

University of Houston  Victoria

**Business Continuity Plan
Hurricane Plan
FY10**

Information Numbers
(361) 578-4848 or Toll Free 1-877-970-4848

Web Site: <http://www.uhv.edu>
Emergency Information: <http://www.uhvemergency.info>

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SECTION 1 HURRICANE PLAN

I. Purpose

This plan is intended to provide for courses of action, triggered by a specific timeline of events beginning 72 hours from expected landfall of a hurricane. The plan attempts to provide adequate time to minimize hazards, loss of property and provide for the protection of employees and students.

II. Policy

- A. This plan and timeline has been reviewed by the President's Cabinet.
- B. If there are conflicts between this Hurricane Plan and the general Business Continuity Plan (BCP), the BCP should prevail.
- C. The activities and responsibilities in this plan are in addition to those departmental and individual responsibilities within the basic Business Continuity Plan.
- D. The safety of students and employees is the highest priority. All personnel, with the exception of a ride-out crew, if required, will evacuate the affected site when hurricane winds are imminent, whether or not shut down procedures have been completed.
- E. Affected campuses will close at the direction of the President (or designee) upon notification that a storm poses an imminent threat. The campus should close within 4 hours of that notification.
- F. Facilities on the UHV campus have not been designated as shelters by an Emergency Management Center or the American Red Cross and therefore, all persons with the exception of the ride-out team (if any) must seek shelter elsewhere.
- G. The President's Conference Room in the University Center building will serve as the headquarters for the implementation of this plan. An alternate meeting location is Conference Room "A" in the University West building.

III. Hurricane Hazards and Preventive Measures

A hurricane is a cyclonic storm which, as a unit, normally travels at about 8 to 12 miles per hour and has a small center area of relative calm with an area of high wind velocity revolving counterclockwise about this central area. Hurricane winds are defined as those having a force greater than 75 mph; however, they have been recorded well over 180 mph.

A wind blowing against a building produces a positive pressure on the windward side and negative pressure, or suction, on the opposite side of the building. A common occurrence in hurricanes is the breaking of windows or opening of doors on the windward side of a building. Through such openings, the wind enters the building and creates a positive pressure on the underside of the roof or on the inner side of the wall. This force in combination with external suction pressure often carries off roofs or forces out the sides of buildings. It is important, therefore, that all access areas be secured as strongly as possible. Electrical hazards due to downed transmission wires are a major cause of hurricane deaths. Extreme care must be exercised to avoid fallen wires.

Flying debris from damaged buildings and loose objects picked up and carried by the wind are responsible for much of the storm damage. Personnel must remain under cover during winds of hurricane velocity. It is required that all loose lumber, sheet metal, drums, pallets, outside trash containers, etc., be secured. Roofs of buildings in particular must be checked and drain heads cleared.

Damage caused by the entry of water into buildings through leaky doors, windows, and roofs, broken windows and backed up storm drains can be expected. Sandbagging, lifting items from the floor and covering equipment are common remedies.

IV. Responsibilities

Refer to the Business Continuity Plan which sets forth specific Communication and Recovery Team responsibilities related to any emergency event.

V. Hurricane Season (Hurricane Season begins June 1)

The campus Safety & Risk Manager will send out a general communication to all employees at all sites to announce the beginning of hurricane season and request that departments review the Business Continuity Plan, including the Hurricane Plan, and employee assigned roles and responsibilities within the plan.

The Facilities Services Department commences pre-season hurricane preparations. **Refer to Section 2, Facilities Services Hurricane Procedures, Hurricane Season, for detailed information and responsibilities.**

VI. Hurricane Conditions (University-Wide Timeline of Activities)

Response times and distances indicated in this plan are based on a storm's straight line movement at 20 mph through the Yucatan Straits into the Gulf of Mexico. Due to the unpredictable nature of these storms it is extremely difficult to base an action plan on a storm's speed and course. Therefore, the actions listed below the Hurricane Landfall and Mile Range headers are intended as decision making guidelines and may be adjusted accordingly as more information on the storm's track becomes available to the Emergency Response Team (ERT).

A. Hurricane Landfall within 72 Hours or 1250-mile range of Victoria as noted on Hurricane Tracking Map:

1. The Safety and Risk Manager will alert the President and the ERT of the potential hurricane threat.
2. The President's Office will send a general advisory to the university community informing them that the campus is monitoring a storm. The Public Information and Emergency Response (PIER) system is a communication option for sending the advisory to faculty, staff and students.
3. All campus departments should review the Hurricane Plan and any specific departmental assigned roles and responsibilities for this timeframe.

B. HURRICANE ALERT STATUS - Hurricane within 48 Hours or 1000-mile Range of Victoria as noted on Hurricane Tracking Map or if any part of the Texas coast is in the projected storm path.

1. The President's Office calls a meeting of the expanded ERT to discuss strategies for preparing for the potential hurricane.
2. The Telecommunications Specialist communicates Emergency Numbers to faculty, staff and students.
3. Facilities Services continues the campus hurricane preparations. **Refer to Section 2, Facilities Services Hurricane Procedures, Hurricane Conditions, for detailed information and responsibilities.**

C. HURRICANE WATCH - Hurricane Landfall within 36 hours or 750 mile-range as noted on Hurricane Tracking Map.

1. President's Office, after advisement from the ERT, makes a decision on campus closure.
2. Communications begin as set forth in the BCP.
3. All University-related functions are canceled.
4. Director of Facilities Services continues with remaining hurricane preparation and shutdown procedures. **Refer to Section 2, Facilities Services Hurricane Procedures, Hurricane Conditions, for detailed information and responsibilities.**
5. All faculty and staff begin pre-evacuation procedures prior to departing the campus.
6. All but pre-designated personnel shall leave the University upon completion of worksite preparations.
7. Employees are advised to check out with immediate supervisor prior to departing.
8. Employees will have four (4) hours to accomplish shutdown.
9. Security personnel shall report to Safety and Risk Manager for assignments.
10. Security will perform a check of the campus to verify that all non-essential personnel have evacuated and will post campus closure signs on all building entry doors.

D. HURRICANE WARNING - Hurricane Landfall within 24 Hours or 500-mile range as noted on Hurricane Tracking Map

1. Remainder of campus should be evacuated.
2. Facilities Services initiates University shutdown procedures. Shutdown air conditioning, natural gas, water, and appropriate electrical systems.
3. Facilities Services stores all vehicles.
4. Facilities Services runs final check, verifies utilities to all buildings have been shut off.
5. Security verifies that all personnel have left the campus and buildings are locked.

VII. Immediately After the Storm

1. University President or a designee recalls the ERT to meet on campus or at a designated site. The team shall:

- i. Complete an initial assessment of damage to the campus' facilities.
 - ii. Establishes communications with federal/state assistance offices.
 - iii. Complete immediate survey of campus to identify and isolate safety hazards (biological, electrical, structural damage, gas leaks, etc.)
 - iv. Authorize Recovery Teams to develop and carry out activities to resume university operations.
 - v. Authorize additional personnel/services as needed.
2. Other campus personnel shall wait to report to campus until notification by immediate supervisor, through PIER or through an announcement in the local media services. For information about campus status during and following the storm, call the following numbers:
Information Numbers:
(361) 570-4242 or Toll Free 1-877-970-4848
3. To view the latest available emergency management communications and information visit the University of Houston-Victoria Emergency Information Web site hosted on the PIER system and accessible at <http://www.uhvemergency.info>.
4. Department Heads, through normal administrative channels, will initiate surveys of department status.

VIII. Hurricane Assessment and Recovery Teams

EMERGENCY RESPONSE TEAM

Refer to Business Continuity Plan

RECOVERY TEAMS

Refer to Business Continuity Plan

SECTION 2 FACILITIES SERVICES HURRICANE PROCEDURES

I. Facilities Director's Responsibilities

- Oversees overall hurricane disaster preparation and response coordination.
- Communicate with the Facilities Services Supervisors, Safety & Risk Manager and the Director of Business Services.
- Procure, store and maintain in an operable condition all supplies and equipment necessary to implement and execute this plan.
- Take necessary steps to effect hurricane preparation measures as outlined in this plan.

II. Beginning of Hurricane Season

- A. Check roofs of buildings for loose debris; insure drain heads are cleared.
- B. Inspect custodial supplies for adequate materials (mops, buckets, squeegees, batteries, plastic bags, and battery-powered lights, etc.).
- C. Ensure adequate fuel (gasoline and diesel) on hand for operation of emergency generators and vehicles following storm.
- D. Inventory and replenish emergency supplies: water, masking tape, duct tape, safety tape, electrical tape, caution barrier tapes, drinking water, etc.
- E. Pre-fill sand bags and store on pallets. Ensure adequate supply of sand and bags available for additional sandbags.
- F. Trim trees and shrubbery. Make trees more wind resistant by removing diseased or damaged limbs and branches so that the wind can blow through.
- G. Ensure the availability of plywood and associated hardware for storm preparation and post-storm repairs.
- H. Obtain current list of emergency phone numbers and any changes of employee emergency evacuation locations.
- I. Verify emergency contact phone numbers and vendor phone numbers are accurate and understand any special vendor arrangements or situations.

III. Hurricane Conditions

A. Hurricane within 72 Hours or 1250-mile range of Victoria

1. Facilities Services continues with hurricane preparations.

B. Hurricane Landfall within 48 Hours or 1000-mile range of Victoria or if any part of the Texas coast is in the projected storm path (Hurricane Alert)

1. Facilities Services continues with hurricane preparations:
 - a. Make final check of roofs for loose debris and clear drain heads.
 - b. Distribute sandbags throughout the campus (if applicable).
 - c. Complete the removal of banners and flags.
 - d. Stow patio and picnic furniture.

- e. Stow trash cans and other loose items.
- f. Secure loose lumber, sheet metal, drums, and other items.
- g. Ensure all vehicles, including Gator Utility vehicles; diesel generator, fuel storage tanks and cans are full of fuel.
- h. Check with Biology Department labs and Greenhouse to ensure items are properly stored and secured. Electrical outages may affect perishable lab supplies.
- i. Finalize Facilities Services personnel contact phone numbers and evacuation locations.
- j. Identify Facilities Services personnel who would stay either on campus or in the area as a ride-out team (only if required)

C. Hurricane Landfall within 36 hours or 750-mile range (Hurricane Watch)

1. Facilities Services completes any remaining hurricane preparation and shutdown procedures.
2. All University vehicles delivered to Facilities Services Maintenance Shop for storage.
3. Facilities Services hurricane procedures supervisor responsibilities:
 - c. Director of Facilities Services
 - i. Notify direct reports of campus closing and initiate campus closing plan.
 - ii. Obtain authorization from the President for disconnecting utilities.
 - iii. Check-off as each facilities supervisor completes their activities.
 - iv. Distribute final emergency phone listing (including Petroleum College International).
 - v. Identify Facilities Services personnel that will remain in the Victoria area, and where.
 - d. Building Maintenance Manager
 - i. Completes removal of banners.
 - ii. Make final check of roofs for loose debris and clear drain heads.
 - iii. Open air vents leading to roofs to equalize pressure during storm.
 - iv. Coordinate raising all computers in Facilities offices and mechanical rooms and placing them above floor level. Cover monitors with plastic bags.
 - v. Assemble plywood, and battery powered hand tools, and hardware in the van for emergency repairs.
 - vi. Ensure all blue prints and documents are above floors.
 - e. Grounds Supervisor
 - i. Collect and store signs that might be out for an event.
 - ii. Top off all gas tanks, generators, vehicles with fuel.
 - iii. Stow all picnic furniture.
 - iv. Remove all flags (U.S., Texas, and University).
 - v. Store all vehicles under cover - Facilities Services (3), Business Services (1), LEAD (1)
 - f. Custodial Supervisor

- i. Collect all outside trash cans and store inside.
 - ii. Empty all refrigerators, excluding the biology refrigerators.
 - iii. Collect all trash 1 hour after closure has been ordered.
 - iv. All Venetian blinds lowered in all facilities.
- g. Facilities Administrative Secretary
 - i. Deliver an updated emergency phone contact list to each Supervisor and the Director of Facilities Services.
 - ii. Review emergency purchase procedures with Purchasing Agent
 - iii. Remind office staff to change phone mail message before leaving.
 - iv. Send an e-mail to departments that they must remove all items from refrigerators that they want to save. All refrigerators will be emptied and cleaned completely.
- h. Sr. Facilities Events Assistant
 - i. Inform remaining groups with reservations to the MPR of cancellations.
 - ii. Assist with phone calls coming into the office and assist as necessary.
- i. Sr. Secretary
 - i. Assist with phone calls coming into the office and assist as necessary.
 - ii. Assist Facilities Services Director with any last minute activities.

D. Hurricane Landfall within 24 Hours or 500-mile range (Hurricane Warning)

1. Facilities Services prepares for university utility shutdown procedures with authorization of President. Shutdown air conditioning, natural gas, water, and appropriate electrical systems at affected sites if necessary.
2. After authorization to shutdown utilities is received, verifies utilities to all affected buildings have been properly shut down.

IV. University Building Preparation Plans

University Center Building:

- Stow all projectiles or potential projectiles on campus and/or roofs.
- Remove all banners and flags
- Top off fuel in emergency generator
- Top off fuel in vehicles, spare cans, nurse tanks, and equipment
- Store vehicles and equipment
- Communicate with external custodial service about campus operations.
- Ensure emergency numbers for vendors and personnel are up to date and sent to the Director of Facilities
- Empty all refrigerators, excluding biology refrigerators
- Collect all trash after closure of building has been initiated
- Lower all Venetian blinds
- Charge all battery powered equipment
- Assemble plywood, battery powered hand tools, and hardware in the van for emergency repairs.

- Identify who is remaining in the local area and those exact locations in the event of a communication system shut-down

University West Building:

- Stow all projectiles or potential projectiles on campus and/or roofs.
- Remove all banners and flags
- Empty all refrigerators, excluding biology refrigerators
- Collect all trash after closure of building has been initiated
- Lower all Venetian blinds

Facilities Services Building:

- Stow all projectiles or potential projectiles on campus and/or roofs.
- Remove all banners and flags
- Empty all refrigerators
- Collect all trash after closure of building has been initiated
- Lower all Venetian blinds

Maintenance Shop:

- Stow all projectiles or potential projectiles on campus and/or roofs.
- Top off fuel in vehicles, spare cans, nurse tanks, and equipment
- Store vehicles and equipment
- Assemble plywood, battery powered hand tools, and hardware in the van for emergency repairs.
- Charge all battery powered equipment

Totah Building:

- Stow all projectiles or potential projectiles on campus and/or roofs.
- Remove all banners and flags
- Empty all refrigerators
- Collect all trash after closure of building has been initiated
- Lower all Venetian blinds

V. Custodial Department Hurricane Procedures

- All Custodial Staff are expected to aid in hurricane preparation to secure the campus.
- Custodial Supervisor will update telephone list and contact custodial staff.
- Custodial Staff is to make every effort to contact the department if off campus upon knowledge of hurricane conditions.
- Custodial Staff will call the Information Numbers and will listen to message for further instructions if off campus.
- Custodial Staff will assemble for a staff meeting to review job assignments.
- The Custodial Supervisor will supervise hurricane preparation and will assign personnel to areas as needed.
- All Custodial Staff will monitor available communication systems during this time.
- Custodial Supervisor will provide plastic can liners to cover computers, printers, and other

electronic equipment.

- Distribute liners to assigned building custodial lead personnel.
- All custodial doors will be unlocked or left open so that building staff may have access to closet.
- Make sure that all Custodial equipment (Buffer, vacuum cleaner, etc.) is moved to the second floor custodial room.
- Make certain that mop bucket, wringer, and mops are available.
- Will help in sand bagging all entrances as needed on doors identified. (If applicable)
- Will help in picking up debris and other loose objects.

VI. Safety Precautions for Checking and Entering Damaged Buildings

- Check for structural damage. Make sure the building is not in danger of collapse. If you are unsure of the structural integrity of the building, do not enter. A building inspector, architect, engineer or professional contractor may need to inspect the building before you enter.
- Inspect buildings for occupants that might have displaced or injured during an event. Assess injuries, if applicable, and notify medical personnel if time permits before moving injured or unconscious persons.
- If you must enter a building at night, carry a battery-operated flashlight. Do not use a flame as a source of light. Do not smoke.
- Turn off any outside gas lines at the tank or meter. Let the building air for several minutes to remove gas fumes or odors if necessary.
- Look for obvious electrical problems, shorts or broken wires. Stay clear of broken wires and obvious problems. Have a licensed electrician inspect and repair any damage to your electrical system.
- Watch for loose ceiling material.
- Open as many doors and windows as possible to remove moisture, odors, and flammable or toxic gases if necessary. If windows are stuck tight, take off window strips and remove the entire window sash. If a door is stuck, drive out the door's hinge pins with a screwdriver and hammer, and remove the door.

FLOOD DAMAGE:

Flooding from tropical cyclones is a major threat to people well inland from the coast. Very slow moving tropical storms and hurricanes can produce tremendous rains of 20 to 30 inches or more, resulting in disastrous flooding.

Foundations:

If you are not qualified to judge the stability of a foundation, hire a contractor to make this inspection. Examine foundations and supports for undermining. If walls or foundations have settled or cracked, stay clear and call a professional contractor.

Walls and Ceilings:

1. Wash out mud, dirt and debris as soon as possible. Clean walls and floors before mud and silt dries.
2. Start cleaning from the top floor or upper limits of flooding and work down toward the first floor.
3. Check walls with a level or plumb bob.

4. Brace walls as necessary.
5. To speed up drying of flooded or wet studding and insulation, remove all siding strips or plaster from upper and lower parts of the walls. Do not repaint walls until they are completely dry. This could take several months if the building has been flooded. Wet insulation is probably ruined and should be discarded.

WIND DAMAGE:

Hurricane force winds of 74 mph or more can destroy buildings, mobile homes, trees and power poles. Debris, such as signs, roofing materials, siding, and small items left outside, become flying missiles in a hurricane. The strongest winds occur in a region of the hurricane called the eyewall. Wind gusts in the right side of the eyewall are the most destructive. Hurricane force winds can be felt as far as 150 miles inland from the coast.

Wind damage to buildings is not always readily apparent. After a severe windstorm, hurricane, or tornado, examine all buildings for hidden damage. Undetected damage could weaken a structure, creating a hazard. Prompt repair, even if only temporary, is usually less expensive in the long run.

Roof:

Inspect the roof. Check the roof on the inside and outside. Don't check the roof from the ground unless the structure has severe damage to the walls or foundation, or it is too steep or too high to climb. If a ground inspection is necessary, use binoculars. When checking the roof, look for:

Damaged or missing roof materials or equipment. Thoroughly inspect roof ridge, gable ends, and eaves.

Use plastic sheeting or roll roofing for temporary repair on solid deck roofs covered with asphalt shingles, wood shingles, or roll roofing. Use patching compounds to repair minor leaks. Look for loose screws on metal roofing. Inspect the entire roof, with particular attention to gable ends, eaves, and ridge cap. If the screws are loose, screw them back in as soon as possible. If the screws don't hold when screwed back in, take the screws out and replace with oversized screws. Use aluminum screws on aluminum roofing, and steel screws on steel roofing. Replace damaged metal roofing.

Potential leaks. On a sunny day, go outside the building, close the doors, and inspect the roof carefully. While looking for holes in the roof, inspect the ridge, gable ends, and eaves, for possible structural separation.

Foundation:

Inspect the foundation. The plate should not be separated from the studding where the foundation meets the walls. On block foundations, inspect the mortar joints to make sure the block with the plate bolt hasn't separated from the wall. On stone or concrete foundations, check to see that the plate bolts are not loose.

Interior:

Inspect the interior of the building for structural damage. Check the framing for ridge separation, loose knee braces, and loose rafters or trusses where they join the walls.

SECTION 3

INFORMATION TECHNOLOGY HURRICANE PROCEDURES

I. Information Technology Director's Responsibilities

- Oversees overall hurricane disaster preparation.
- Communicates with the Emergency Response Team, IT senior staff, UH AVP for Information Technology, and the Technical Services Manager in Fort Bend.
- Ensure that all supplies, materials, and equipment necessary to implement and execute this plan are available and operational.
- Take steps to effect hurricane preparation measures as outlined in this plan.

II. Beginning of Hurricane Season

- A. Check Server Room and Wiring Rooms in all buildings to insure that backup AC units and UPSs are functional and that all equipment is functioning as usual.
- B. Check on inventory of supplies and materials (storage tapes, tape containers, plastic bags for covering PCs, etc.).
- C. Check inventory of flashlights, batteries, fans, masking tape, etc.
- D. Obtain current list of emergency phone numbers and possible changes of location (in case of evacuation) for IT staff.
- E. Verify emergency contact numbers and vendor phone numbers are accurate.

III. Hurricane Conditions

A. Hurricane within 72 Hours or 1250-mile range of Victoria

- 1. Information Technology continues with hurricane preparations.
 - a. Create auxiliary copy of latest backups so there are two backup tape sets: an original and a copy.

B. Hurricane Landfall within 48 Hours or 1000-mile range of Victoria or if any part of the Texas coast is in the projected storm path (Hurricane Alert)

- 1. Information Technology continues with hurricane preparations:
 - a. Assign backup tape sets to appropriate IT staff for off-campus storage.
 - b. Final update of IT personnel contacts numbers and evacuation locations.
 - c. Identify IT personnel who would stay either on campus or in the area as a ride-out team (only if required)

C. Hurricane Landfall within 36 hours or 750-mile range (Hurricane Watch)

- 1. IT completes any remaining hurricane preparation and shutdown procedures.
- 2. IT hurricane procedures supervisor responsibilities:
 - a. Director of IT
 - i. Notify direct reports of campus closing and initiate IT closing plan.

- ii. Obtain appropriate wording from the ERT Team for initial switchboard and web site messages for the shutdown.
 - iii. Check-off as each IT manager completes their activities.
 - iv. Distribute final emergency phone listing.
 - v. Identify which IT personnel will remain in the area, and where.
- b. Systems Administrator
 - i. Insure latest backup process completed successfully and retrieves the latest backup tape set for off-site relocation.
 - c. Network Administrator
 - i. Check backup AC and UPSs for final time.
 - ii. Contact service provider for backup server service.
 - d. Help Desk Manager
 - i. Coordinate moving all computers located near windows for users requesting assistance.
 - e. Web Master
 - i. Establish any requested changes to the web site prior to closing.
 - f. Academic Computing Services Manager
 - i. Move or cover all computers located in rooms with windows. Protect as necessary any computer lab or ITV equipment.
 - g. Telecommunications Specialist
 - i. Change the switchboard greeting to inform callers of the university's closing and anticipated re-opening.
 - h. Senior Secretary
 - i. Deliver an updated emergency phone contact list to each Manager or Administrator and the Director of IT.
 - ii. Remind office staff to change phone mail greeting prior to leaving.

D. Hurricane Landfall within 24 Hours or 500-mile range (Hurricane Warning)

- 1. IT staff completes all shutdown preparations and procedures

SECTION 4

SEVERE WEATHER AND INFORMATION LINKS

- <http://www.noaa.gov> – National Oceanic and Atmospheric Administration (NOAA)
- <http://www.nws.noaa.gov> – NOAA National Weather Service (NWS)
- <http://www.srh.noaa.gov> – NWS Southern Region Headquarters
- <http://www.nhc.noaa.gov> – NWS National Hurricane Center (NHC)
- <http://www.spc.noaa.gov/> – NOAA Storm Prediction Center
- <http://www.srh.noaa.gov/wgrfc> – NWS West Gulf River Forecast Center
- <http://www.nws.noaa.gov/emwin> - NWS Emergency Managers Weather Information Network (EMWIN)
- http://www.cpc.ncep.noaa.gov/products/expert_assessment/threats.html - Climate Prediction Center graphic of weather threats to the U.S. for the next few days
- <http://www.weather.com> – The Weather Channel
- <http://www.txdps.state.tx.us> – Texas Department of Public Safety
- <http://www.dot.state.tx.us> – Texas Department of Public Safety road conditions
- <http://www.fema.gov> – Federal Emergency Management Agency
- <http://www.redcross.org> – American Red Cross
- <http://www.ready.gov> – U.S. Department of Homeland Security
- <http://www.victoriatx.org> – City of Victoria
- <http://www.newscenter25.com> – KAVU News center 25
- <http://www.uhv.edu> – University of Houston-Victoria

Other links may be found on the Governor’s Division of Emergency Management (GDEM)
Web site: www.txdps.state.tx.us/dem

SECTION 5 HURRICANE AWARENESS

I. Definitions to Know

TROPICAL DEPRESSION: An organized system of persistent clouds and thunderstorms with a closed low-level circulation and maximum winds of 38 mph or less.

TROPICAL STORM: An organized system of strong thunderstorms with a well defined circulation and maximum sustained winds of 39 to 73 mph.

HURRICANE: An intense tropical weather system with a well defined circulation and sustained winds of 74 mph or higher.

TROPICAL CYCLONE: A general term used to describe a tropical depression, tropical storm, or hurricane.

II. Watches and Warnings

HURRICANE/TROPICAL STORM WATCH: Hurricane/Tropical storm conditions are possible in the specified area of the **Watch**, usually within 36 hours. During a **Watch**, prepare your home and review your plan for evacuation in case a Hurricane/Tropical **Warning** is issued.

HURRICANE/TROPICAL STORM WARNING: Hurricane/tropical storm conditions are expected in the specified area of the **Warning**, usually within 24 hours. Complete storm preparations and leave the threatened area if directed by local officials.

SHORT TERM WATCHES AND WARNINGS: These warnings provide detailed information on specific hurricane threats, such as floods and tornadoes.

FLOOD WATCH: This product informs the public and cooperating agencies of *possible* flooding. If you are in a **Watch** area, check flood action plans, keep informed and be ready to act if a warning is issued or you see flooding.

FLOOD/FLASH FLOOD WARNING: A flood/flash flood **Warning** is issued for specific communities, streams, or areas where flooding is imminent or in progress. Persons in the warning area should take precautions **IMMEDIATELY!**

III. National Hurricane Center Products

PUBLIC ADVISORIES offer critical hurricane watch, warning and forecast information.

FORECASTS/ADVISORIES provide detailed hurricane track and wind field information.

IV. Saffir-Simpson Hurricane Scale

The *Saffir-Simpson Hurricane Scale* is a 1 to 5 rating based on the hurricane's intensity. All hurricanes are dangerous, but some are more so than others. The way storm surge, wind and other factors combine determines the hurricanes destructive power. This scale estimates potential property damage. Category 1 is a minimum hurricane and Category 5 is the worst case scenario. Hurricanes reaching Category 3 and higher are considered *major* hurricanes because of their potential for loss of life and damage. Category 1 and 2 storms are still very dangerous and warrant preventative measures. For more information on the Saffir-Simpson Hurricane Scale, go to www.nhc.noaa.gov/aboutsshs.shtml.

Saffir-Simpson Hurricane Scale

Scale Number (Category)	Sustained Winds (MPH)	Types of Damage	Hurricanes
1	74-95	Minimal: Damage primarily to shrubbery, trees, foliage and unanchored mobile homes. No real damage to other structures.	Irene, 1999 Jerry, 1989
2	96-110	Moderate: Some trees blown down. Major damage to exposed mobile homes. Some damage to roofing materials, windows and doors.	Floyd, 1999 Kate, 1965
3	111-130	Extensive: Large trees blown down. Mobile homes destroyed. Some structural damage to roofing materials of buildings. Some structural damage to small building.	Alicia, 1983 Betsy, 1965
4	131-155	Extreme: Trees blown down. Complete destruction of mobile homes. Extensive damage to roofing materials, windows and doors. Complete failure of roof on many small residences.	Hugo, 1989 Carla, 1961
5	>155	Catastrophic: Complete failure of roofs on many residences and industrial buildings. Extensive damage to windows and doors. Some complete building failure.	Camille, 1969 Andrew, 1992