

COASTAL ACTION STORM PLAN

Emergency Response

“CASPER”

**FAMILY DISASTER PREPARATION AND RECOVERY
PLAN**

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DISCLAIMER

The statements, recommendations, and procedures provided in this planning guide are those of the author and Safety Net Consulting, Incorporated. This guide does not necessarily reflect all the available options for emergency planning, or preventing property loss or personal injuries associated with natural or man-made disasters. The material presented in this document reflects multiple accredited sources and the accumulated best practices of those involved in emergency planning and disaster recovery.

Your timely planning is critical for a successful outcome. Many emergency agencies have found that few of those who live in coastal storm areas will have a plan and reasonably prepare before a potential disaster. Timely planning is critical to the safety of your family. Any person using this document must use reasonable common sense and prudent judgment to prevent personal injury and limit property loss. Your safety and that of your family should always be the prime objective. Your decisions and actions must be based on choosing the safest course of action for all those involved and carefully considering current and forecasted conditions. No guaranties, either expressed or implied can be included with this planning document.

Your Important Telephone Numbers

Preface

Today, most people believe that they will have sufficient time before a dangerous storm to prepare and that city, state, and federal agencies will shortly come to assistance following a storm. While available emergency planning does an inadequate job of preparing you and your family for dangerous weather (or man-made) events. Recent hurricanes have forced improvements at all levels (Federal, state, city) as residents have come to better realize what to expect and who would be there initially to assist in the recovery. We are all forced to do a better job. Hurricanes like Katrina, and Gustav have demonstrated the tragic results of a major hurricane impacting an inadequately prepared population who is relying on a flawed city and state plan to keep them from peril. Our planning falls upon us if we and our families are to have a reasonable safety margin. This hurricane preparation and recovery plan reflects that effort. This Coastal Action Storm Plan Emergency Response ("CASPER") has been compiled from multiple sources and combines the best information and opinions available to the editor at the time of printing. Some information is significantly different from previous plans, and may even differ from currently published hurricane plans.

Subject experts vary in opinions on some of the key elements enclosed in this plan, therefore the reader of this plan will have to use his or her best judgment in the preparation and construction of this plan. This plan is intended to address those shortfalls and give our coastal residents the basic information and tools needed to plan for, and recover from a major hurricane affecting your area.

Your planning must fit your family's particular and special needs (an elderly parent, special needs child, inadequate mobility, pets, etc.). Be aware that your time to prepare will compress as the storm approaches. More will have to be done with less time available as the danger of the situation increases. Supplies of food, water, and material will quickly be gone. Transportation problems will complicate both evacuation and your return to the area. The uncertainty of the storm's track and strength will fog your decision making as to whether to stay or go. All of these elements impacting you will have to be considered and sorted out. This planning document is designed specifically to help you address these problems.

Many emergency agencies estimate that only 10-15% of the residents living in the coastal areas affected by hurricanes have an emergency plan. Without a plan, a family could be caught in a "lose-lose" situation not having considered the major problems that nature could present. Too late to leave, but without sufficient preparations to stay, you could be stranded in a dangerous situation. This Coastal Area

Storm Plan Emergency Response (CASPER) is “bare bones” without lengthy explanations except when essential for a point. The CASPER is divided into three major sections; Long Term Planning and Preparation, Pre-Hurricane Warning Stage, and Post Storm Recovery. This plan contains buy lists to aid gathering the needed supplies.

If a major hurricane hit this community, it would be reasonable to expect significant property damage, threat to life, and a long recovery period of months, not days. Knowing that our family is prepared and out of harm’s way, we can accomplish our primary duties. If this plan covered all emergencies, it would be too bulky to be read or effective. But, many items in this plan can be used for different emergency situations. With this guide and with available resident resources and knowledge, your emergency family planning will give you a margin of safety. And most importantly, this guide will give you a peace of mind knowing that you have accomplished more than 85% of your neighbors. You will face the oncoming storm with options and knowledge.

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Long Term Considerations, Planning and Preparation

Some Key Planning Concepts

Hurricane Cautions

Hurricanes are NOT PREDICTABLE no matter what your local TV weatherman may tell you. Currently, the National Hurricane Center's super computers take about 6 hours to project an expected track and strength prediction for a hurricane. If one of the meteorological input readings is changed to the computer, the projected track and strength will change significantly. This means that if you base your critical decisions to stay, when to leave, or seek alternate shelter based on a storm's projected track and strength, you can be wrong, dead wrong 80% of the time! See the chart below.

Hurricane Storm Track Error Versus Time (2008 Figures)

(Before the onset of Tropical Force Winds 39+ mph)

48 hours	+/- 90 miles
72 hours	130 miles
96 hours	150 miles
120 hours	200 miles

(Source: National Hurricane Center 2008)

Because of the difficulty of accurately predicting a hurricane's track and strength, you might believe that the storm will miss your area. You may then find that the storm has changed course and will now probably hit your area. Without enough time to evacuate the area, your only options are to stay your home, try the evacuation route and hope not to get stranded en route, or to find better shelter. Making decisions is difficult while a tropical storm is developing 2,000 miles away, but that soon to be hurricane could be hitting you as a strong category 2+ in less than 5 days. The blue skies of today could be changed to ominous skies, tropical force winds and heavy rains producing local flooding in a day or two. You may have less than 24 hours to plan, prepare, and start evacuating. The closer to the **TIME** of the onset of tropical storm conditions (Tropical Force Winds 39+mph) preceding a hurricane may be all the time that you have. Without planning, preparation and sufficient supplies, you may find yourself and family with quickly dwindling options and now facing a very dangerous situation.

Note: A hurricane can increase or decrease one category in less than 24 hours, increase speed over the ground up to 60 mph, or just stall in place. Gulf of Mexico hurricanes average track speed is approximately 12 mph. For North Atlantic hurricanes, track speed increases the further north a storm travels and could reach 15-20+ mph (due to westerly wind flow currents).

Location Dangers. Because of heavy rains and poor roadway drainage, local flooding before a hurricane will start two days or more before hurricane force winds. Your area may feel the impact of a storm 600 miles wide with 300 miles of that being hurricane force winds. The rising waters associated with hurricane storm surge zones create lethal areas. The greater the storm's strength, the higher the water level. ALWAYS LEAVE AREAS THAT WILL FLOOD. Know what areas along your evacuation route will flood in heavy rain conditions. Consider this, **even with your presence, you can not save anything that a hurricane's storm surge and force can easily destroy with its power.**

The "To Leave or Not Leave" Decision

You will be unable to make a very accurate hurricane impact prediction far enough in advance to be any better than a "1 in 5" guess. You will be wasting evacuation time hoping for a "better" storm track and intensity prediction. Leaving well ahead of an approaching hurricane is always the safest option. You will have to judge your timeframe to evacuate your area based on the specifics of your area, its flooding potential, and your personal circumstances.

"In your life time, you may have to evacuate from an approaching hurricane maybe four times. Because of a change in the storm's track, or intensity, 3 times may be for no reason, but that 4th time will demonstrate most graphically to you, the wisdom of evacuating. This means that you will have to make critical decisions with less than a 20% probability of impact."

Dr. William Read, National Hurricane Center
Virginia Department of Emergency Management
Seminar 2009

Homes can be rebuilt and your presence probably would have little impact in saving that home. Imbedded tornadoes can level multi-story buildings. Storm surges can clear an area of all construction. Understand the uncertainties and respect the storm's power and dangers. Accept the fact that you may be evacuating when it might not be needed, but also consider what your thoughts would be if you found yourself and family trapped in your dwelling facing an 18 foot storm surge with no place to escape. Safety has its own peace of mind and security. Failure to understand and accept these uncertainties of a hurricane can be fatal.

Attempting to drive through rushing water a foot deep can sweep your car off the road. Driving through standing water reaching your car's bumper can totally disable and destroy your vehicle's engine. If your vehicle becomes disabled, your escape becomes uncertain.

Warning

Due to the population densities and limited road capacity in many coastal areas, evacuation roads will become gridlocked well BEFORE the hurricane hits. Extensive flooding from the leading *TROPICAL STORM* portion of the hurricane can extend 300 miles or more in front of a hurricane. Tropical force winds (39-73 mph) will cause roadways to be closed* and impact your area a day or more even before the hurricane arrives. Make your decision and act early.

The majority of deaths from a hurricane are caused by drowning. Being caught in the hurricane's STORM TIDE (storm's surge + tide) is lethal. Torrential rains before the hurricane can wash out roads and bridges in areas far from the coast. Evacuation routes will be closed as the wind's speed approaches tropical force (39 mph+), driving is very difficult at wind speeds of 45 mph, and all emergency services (fire, police, ambulance) will cease when wind speeds approach 50 mph.

*Virginia Dept of Transportation for Hampton Roads area will close the Hampton Roads Bridge Tunnel, Monitor-Merrimac Memorial Bridge

Tunnel, Coleman Bridge, High Rise Bridge as winds reach 45 mph. The Midtown Tunnel will be closed as winds reach 39 mph. The Chesapeake Bay Bridge Tunnel is closable when their authority want to close it.

TO AVOID ENDANGERING STATE PERSONNEL, ALL EMERGENCY SERVICES AND VEHICLES WILL BE REMOVED FROM ALL ROADS WHEN THE WINDS REACH 50 MPH. This will strand anyone left on any of the roads. You will be one your own.

INITIAL STEPS FOR YOUR FAMILY'S DISASTER PLANNING

1. All this information may be difficult to fully accept, but you must realize these difficulties. Start your basic emergency planning and you will have options. Start with your family's basic needs. It is far better to have some basic needs met than to have nothing except a hope that someone else will provide for your survival. Your basics needs in order are safety, shelter, water, food, and then clothing.

2. Understand and accept the uncertainties and dangers of a hurricane.

3. Know your neighborhood and the area's flooding potentials.

4. Consider the durability of your house and location (tall pine trees, power lines, drainage creek nearby, large garage door, glass sliding doors, 2 story house, etc.).

5. Consider the storm's potential impact on children or adults with special needs or circumstances (aged parent, medical requirements such as oxygen, insulin, frail health, special needs child, etc.).

6. Assemble and label important Records for quick identification and access (I call it a "Quick Pull" System). I recommend using yellow or orange adhesive "dots" like those used in a garage sale to label important records and files. Place important papers in protective plastic bags (like Ziplock type).

7. Check Insurance Coverage. Review your property insurance coverage and Flood Insurance coverage. Keep all insurance paperwork together and specially **LABELED (“Quick Pull” System as discussed)**.

8. Take Visual Records. Take digital pictures or **video**, or both of all interior rooms showing flooring, carpeting, furniture, walls and ceilings (grade of construction, ceiling fans, crown molding, etc. and show all exterior views of your property. Show clear areas around your house with trees trimmed back to limit possible contact with your house. Make copies of your photos and videos and send them to a friend or /family member out of the area and to your insurance company.

9. Home Insurance Documentation. Your insurance company expects the homeowner to make prudent and reasonable preparations to limit storm damage to your property. Retain all sales receipts for storm supplies purchased. Develop a **QUICK PULL** file system using specially LABELED (mark with color dot/highlighter, etc.) file system for quick and easy recognition of all critical record files in case you are forced to evacuate quickly. Protect documentation with labeled zip-style plastic bags. **Get Flood Insurance**

10. Identify Your Lot Location. Take a picture of your lot’s boundary corners and then mark the PIN location or geographical (lat/long) location of your property pictures. If you do not have a GPS system, borrow one from a friend to get the LAT/Long of your lot. This will help you locate and identify your property after a major disaster when all familiar signs and markings have been destroyed, covered over, or blown away.

11. Pre-storm Supplies. Protecting your house against wind and water damage requires an effort and can be costly. These are basic guidelines, but you want to protect your windows/sliding doors from blown objects **WHILE ALLOWING FOR PRESSURE EQUALIZATION** within your house as the wind changes direction as the storm passes. If your house is sealed tightly to prevent water from entering, the pressurization difference between the inside and outside can literally blow the roof off. If covering all your doors and windows is not feasible, at least cover large windows, sliding doors, and most importantly, reinforce your garage door.

Plan to cover your windows, doors, and attic/eve windows with plywood (CDX 1/2 to 3/4 inch). For brick veneer homes, attach

plywood using concrete anchor screws (TAPCON brand 3/16" x 1-1/2" with metal washers available at hardware stores). Drill a couple of holes (door knob hole size or so) in plywood to allow air pressure out and light in. Holes will also allow the downwind side windows to be opened slightly to permit pressure equalization. Paint both sides of plywood with a white paint (helps reflect interior and exterior light) protects plywood, keeps the plywood from warping. (see Miami Dade County Hurricane Preparation web site for info. Info sites are listed on reference page, page ____). Cut, paint and label the plywood coverings ahead of time. Gather a supply of blue tarps, roofing nails, and wooden strips in case you have to do temporary roof repairs after the storm. These supplies will be very hard to find for some time after the storm. "For the want of a nail....."

12. Reinforce Garage Door. Previous hurricane damage has shown that 80% of the homes that were destroyed when either the garage door was blown in or pulled out. The garage door track and track roller do not offer much horizontal structural strength. Once the garage door has collapsed, a wind funnel effect in your garage will blow the roof off and compromise the entire house. Although reinforcing the garage door presents its own engineering problems, the door must be reinforced both on the inside and outside. Use (2) metal 4"x4" brackets (strong tie type) for a double garage door. Two holes are drilled into driveway for the strong tie and (2) lag bolts are then used to secure the top and bottom metal plates (to the driveway and header above door and inside of the garage. Then a **#2 yellow pine** 4 x 4 or (2) 2x4's of sufficient length to go to the header that will allow for another strong tie or bracket with U-bolt to be placed at the top. See the following sites for information and demonstration video:

www.sun-sentinel.com/news/weather/hurricane

<http://hurricane.weathercenter.com/guide/garages.htm>

13. Storage. Being able to protect and quickly locate your supplies is important. Buy sufficient clear or semi-clear plastic containers of different sizes to meet your requirements. Large plastic trash bags and duct tape are very useful for protecting your property. Use waterproof markers to label containers. Buy sufficiently strong plastic bags to dispose of refuse/human waste. Provide for a means for collecting, and storing drinking and non-potable water. **Plan on 1 gallon of drinking water per person or pet per day for a minimum of 7 days.** If evacuating, take three days supply with you. This can be a large volume and a heavy weight for a large family. Before a storm, bottled water will quickly sell out. Without electric

power, city water will soon be unavailable. Without city water, toilets will not flush nor will area sewage pump stations work. Ground water will soon become contaminated.

14. Food and Water. Try to accumulate at least four weeks supply of canned or packaged foods. This food does not have to be everyday affair quality, but whatever will satisfy your requirements. Do not plan on heating foods as this may not be an option. To achieve your water requirements, there are hand operated water filter pumps available at sporting goods stores and online that will significantly ease water and storage requirements, and protect you against waterborne diseases. Suitable hand operated water pump units range in price from \$60-\$200 and provide up to 13,000 gallons of filtered water (eliminates sewage bacteria, gardias and crypto etc., **NOT Salt/HARMFUL CHEMICALS**). (see www.campmor.com). Note: these hand pump units do not remove the salt from salt water, but units are available that can produce drinkable water from sea water, but they are expensive and most require an electrical power source. Do not count on boiling water. It may not be possible. Then what?

15. Medicines/ Health Needs/Inoculations. Access your prescription needs and special health requirements. Do your prescriptions need refrigeration or have a short shelf life? Ensure inoculations, tetanus shots, and "third world" shots (cholera, mumps, measles, etc.) are current. Consider hepatitis A, B, C shots. Oxygen supply presents special problems and will not be available at area shelters. Discuss with your supplier. Make a copy of all your prescriptions and place with important papers

16. Electrical Backup/Equipment. Portable generators will provide electricity in a power failure, but have many limitations and precautions must be used for safe operation. Proper heavy duty electrical extension chords are critical to prevent electrical fires. Gas consumption (approximately 1/2 gallon per hour) plus storage and fuel supply are issues. A boat in the yard with full tanks can solve the fuel storage issue if it is recoverable after the storm. A good source for backup power for car-type radios/plug in cigarette lighter (12volt DC) is the deep-cycle battery in your boat if it is charged and removed prior to storm. Operating requires wiring and switch set up. A battery can provide a good power source for low-draw lights (auto low wattage or LED type). Consider low-level LED solar recharged battery powered yard lights for use in your home after the storm.

17. Tools. Hand tools and battery powered tools will help make quick repairs when the power is out. Keep them accessible and charged inside the house with you. Protect them from water in case of house flooding. Have a supply of hand tools, double headed nails, drywall screws, plastic tarps, and strips of wood for reinforcement for quick repairs.

18. Communications_. Develop a family communications plan with contact telephone numbers out of the area. If evacuating, take your phone list, address book and prepaid phone cards with you in case cell towers are out. Have some means to communicate with family members and neighbors if staying or evacuating together in a convoy. Either walkie-talkie, CB, or amateur radio will work for a short distance. Remember, the survivability of cell phone towers is unknown.

19. Utility Shutoff's Know locations for house's main water shutoff (tool required to close), water heater inlet valve, master electrical switch, and gas line valve **IMPORTANT** (if you close the gas line, a certified tech must restart pilot light) . If you are leaving the area, turn off the gas at the house inlet to protect against fire or explosion. After the storm, mud and debris may obscure your water main and gas valve locations.

Access/Entry Control/Curfew/Security After a major disaster, many would have to rely on established neighborhood controls to maintain security and prevent looting. The complexity of this would be determined by the extent of damage to the area, the duration before stability can be reestablished, and the surrounding area conditions. Conditions could run the entire spectrum from calm to chaos. Plan for the worst, hope for the best. Meet, greet, and know your neighbors.

Sanitation. With the loss of city electrical power, water and sewage control will be lost, therefore residents will have to provide a sealable container to collect, control, disinfect, dispose of human waste in a centralized location. The collection area for disposal of dead animals should be considered.

******Storm Warning Action Checklist******

The weather forecaster has indicated that a tropical depression is strengthening and that it is expected to become a tropical storm and possibly build to a hurricane. If it becomes a hurricane, it could impact the U.S. coast, possibly your area. Now, you should prepare your family and review your previous PLANNING. NOW! Many will say that you have plenty of time, or you don't need to worry, yet. That bad advise could place you and your family in grave danger! They have not prepared. You have prepared. You have options. They have very limited options.

Too many people would like company to support their faulty decision making, like when buying stock or making investments. They would like to share the failure if they are wrong. Same logic goes with hurricane preparations. Nobody wants to admit when they are wrong. Nobody wants to think the possible down side. Prepare and sleep better.

So much information. Where to start.

1. Read this preparation guide.
2. Review this guide with your family and neighbors.
3. Start your ***CHECKLIST***, page 25
4. Inventory your available food supplies and determine what more is needed.
5. Determine hardware supplies needed. Buy early.
6. Determine drugstore supplies needed. Buy early.
7. Ready your house or apartment. Clear yard.
8. Locate important files and records (marked "Quick Pull" files). Label and place in waterproof container.
9. Store outside items in garage.
10. Place emergency equipment, tools and repair supplies in accessible and safe inside area. Wrap and protect your battery powered and electric tools from water damage.
11. Protect large windows, glass doors, windows with plywood covering (1/2-3/4 inch CDX plywood /painted both sides.
12. Reinforce garage door inside/outside with vertical bracing like strong-tie plates and #2 yellow pine 2"x4"s.
Gather containers for drinking water.
13. Gather important family items and protect in sealed plastic bags. Label bags.

14. Protect expensive items in plastic bags, seal, and label. Place above floor level in safe area.
15. Gather clothing for each family member.
- 16.** Determine probable evacuation route. Consider flooding potential of chosen routes
17. ***DETERMINE YOUR TIMELINE FOR EVACUATION.***
Consider time needed to evacuate. Consider width and speed of storm, and time needed to clear your area. DETERMINE THE LATEST TIME THAT YOU CAN SAFELY LEAVE AND BE ABLE TO CLEAR EVACUATION ROUTE BEFORE FLOODING AND THE ONSET OF TROPICAL FORCE WINDS (39 MPH). THIS IS DIFFICULT. Remember that it is better to survive and rebuild than to die in an attempt to take all your stuff.
18. Get cash, coins, phonecard and gas for car. Map for route.
19. Check car's coolant, tire pressure, spare tire pressure, oil level. Flat tire fix.
20. Place all the stuff that you have to take in sections by priority and then see how much space will be required to get it all in the car. Load your car by priority of the piles. Consider the weight for all that you will need to take. Is it too heavy?
Prioritize supplies as needed.
21. Take portable potty/paint can with a lid with plastic liners and toilet paper. If you will be in traffic for 18 hours, how will meet your family's needs?
22. Take radio, spare batteries.
23. City and state road maps. GPS if available. Look at alternate routes and areas where you could find last minute refuge. It is better to be out of the flood area than to be trapped on the evacuation route with rising flood water and increasing winds.

Note: Estimate how long your car will run at idle in case you are caught in gridlock. If your car can travel 500 miles (10 hours at normal highway speed), you should get 20-25 hours at idle with the air conditioning on. If your evacuation time is longer, you will have to carry spare gas cans which is dangerous and space consuming.

Area Shelters The city will open and operate short term shelters when a Category 1 or greater hurricane is expected to impact our area. The city may order a mandatory evacuation in a Category 2 or greater hurricane. When evacuating to an area shelter, REMEMBER:

- 1. no pets allowed**
2. bring own bedding

3. bring water and food
 4. bring medicines and prescriptions
 5. change of clothing
 6. toiletries and personal items
 - 7. personal identification (needed to get back into neighborhood)**
 8. games, activities, books, etc
 - 9. no smoking, no alcohol**
 - 10. no weapons**
 11. Do not go to the shelter until it is announced open
 12. Eat well before going to shelter
 13. Bring important paperwork/records file/insurance papers/documentation
- Note: Your bags will be checked by City Sheriff's department personnel
14. Address book/family and friends telephone listing

Beginning of Hurricane Season, Your Annual Preparations

BASIC Hurricane Planning Considerations.

Develop and review your basic hurricane plan. Nobody can make decisions for you. City officials may not release information soon enough because of storm track and storm strength uncertainty. **There is about a 1 in 5 chance that a storm will hit you, but by the time that you realize that it REALLY WILL HIT YOU, it will be too late to evacuate!** If it was forecast to be a category 1 storm and quickly turned into a full category 2+ hurricane, you will severely limit your options and safety.

You will need to evaluate your location if you live in flood prone area that would be impacted by a hurricane storm surge, or if your way out floods easily because of heavy rains and poor drainage. Some hurricanes can bring a day's worth of rain even before the damaging winds arrive. Do not get trapped. Consider how difficult and how long it would be to evacuate your area. Know where your local storm shelters are located. Have a backup plan if you have to relocate before it is too late to evacuate the area. Remember, that hurricane forecasting of TRACK, AND INTENSITY is not exact, but a 50-50 guess. If you wait until you know the exact landfall, path and intensity of a hurricane, it may be too late to escape. Plan for **ONE LEVEL MORE** than predicted. If the experts say "only a category 1", plan on a category 2.

Because of high population densities and transportation difficulties, some areas might have to be evacuated **DAYS** even before tropical force winds start which could be a day or more before hurricane winds start. You may have to evacuate on a perfectly beautiful day.

Preparing Your House and Yard

Do a visual survey and inventory of your house and property to determine the following:

1. amount of ½ inch-5/8 inch CDX plywood required to cover and protect windows, doors
2. area to store lawn furniture and equipment
3. tree limbs that threaten roof areas (should not be within 10 feet of the house)
4. location of water main/gas line shutoff valves
5. water heater inline valve shutoff location
6. method/hardware to prevent garage door from blow in/out

7. visually document (pictures/video) all interior rooms, furnishing, ceilings and fixtures. Locate house plans if available
8. collect containers to support each family member's and pet's needs for a 4 week period, water, food, fuel, waste, repairs, supplies, clothing protectors
9. collect items to repair screening, roof, walls, tarps
10. hand tools and battery powered tools
11. hand pump sprayer for Clorox (1 cup Clorox to 2 gallons water) wash down of walls and floors
12. suitable area for storage combustibles/fuel/propane/cooker
13. locate and label (colored dot, etc) all critical files to be removed quickly
14. quantity of ziplock type file protectors (1/2 gallon, 1 gallon, etc.), large plastic garbage bags for collection/disposal
15. quantity of large 5 gallon containers for collection and storage
16. quantity of small, medium, large coolers for storage
17. outdoor cooking equipment and supplies needed
18. emergency house kit; flashlights, batteries, radio, fire extinguisher, space blankets, first aid kits, matches
19. outside emergency kits; rope, ax, come-along, bow-saw, hammer, double headed nails, screws, duct tape
20. insect repellent
21. Clorox bleach disinfectant (collect 5-10 gallons)
22. plastic gloves, good work gloves
23. dust masks (N-95 type), surgical masks
24. eye protection (needed during cleanup)
25. Clear out attic of unwanted items
26. Clear out garage and shed of unwanted items
27. Source of fuel for heating food

Hurricane Pre-Warning Stage

Your Checklists and Your Priorities

Operating from a "CHECKLIST" is the best way that you can successfully complete most of the things that have to be done in the short time before a storm hits. There will be too many items for you to remember or rely on your memory to complete. A checklist will take the pressure off of you and allow you to focus on what needs to get done. Develop your personal prioritized checklist for what to buy, and what has to be done as the storm approaches. Your time is limited, buy efficiently the most essential items.

SEVEN to FIVE DAYS before Onset Tropical Force Winds (TFW)

Sterilize plastic containers for water storage (1 gallon per person per day)

Place containers/ liter bottles (not milk type) in freezer to make block ice

Recharge deep-cycle battery

Recharge tool batteries

Verify food/water supplies and amount needed

Clorox for disinfectant/sprayer

Purchase priority items

ATM cash

Medical needs/prescriptions refilled

Assist neighbors

Check trees for potential house contacts

Locate water shutoff wrench

Remove lawn and patio furniture

Locate emergency kits/medical/tool/tarps/battens/trash containers to central room

Remove/secure boat and trailer

Prepare to board up windows/doors/reinforce garage door

Remove trash and sterilize containers

Pull designated Quick Pull Files, seal and protect in zip bags

HURRICANE Possible- MINUS FOUR DAYS Prior onset TFW

Make plans to evacuate when possible impact potential exists. It is safest to evacuate early. Select routes and alternate. Identify needed supplies if evacuating. Determine your evacuation day and time. **In some areas, evacuation time is days before**

the onset of tropical force winds, NOT HOURS. Do not evacuate into currently gridlocked conditions or onto roads that are flooding. Seek shelter, or shelter of last resort. Run from water and flooding, shelter from wind.

Load your vehicle with emergency supplies, documents.
Evacuate. If evacuation roads reported gridlocked or blocked, consider going to an area shelter. If area shelters are closed or full, GO TO AN AREA WHERE THERE IS HIGH GROUND OUT OF THE FLOOD AREA. Or, find an elevated floor of a parking garage in the area. Park on the third or fourth floor in the SW area.

IT MAY BE TOO LATE TO EVACUATE AREA NOW- BEWARE!!

HURRICANE Possible- MINUS THREE DAYS onset TFW

Consider going to shelter before it is too late to evacuate area.
Finish boarding up house, windows, doors and garage door.
Buy last minute supplies if available and needed
Move interior furniture to middle of rooms
Roll carpets and place above floor level
Cover and protect electrical appliances/computers
Cover and protect valuables/keepsakes/photos
Assist neighbors
Do last minute wash/dry of laundry
Prepare car for evacuation if storm hazard potential Category 2 or more exists
Mail/email off documentation (earlier if possible in case mail delayed/stopped)

HURRICANE POSSIBLE – MINUS TWO DAYS onset TFW

Coordinate plans with neighbors/
Remove boat battery for useful power source in house
Secure boat well
Finish boarding up house, doors, and garage door
Assist neighbors
Leave POC/NOK information sheet in protected holder in visible location
Email points of contact/Give neighbors your intentions
Move essential supplies/tools/food/water/First Aid kit/radio/TV to center room
Document your preparations inside/outside with pictures/video or both. Take documentation with you.

IMPORTANT

If evacuating

Turn off INDIVIDUAL CIRCUIT BREAKERS for water heater, A/C and house lighting circuits. Decide about refrig/freezer power shutoff and food cleanout.

Close street side main water valve to house to prevent contamination or flooding of your house.

Turn off gas line to house

Unplug all non-essential electrical equipment

If it looks like storm surge will affect your house, turn off electrical main power switch at breaker box (CLEAN OUT YOUR REFRIG of items that will spoil).

Open windows slightly that are plywood protected to enable house pressure equalization during storm. Ensure adequate attic ventilation

Consider if staying

Close street side main water valve to house to prevent contamination

Turn off gas line to house if in doubt

Slightly open windows that are plywood protected on each side of your house to enable pressure equalization during storm. Ensure adequate attic ventilation

GO TO A CITY SHELTER IF POSSIBLE!!!!

HURRICANE – MINUS ONE DAY

Store drinking water in containers before shutting off water. Each person and pet requires 1 gallon per day drinking water alone. Verify food supply and emergency kits accessible in house. Monitor city's emergency AM channel for latest information.

HURRICANE DAY

Beware of the eye of the storm. Beware of downed electrical lines and do not assume that just because the power is out at your house that the power lines are dead in the adjacent areas. Make only emergency repairs with extreme caution. Beware of

dangling tree limbs especially when clearing roof areas. Do not drive thru standing water unless life/death matter.

Post storm

HURRICANE- POST STORM

Neighbor assist neighbor. If assistance is needed, communicate with neighbors, building rep, or place a colored cloth on front door or in window:

RED- Emergency medical or injury ONLY

WHITE- NON-emergency but assistance needed

DRINKING WATER PURIFICATION and SANITIZATION

1. If needed, boil water 10 minutes
2. or, filter water thru clean multilayered cloth, then add 8 drops of 2% Clorox solution per gallon. Bleach should be 4-6% solution sodium hydrochloride, NO ADDITIVES (Clorox regular type). Stir, then let water stand 20 minutes.
3. or, add 20 drops of Clorox to clear rain water/40 drops to cloudy rain water. Let stand 20 minutes
4. Consider the health hazards that would be associated with indiscriminate dumping of household biological waste or spoiled food. Each resident is responsible to properly collect in a plastic, covered container, disinfect (lime/disinfectant) and properly dispose of waste. Neighborhood should set up specific procedures and location to accomplish.

CLEANUP AFTER FLOODING

To eliminate mold and prevent it from forming and contaminating the structure, quickly remove all wet carpeting, padding, rugs and wet wallboard. Ensure NO Electrical house circuits are powered, then with a saw, cut away and remove the WET wallboard down to the bare wood studs. If thermal insulation in walls or subflooring is wet, it will have to be removed, and placed in plastic bags. Once done, spray wet floors, walls, and ceilings with a 9:1 ratio water to Clorox solution. Squeegee out water from floors. Ventilate structure to dry out.

DANGERS AFTER STORM.

Animals. Large areas will probably be flooded and wild animals will be displaced. Additionally, some house pets will probably get loose. Especially watch for potential threats.

Plants. Oleander branches may look like a convenient stick to use for roasting hotdogs, **but it is highly poisonous.** Identify these bushes in your area and avoid.

Charcoal. Smoke from charcoal fire is highly toxic with carbon monoxide when in a confined area. Carbon monoxide is odorless and kills very quickly. Do not use charcoal fires inside of a confined area or upwind of people nearby.

Portable Generators. Do not place a portable generator in garage or near living space as gasoline motors produce deadly toxic fumes. Carbon Monoxide fumes are denser than outside air, therefore will sink. Someone sleeping on a floor can be overcome and die before you would even notice. Watch the direction of the wind and place gas motors downwind of living spaces. Keep motor/generator in well ventilated area. Do not refill tank with engine operating or when hot. Use only heavy duty electrical extension chords rated for the job. Do not tie into your house!

Hurricane Supply List

***CRITICAL ITEMS NEEDED FOR YOUR BASIC SURVIVAL**

Grocery Store type items

***Food items Non-perishable/MRE's (2-3 weeks worth/person)**

***Plastic water containers** (1 gallon per day per person for drinking minimum)

Note: DO NOT USE plastic milk bottles because it will contain bacteria, taint the water and make you very sick.

***Bottled water** (1 gal per day per person/7 days supply)

Note: It is better to have some water AND also a way to produce sterile water either with a filter pump or a sterilizing tool

Aluminum foil

Closable plastic bags (ie Ziplock type 1 qt, 2 qt, 1 gal)

Plastic forks/spoons/knives

Clorox-type non-additive liquid bleach

Waterproof Matches/lighters

Pet food/supplies

Medical needs (prescriptions)

Plastic heavy duty trash bags

***Personal hygiene items**

Baby wipes (saves a lot of water, easy disposal)

***First aid kit**

Insect spray and repellent

Benadryl type anti-itch insect spray

***Anti-diarrhea tablets** (Imodium-D/water quality may be a problem/suspect)

***Anti-bacterial wipes**

***Waterless Hand cleaner**

Poison ivy spray

Nail puncture wound treatment

Hardware store Items

Flashlights (LED- type new technology best)

Plastic tarps/sheeting to cover roof damage and furniture

Double headed construction nails

Wooden strips for repair battens (repair windows/walls/doors)

Heavy rope (secure boat, move tree limbs)

Plywood CDX (1/2 -3/4 inch) cover doors/windows/make repairs

Tapcon concrete anchors 3/16 x 1-1/2" to secure plywood to doors/windows

Lag bolts/lugs/strong tie plates/ 4x4 wood to secure garage door

2x4 studs (garage door reinforcement/repairs as needed)

Batteries (AA, AAA, D cell type)

30 gallon covered plastic container for non-potable water container (plastic yard barrel)

***(2) 5 gallon covered plastic containers** (storage and sanitation)

1/2 gallon/ 1.5 liter plastic bottle containers (put in freezer to make block ice)

Note: Leave 10% space for ice expansion in bottle, not milk bottle

Duct tape
Window screening (to repair screens)
Light line cordage
Drywall screws
Roofing nails
Plastic disposable gloves
Heavy duty plastic gloves
Work gloves
Come-along to move heavy limbs
3 in 1 oil (seals in Coleman grills/lights dry out)
Disinfectant (for deodorizer/sanitation)
Bow type Hand-saw
Battery-powered Circular saw
Waterproof markers
Yard sale colored stickers to label Quick Pull Files
Stainless steel wire
Waterproof portable file containers
(2) Fix-a-Flat aerosol cans for car
Crowbar /prybar 24-36"

Sporting Goods Items

***Water filter hand pump**

***SteriPen UV purifier**

Charcoal water filter container (like Brita)

Snake shot/rat shot

Screened enclosure/tent

Ground sleeping pad

Multi-tool/Swiss Army style knife

Ax

Clothing storage bags

Camp stove

Camp stove fuel

Propane camp fuel

Coffee pot

12 volt DC deep cycle boat battery/wiring/switch/light sockets
for illumination

Whistles (signaling devices)

AM/FM radio

Bicycle helmet (good protection from flying debris)

Swim goggles/safety goggles (driving rain and debris hurts and
prevents injury)

Large coolers (2), 1 for ice and 1 for food.

First Aid Kit

***First Aid book**

Rain poncho

Thick soled boots/hiking boots for walking over debris

NOTES