning Guide

45th Space Wing

Office of Emergency Management

Patrick Air Force Base, Florida

About your Family Disaster Plan

There are many different kinds of disasters, such as fires, floods, airplane crashes, chemical spills, pipeline leaks and explosions, which seldom give warning and can be equally devastating to their victims. The planning you and your family do now will be of benefit for any type of disaster that can strike your community.

This guide is a plan template and is intended to provide you a simple format and possible suggestions about information you might want to include in your family disaster plan. It is not all inclusive and should be modified by the user to suit individual or family needs.

This plan can be filled in electronically or printed and filled in by hand. If filled in by hand, we recommend that you use a pencil for ease of making future corrections to information contained in the document.

At least once a year, have a meeting with your family to discuss and update your disaster plan with current and correct information. Determine what additional training, equipment, and supplies are needed.

Practice! Occasional drills can improve reaction time and help to avoid panic in an actual emergency.

Update and review plan	Last update	Next update

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45 SW Office of Emergency Management wishes to gratefully acknowledge content contributions from the Federal Emergency Management Agency (FEMA), The American Red Cross (ARC) and The Salvation Army.

Household Members

Household Members	Relation/Birth Date	Social Security Number

PETS

Pets	Pet License #	Vet name & phone

Household Information

Home Address: _____

Phone1: _____Phone2:_____

E-mail 1:_____

E-mail 2: _____

Car Information

Car 1: Make _____/ Model _____/ Year _____/ License # _____

Car 2: Make _____/ Model _____/ Year _____/ License # _____

Car 3: Make _____/ Model _____/ Year _____/ License # _____

Emergency Numbers

CALL 911 FOR EMERGENCY

Note: After a disaster, 911 may not be working. Use these numbers when able.

Fire	Phone	Address
Police	Phone	Address
Ambulance	Phone	Address
Poison Control Center	Phone	Address
Hospital Emergency Room	Phone	Address
Doctor #1	Phone	Address
Doctor #2	Phone	Address
Doctor #3	Phone	Address

Utility and Service Contacts

Water/Sewer	Phone	Address
Electric	Phone	Address
Gas	Phone	Address
Phone	Phone	Address
Cable	Phone	Address

Insurance

Policy	Name	Policy #	Phone
Health			
Auto			
Home			
Life			

Family/Friends/Neighbors

Note: Identify two neighbors. Agree to check on each other

Name: _____

Address/Location: _____

Home #: _____Work #:_____Cell #:_____

E-mail:_____

Name: _____

Address/Location: _____

Home #: _____Work #:_____Cell #:_____

E-mail:_____

Name: _____

Address/Location: _____

Home #: _____Work #:_____Cell #:_____

E-mail:_____

Name: _____

Address/Location: _____

Home #: _____Work #:_____Cell #:_____

E-mail:_____

Out-of-Area Contact

Name and telephone number of person outside your local area for family members to call to report their location and condition. Everyone should memorize this number! Also select an alternate contact just in case the primary contact cannot be reached.

Important: During disasters, use phone for emergencies only. Local phone lines may be tied up. Make one call out-of-area to report in. Let this person contact others.

Primary Contact Information

Name: _____

Home Address: _____

Home #: _____Work #:_____Cell #:_____

E-mail:_____

Alternate Contact Information

Name: _____

Home Address: _____

Home #: _____Work #:_____Cell #:_____

E-mail:_____

Work, School, and Other Contacts

Family members should know each other's disaster procedures for work, school, or other places where they spend time during the week.

Family Member: _____Work/School/Other: _____

Address: _____Phone #: _____

Disaster Procedures:_____

_____

Family Member: _____Work/School/Other: _____

Address: _____Phone #: _____

Disaster Procedures:_____

_____

Family Member: _____Work/School/Other: _____

Address: _____Phone #: _____

Disaster Procedures:_____

_____

Family Member: _____Work/School/Other: _____

Address: _____Phone #: _____

Disaster Procedures:_____

_____

In case of emergency, you should know if the school will keep your children until an authorized adult comes to get them. Determine what is required to release your child to your representatives if you cannot get there yourself. Ensure that the school knows your current contact information and those people authorized to collect your children.

Reunion Procedures

Establish two places where you and your family can meet following an emergency. One immediately outside of your home, e.g. a neighbor's mailbox, for use during a home emergency **AND** another site away from home in case you can't return.

In or Around House/Apartment	Inside House/Apartment
	Outside House/Apartment
When Family is Not Home	Priority Location (Leave note in a designated place such as inside mailbox where you will be: i.e., neighbor, relative, park, school, shelter, etc.)

Note: Reunion and evacuation procedures need to include children at school and house members with disabilities. Talk to school officials. Write down procedures.

Important Notes and Procedures

_____

_____

_____

_____

Note: People with disabilities are advised to identify two or three people at work, school, neighborhood, etc. who will assist them in the event of a disaster.

Medication List

User's Name	Medication Name	Dosage/Frequency	Reason for Taking
Doctor	Prescription #	Date Started/Ending	Location of Meds

User's Name	Medication Name	Dosage/Frequency	Reason for Taking
Doctor	Prescription #	Date Started/Ending	Location of Meds

User's Name	Medication Name	Dosage/Frequency	Reason for Taking
Doctor	Prescription #	Date Started/Ending	Location of Meds

User's Name	Medication Name	Dosage/Frequency	Reason for Taking
Doctor	Prescription #	Date Started/Ending	Location of Meds

User's Name	Medication Name	Dosage/Frequency	Reason for Taking
Doctor	Prescription #	Date Started/Ending	Location of Meds

Note: Keep at least seven days of vital medications and supplies on hand. Talk to doctor before storing medication or if you use two or more medications. Take them with you if you have to evacuate to a shelter, friend's house, or other family member's home.

Pharmacy/Doctors/Specialists

Pharmacist Name: _____Phone #: _____

Pharmacy Name: _____Address: _____

Pharmacist Name: _____Phone #: _____

Pharmacy Name: _____Address: _____

Doctor Name: _____Phone #: _____

Organization: _____Address: _____

Area of Concern: _____

Doctor Name: _____Phone #: _____

Organization: _____Address: _____

Area of Concern: _____

Specialist Name: _____Phone #: _____

Organization: _____Address: _____

Area of Concern: _____

Specialist Name: _____Phone #: _____

Organization: _____Address: _____

Area of Concern: _____

Specialist Name: _____Phone #: _____

Organization: _____Address: _____

Area of Concern: _____

Additional Medical Information

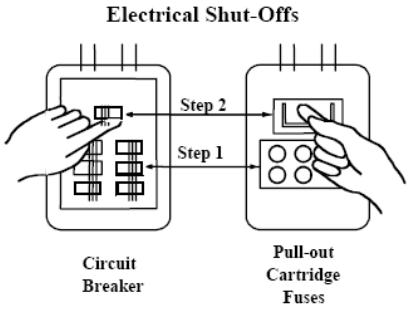
Allergies to Medications	
Person's Name:	Medication:
Person's Name:	Medication:
Person's Name:	Medication:
Person's Name:	Medication:
Person's Name:	Medication:
Health/Disability Information	
Person's Name:	Information:
Person's Name:	Information:
Person's Name:	Information:
Person's Name:	Information:
Person's Name:	Information:
Special Needs, Equipment, and Supplies	
Person's Name:	Information:
Person's Name:	Information:
Person's Name:	Information:
Person's Name:	Information:
Person's Name:	Information:

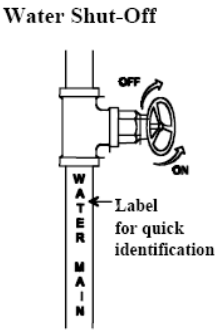
Note: Fill this and all sections out in pencil. Update regularly. If additional information is needed, tape or staple another sheet of paper.

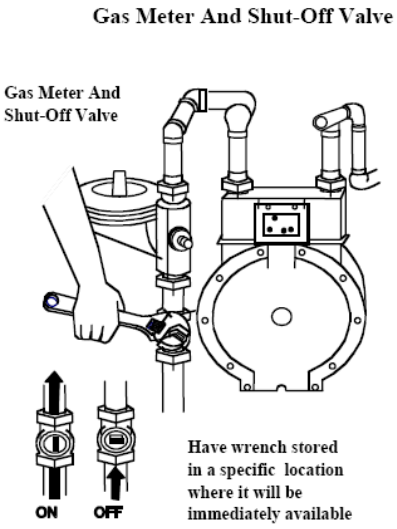
Home Layout/Diagram

Draw a floor plan of your home showing the location of exit doors and windows, utility shutoffs, first aid kit, and emergency supplies. Ensure EVERYONE in your household is familiar with it. Show it to babysitters and house guests when you're going away.

Utility Control







Locate each of these utility control points in your home.

Electricity: In the event that you need to turn off the electricity in your house, go to the breaker box and do the following:

1. Turn off smaller breakers one by one
2. Flip the “main” breaker to off last

To reenergize your home, reverse the steps above

Water: In the event you need to shut water off inside your home, find the main water valve and turn it to your right. To open the flow of water back into the house, turn it to your left.

Gas: IMPORTANT – Only turn off you gas at the meter if you smell gas!

To turn off natural gas in your house, take a wrench and tighten it on to the quarter turn valve that is on the pipe that feeds into the gas meter. Turn it one quarter turn to make the indicator parallel to the ground. In most locations, once you do this you cannot turn the gas back on to the house without the utility company.

Propane: If you live in an area that uses outdoor propane or LPG you will find this outside the home. Open the top of the tank and you will see either a regular turn knob or a quarter turn valve. Turn the knob to your right to shut off the flow of propane into your house. For quarter turn valve see above.

Practice Your Plan

Once you have developed your plan, you need to practice and maintain it. Practicing your plan will help your family instinctively take the appropriate actions during an actual emergency; even in the middle of the night. You should review your plan at least annually and make updates as necessary.

- **Quiz your kids every six months so they remember what to do, meeting places, phone numbers, and safety rules.**
- **Conduct fire and emergency evacuation drills at least twice a year.** Actually drive evacuation routes so each driver will know the way. Select alternate routes in case the main evacuation route is blocked during an actual disaster. Mark your evacuation routes on a map; keep the map in your disaster supplies kit. Remember to follow the advice of local officials during evacuation situations. They will direct you to the safest route, away from roads that may be blocked or put you in further danger.
- **Replace stored food and water every six months.** Replacing your food and water supplies will help ensure freshness.
- **Use the test button to test your smoke alarms once a month.** The test feature tests all electronic functions and is safer than testing with a controlled fire (matches, lighters, or cigarettes). If necessary, replace batteries immediately. Make sure children know what your smoke alarm sounds like.
- **If you have battery-powered smoke alarms, replace batteries at least once a year.** Some agencies recommend you replace batteries when the time changes from standard daylight savings each spring and again in the fall. "Change your clock, change your batteries," is a positive theme and has become a common phrase.
- **Replace your smoke alarms every 10 years.** Smoke alarms become less sensitive over time. Replacing them every 10 years is a joint recommendation by the National Fire Protection Association and the U.S. Consumer Products Safety Commission.
- **Look at your fire extinguisher to ensure it is properly charged.** Fire extinguishers will not work properly if they are not properly charged. Use the gauge or test button to check proper pressure. Follow manufacturer's instructions for replacement or recharging fire extinguishers. If the unit is low on pressure, damaged, or corroded, replace it or have it professionally serviced.

Preparing a Disaster Supplies Kit

You may need to survive on your own after a disaster. This means having your own food, water, and other supplies in sufficient quantity to last for at least three days. Local officials and relief workers will be on the scene after a disaster, but they cannot reach everyone immediately. You could get help in hours, or it might take days.

Basic services such as electricity, gas, water, sewage treatment, and telephones may be cut off for days, or even a week or longer. Or, you may have to evacuate at a moment's notice and take essentials with you. You probably will not have the opportunity to shop or search for the supplies you need.
A disaster supplies kit is a collection of basic items that members of a household may need in the event of a disaster.

Kit Locations
Since you do not know where you will be when an emergency occurs, prepare supplies for home, work, and vehicles.

Home	**Work**	**Car**
Your disaster supplies kit should contain essential food, water, and supplies for at least three days. Keep this kit in a designated place and have it ready in case you have to leave your home quickly. Make sure all family members know where the kit is kept. Additionally, you may want to consider having supplies for sheltering for up to two weeks.	This kit should be in one container, and ready to "grab and go" in case you are evacuated from your workplace. Make sure you have food and water in the kit. Also, be sure to have comfortable walking shoes at your workplace in case an evacuation requires walking long distances.	In case you are stranded, keep a kit of emergency supplies in your car. This kit should contain food, water, first aid supplies, flares, jumper cables, and seasonal supplies.

What should I put my family's disaster supplies kit in?

Disaster supplies kits can be large or small depending on how many persons you have to gather supplies for in your household. Your emergency supplies should be sufficient to sustain you, your family and pets for a ***minimum of 72 hours***. A two (2) week supply of medicines and prescription drugs is recommended**.** This may make a difference in what type of container you utilize for your kit. Next, remember that you may not be the one picking up or carrying the disaster supplies kit. Everyone should be able to get the kit and evacuate the home quickly. Some containers have wheels, some have straps and carrying handles to make evacuating quicker and easier.

Below are some options of types of containers to use for your disaster supplies kit. You may have something to use already or you may need to purchase them. Either way you will need something dedicated for your disaster supplies kit. Mark it clearly so that everyone is aware of the contents.

How long can food supplies be stored?

To judge how long you can store food supplies, look for an "expiration date" or "best if used by" date on the product. If you cannot find a date on the product, then the general recommendation is to store food products for six months and then replace them.

Some households find it helpful to pull food products for their regular meals from their disaster supplies kit and replace them immediately on an ongoing basis, so the food supplies are always fresh.

What kinds of food supplies are recommended to store in case of a disaster?

- Avoid foods that are high in fat and protein, and don't stock salty foods, since they will make you thirsty. Familiar foods can lift morale and give a feeling of security in time of stress. Also, canned foods won't require cooking, water or special preparation. Take into account your families unique needs and tastes. Try to include foods that they will enjoy that are high in calories and nutrition.
- Store supplies of non-perishable foods and water in a handy place. You need to have these items packed and ready in case there is no time to gather food from the kitchen when disaster strikes.
- Select foods that require no refrigeration, preparation or cooking, and little or no water. Foods that are compact and lightweight are easy to store and carry.
- Try to eat salt-free crackers, whole grain cereals and canned food with high liquid content.

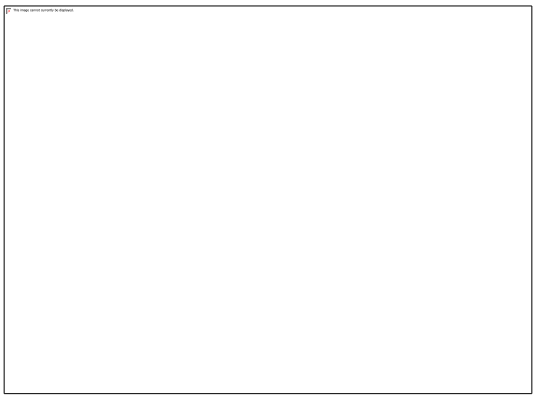
Recommended Foods

- Ready-to-eat canned meats, fruits and vegetables. (Be sure to include a manual can opener)
- Canned juices, milk and soup (if powdered, store extra water).
- High-energy foods, such as peanut butter, jelly, crackers, granola bars and trail mix.
- Comfort foods, such as hard candy, sweetened cereals, candy bars and cookies.
- Instant coffee, tea bags.
- Foods for infants, elderly persons or persons on special diets, if necessary.
- Compressed food bars. They store well, are lightweight, taste good and are nutritious.
- Trail mix. It is available as a prepackaged product or you can assemble it on your own.
- Dried foods. They can be nutritious and satisfying, but some have a high salt content, which promotes thirst. Read the label.
- Freeze-dried foods. They are tasty and lightweight, but will need water for reconstitution.
- Instant Meals. Cups of noodles or cups of soup are a good addition, although they need water for reconstitution.
- Snack-sized canned goods. Good because they generally have pull-top lids or twist-open keys.
- Prepackaged beverages. Those in foil packets and foil-lined boxes are suitable because they are tightly sealed and will keep for a long time

Foods to Avoid

- Commercially dehydrated foods. They can require a great deal of water for reconstitution and extra effort in preparation.
- Bottled foods. They are generally too heavy and bulky, and break easily.
- Meal-sized canned foods. They are usually bulky and heavy.
- Whole grains, beans, pasta. Preparation could be complicated under the circumstances of a disaster.

What is the basis for the Red Cross recommendation to store supplies to last several days to a week?



The American Red Cross recommendations to have food, water, and other emergency supplies on hand are not new, and are considered reasonable in case of any disaster. Our recommendations are to have supplies to last several days to a week. Most reasonable people would not consider such quantities of supplies as a "stockpile" or "hoarding."

Some families may choose to store supplies to last several weeks or more. Certainly, if they wish to do so, they may. It is always wise to have sufficient food and water supplies on hand in case access to such supplies may be disrupted by a disaster.

How Much Water do I Need?

You should store at least one gallon of water per person per day. A normally active person needs at least one-half gallon of water daily just for drinking.

Additionally, in determining adequate quantities, take the following into account:

- Individual needs vary, depending on age, physical condition, activity, diet, and climate.
- Children, nursing mothers, and ill people need more water.
- Very hot temperatures can double the amount of water needed.
- A medical emergency might require additional water.

How Should I Store Water?

To prepare safest and most reliable emergency supply of water, it is recommended you purchase commercially bottled water. Keep bottled water in its original container and do not open it until you need to use it. Observe the expiration or “use by” date.

If you are preparing your own containers of water

It is recommended you purchase food-grade water storage containers from surplus or camping supplies stores to use for water storage. Before filling with water, thoroughly clean the containers with dishwashing soap and water, and rinse completely so there is no residual soap. Follow directions below on filling the container with water.

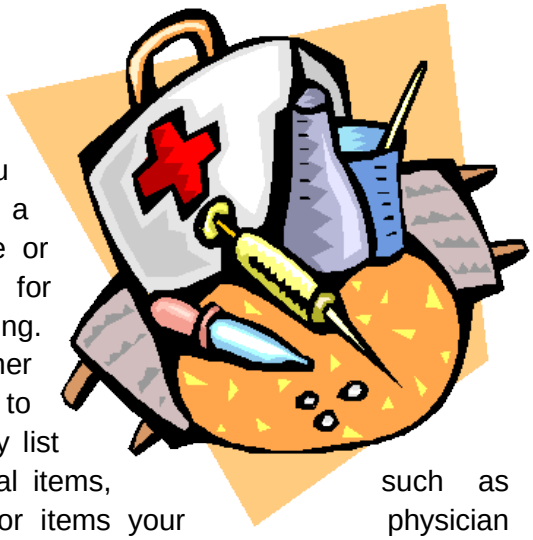
If you choose to use your own storage containers, choose two-liter plastic soft drink bottles – not plastic jugs or cardboard containers that have had milk or fruit juice in them. Milk protein and fruit sugars cannot be adequately removed from these containers and provide an environment for bacterial growth when water is stored in them. Cardboard containers also leak easily and are not designed for long-term storage of liquids. Also, do not use glass containers, because they can break and are heavy.

If storing water in plastic soda bottles, follow these steps
Thoroughly clean the bottles with dishwashing soap and water, and rinse completely so there is no residual soap. Sanitize the bottles by adding a solution of 1 teaspoon of non-scented liquid household chlorine bleach to a quart of water. Swish the sanitizing solution in the bottle so that it touches all surfaces. After sanitizing the bottle, thoroughly rinse out the sanitizing solution with clean water.

Filling water containers
Fill the bottle to the top with regular tap water. If the tap water has been commercially treated from a water utility with chlorine, you do not need to add anything else to the water to keep it clean. If the water you are using comes from a well or water source that is not treated with chlorine, add two drops of non-scented liquid household chlorine bleach to the water.Tightly close the container using the original cap. Be careful not to contaminate the cap by touching the inside of it with your finger. Place a date on the outside of the container so that you know when you filled it. Store in a cool, dark place.Replace the water every six months if not using commercially bottled water.

First Aid Supplies

Anatomy of a First Aid Kit



First Aid kits come in many shapes and sizes. You can purchase one from a drug store, or you can make your own kit. Kits are designed for a variety of locations including your home, office or automobile. They're also important to have for special activities such as hiking, camping or boating. Whether you buy a First Aid kit or put one together yourself, make sure it has all the items you need to be prepared for emergencies. See the inventory list below but also be sure to include any personal items, such as medications and emergency phone numbers, or items your physician may suggest. Check the kit regularly to make sure flashlight batteries work, out-of-date contents are replaced, and expiration dates are current. Remember, the contents of a first aid kit can be dangerous in the hands of young children, so store your first aid kit in a secure place.

First Aid Kit Suggestions

- First Aid Cream
- Triangular Bandage
- First Aid Tape
- Gauze Pads and Roller Gauze (assorted sizes)
- Antibacterial Ointment
- Hand Wipes
- Disposable Gloves
- Hand Sanitizer
- Rescue Breathing Barrier
- Pencil and Notepad
- Antiseptic Wipes
- Plastic Bags
- Band-Aids (assorted sizes)
- Safety Pins
- Blanket
- Scissors and Tweezers
- Cold Pack
- Small Flashlight and Extra Batteries
- Combined Sterile Dressings
- SOS Banner
- Gauze Pads and Roller Gauze (assorted sizes)
- Sting Relief Pads
- Conforming Bandages
- Syrup of Ipecac (use only if instructed by Poison Control Center)

Tools, Supplies, Clothing and Bedding

Supplies and Tools

- Mess kits, or paper cups, plates, and plastic utensils
- Emergency preparedness manual
- Battery-operated radio and extra batteries
- Flashlight and extra batteries
- Cash or traveler's checks, change
- Non-electric can opener, utility knife
- Fire extinguisher: small canister ABC type
- Tube tent
- Pliers
- Tape
- Compass
- Matches in a waterproof container
- Aluminum foil
- Plastic storage containers
- Signal flare
- Paper, pencil
- Needles, thread
- Medicine dropper
- Shut-off wrench to turn off household gas and water
- Whistle
- Plastic sheeting
- Map of the area (for locating shelters)

Sanitation

- Toilet paper, towelettes
- Soap, liquid detergent
- Feminine supplies
- Personal hygiene items
- Plastic garbage bags, ties (for personal sanitation uses)
- Plastic bucket with tight lid
- Disinfectant
- Household chlorine bleach

Clothing and Bedding

Include at least one complete change of clothing and footwear per person.

- Sturdy shoes or work boots
- Rain gear
- Blankets or sleeping bags
- Hat and gloves
- Thermal underwear
- Sunglasses

Special Items and Important Family Documents

Remember family members with special requirements.

For Baby

- Formula
- Diapers
- Bottles
- Powdered milk
- Medications

For Adults

- Heart and high blood pressure medication
- Insulin
- Prescription drugs
- Denture needs
- Contact lenses and supplies
- Extra eyeglasses
- Non-Prescription Drugs
- Aspirin or non-aspirin pain reliever
- Anti-diarrhea medication
- Antacid (for stomach upset)
- Syrup of Ipecac (use to induce vomiting if advised by the Poison Control Center)
- Laxative
- Activated charcoal (use if advised by the Poison Control Center)

Important Family Documents *(Store in a waterproof, portable container)*

- Will, insurance policies, contracts deeds, stocks and bonds
- Passports, social security cards, immunization records
- Bank account numbers
- Credit card account numbers and companies
- Inventory of valuable household goods, important telephone numbers
- Family records (birth, marriage, death certificates)
- Copy of Family Disaster Plan

Maintaining Your Disaster Supplies Kit

Just as important as putting your supplies together is maintaining them so they are safe to use when needed. Here are some tips to keep your supplies ready and in good condition:

- Keep canned foods in a dry place where the temperature is cool. Throw out any canned good that becomes swollen, dented, or corroded.
- Store boxed food in tightly closed plastic or metal containers to protect from pests and to extend its shelf life.
- Place new items at the back of the storage area and older ones in the front.
- Change stored food and water supplies every six months. Be sure to write the date you store it on all containers.
- Re-think your needs every year and update your kit as your family needs change.
- Keep items in airtight plastic bags and put your entire disaster supplies kit in one or two easy-to-carry containers, such as an unused trashcan, camping backpack, or duffel bag.

Pet Plan

Contact your veterinarian or local humane society for information on preparing your pets for an emergency.

Before The Disaster

- Make sure that your pets are current on their vaccinations. Pet shelters may require proof of vaccines.
- Have a current photograph
- Keep a collar with identification on your pet and have a leash on hand to control your pet.
- Have a properly-sized pet carrier for each animal - carriers should be large enough for the animal to stand and turn around.
- Plan your evacuation strategy and don't forget your pet! Specialized pet shelters, animal control shelters, veterinary clinics and friends and relatives out of harm's way are ALL potential refuges for your pet during a disaster.
- If you plan to shelter your pet - work it into your evacuation route planning.

During The Disaster

- Animals brought to a pet shelter are required to have: Proper identification collar and rabies tag, proper identification on all belongings, a carrier or cage, a leash, an ample supply of food, water and food bowls, any necessary medications, specific care instructions and news papers or trash bags for clean-up.
- Bring pets indoors well in advance of a storm.
- Pet shelters will be filled on first come, first served basis. Call ahead and determine availability.

After The Disaster

- Walk pets on a leash until they become re-oriented to their home - often familiar scents and landmarks may be altered and pets could easily be confused and become lost. Also, downed power lines, reptiles brought in with high water and debris can all pose a threat for animals after a disaster.
- If pets cannot be found after a disaster, contact the local animal control office to find out where lost animals can be recovered. Bring along a picture of your pet if possible.
- After a disaster, animals can become aggressive or defensive. Monitor their behavior.

Pet Disaster Supply Kit

- Proper identification including immunization records
- Ample supply of food and water
- A carrier or cage
- Medications
- Muzzle, collar and leash