

Severe Weather Preparedness Plan

For

The Harborage at Ashley Marina

33 Lockwood Dr

Charleston, SC 29401

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August 2015

This plan will be revised by marina owners / operators to keep current with advances in available technology and marina development.

Revised this date: _____ 10/8/2015 _____

Revised this date: _____ 3/24/2016 _____

Revised this date: _____ 7/31/2020 _____

Revised this date: _____ 12/15/2022 _____

Revised this date: _____ 7/27/2023 _____ Phillip Holley _____

This plan should be reviewed and rehearsed prior to each hurricane season. Employees should have a complete understanding of the marina's policies and plans for a severe storm situation.

Review date: _____ 7/31/2020 _____

Review date: _____ 12/15/2022 _____

Review Date: _____ 7/27/2023 _____

Review Date: _____ 8/28/2023 _____

Review Date: _____

Severe Weather Preparedness Plan

Purpose. To establish a marina severe weather preparedness plan which will minimize damages to the Marina property and the vessels resulting from high winds and water. This plan outlines the steps to be taken to respond to severe weather storms.

Discussion. In the event of a severe storm normal operations are disrupted and specific actions may be required to minimize property and personnel damage. This plan requires planning, logistics and operational actions to prepare for and counteract the effects of high wind and water.

Scope. This plan furnishes information and a checklist of items to be completed to secure the Marina against the effects of a severe storm and to safeguard its personnel and property.

Action. All personnel assigned to this plan shall ensure compliance with this plan. Each person assigned to implementing this plan shall be familiar with the contents of this plan by reading it at the beginning of each year prior to the hurricane season and carrying out all tasks identified herein in the event of a severe storm. Post a copy of Tab A, the Emergency Listing, and the Hurricane Response Checklist.

Concept of Operations. Severe weather can come in the form of lightning, hail storms, tornado, or a hurricane. Because hurricanes are the most severe and damaging, they will be addressed in detail, however, the concepts required in preparing them also apply to your local storm conditions.

HURRICANE PREPAREDNESS

The hurricane season is from 1 June through 30 November. During this season, the Marina will maintain one of four material readiness phases. Phase 4, the lowest level of preparation, will be set automatically from 1 June through 30 November. Higher readiness phases will be set upon the approach of a storm.

Hurricane preparedness phases have been developed to ensure an orderly transition of the Marina from a hurricane watch to the arrival of the hurricane. The Marina Management owner or designee will direct the response and preparedness for each hurricane phase.

Any tropical disturbances along the Atlantic Coast can be considered a threat to the City of Charleston and the State of South Carolina. The conventional path for these storms is northerly, however, these paths are not always the pattern. Unexpected cold fronts can stall the forward movement of a storm and allow it to strengthen over warm waters. Also, storms which make landfall on the Gulf Coast can come across the Appalachians and cause severe flooding and wind damage in South Carolina.

The passage of a hurricane could strongly affect an area in excess of one hundred miles. Winds build rapidly, up to speeds approaching 150 mph. It can be anticipated that commercial power will be interrupted for an extended period. General confusion in the community can be expected during pre and post hurricane efforts. The various drawbridges in the area will probably be disabled in the down position, severely hindering marine traffic.

Evacuation orders will be issued by local authorities in time to ensure that evacuation can be completed prior to the arrival of sustained gale-force (39 mph) winds.

The passing of the "eye" of the storm in your area is to be experienced with a great deal of caution. The direct passing of the "eye" presents a brief lull. Following this period of little wind will be a sudden blast of high velocity winds from the opposite direction. During the period of the "eye" passing, no one should venture

outside or attempt to do anything in the exposed areas of the Marina. Updates of the storm's position can be obtained from your local radio, TV stations, and the marine weather service broadcasts.

A storm with winds below hurricane strength may still pose a threat to the marina. It may continue to build in strength before coming ashore as a hurricane, or it may come ashore at storm strength and still be strong enough to cause considerable wind, rain, and flood damage. In these situations the storm will be treated as a severe weather front and action appropriate to that weather system will apply.

HURRICANE CATEGORIES

The National Weather Service (NWS) categorizes tropical storms and hurricanes into five categories. The lesser beginning with the lower numbers, and as the numbers get higher, the more severe the storm. The storm surges in the table below are without wind and waves and are given a mean sea level (MSL). Depending on the category of the storm, it is estimated that waves from 5 to 20 feet may be added to the surge. If the storm makes landfall at high tide you may add another 1.0 foot to 1.5 feet to the height.

Hurricane Category	Winds (MPH)	Storm Surge(ft)	Central Pressure Millibars / Inches		Damage
I	74-95	4-5	≥ 980	≥ 28.94	Minimal
II	96-110	6-8	965-979	28.50-28.91	Moderate
III	111-130	9-12	945-964	27.91-28.47	Extensive
IV	131-155	13-18	920-944	27.17-28.47	Extreme
V	155+	> 18	< 920	< 27.17	Catastrophic

SAFFIR / SIMPSON HURRICANE SCALE

This plan has taken into consideration that each category of hurricane approaching the Marina will require different levels of preparedness. As an example, a Category 1 hurricane with anticipated surge of 4 feet including tidal range may not justify moving equipment to a second to protect them from flood water damage.

The maximum probabilities given for predicting the movement of a hurricane preceding the arrival of the storm are:

<u>Forecast Period</u>	<u>Maximum Probability</u>
72 Hours	10%
48 Hours	13% - 18%
36 Hours	20% - 25%
24 Hours	35% - 45%
12 Hours	60% - 70%

Note: The probabilities listed are the maximum values assigned to any location in advance of a predicted landfall. For example, the highest probability that the National Hurricane Center would assign to the event that a hurricane would strike Charleston, South Carolina within 72 hours would be 10 percent. Similarly, the highest probability assigned to the event that landfall would occur within 18 hours would be 45 percent.

Given these differences in probabilities the marina must be prepared to initiate the action plan on a low probability of it passing over the marina to achieve the 72 hour lead time necessary to execute the plan. All preparations should be completed prior to the arrival of sustained gale-force winds.

HURRICANE PHASES FOR THE MARINA

There are four hurricane phases which will be set by the Marina. The speed of advance of a hurricane dictates the hurricane phase to be set. The following advance notice is considered adequate for the Marina to accomplish the required readiness actions under most circumstances. These phases are:

Phase Four: A seasonal hurricane phase is automatically set by the Marina on 1 June of each year extending to 30 November.

Phase Three: When a hurricane is approaching, a phase to indicate that sustained gale-force (39 mph) winds, or greater, are expected within 72-48 hours.

Phase Two: When a hurricane is approaching, a phase to indicate that sustained gale-force (39 mph) winds, or greater, are expected within 48-24 hours.

Phase One: When a hurricane is approaching, a phase of maximum preparedness is set when winds of sustained gale-force (39 mph) or greater are expected within 12-24 hours.

Progression from Phase Four directly to Phase One can happen very rapidly, and is quite possible because of the erratic behavior of hurricanes and the difficulty of accurately predicting the paths of hurricanes.

RESPONSIBILITIES PRIOR TO THE HURRICANE SEASON

INSTRUCTIONS FOR MARINA STAFF

Prior to the hurricane season the following administrative functions will be carried out.

- Review severe weather plans and update.
- Post Hurricane Response Checklist, Tab A, and distribute copies of Hurricane Plan to all concerned with carrying out the plan.
- Distribute copy of Marina Tenants Severe Weather Questionnaire, Tab B, to all tenants/slip renters. Follow-up on return of forms.
- Inventory possessions for insurance purposes, prioritize what must be evacuated and what can be protected. Be sure a copy of your inventory is kept in a safe place. Video if possible. Review insurance coverage for flood and wind damage.

Prior to the hurricane season take the following grounds actions:

- Each employee will have a written plan prepared for his/her personal preparation and evacuation in order to effectively reduce his/her required leave time. This will also ensure that other crew members can have adequate leave time. This plan should be discussed with your family so that they will be prepared and know what is expected of them.

- Ensure that the following are stocked and ready for issue:
 - Nylon line sized to tie down large items
 - rolls of polyethylene and duct tape for wrapping loose dock items
- Inspection buildings to detect, repair, or secure potential sources of danger such as:
- Damaged or improperly secured doors, windows, and tie downs.
- Structural weakness resulting from worn or weather-beaten supports, wooden light poles, and similar objects.
- Surrounding trees, with rotten limbs or large branches. Trim excess growth from trees and dispose of cuttings.
- Inspect, service and repair as necessary all docks, piers, wharfingers or slip fingers and pilings, especially cleats and utilities.

HURRICANE RESPONSE CHECKLIST FOR MARINA STAFF

PHASE FOUR

AUTOMATICALLY SET 1 JUNE THROUGH 30 NOVEMBER

- _____ Review severe weather preparedness plan and update.
- _____ Address areas of responsibilities and complete.
- _____ Distribute and post revised severe weather plan.
- _____ Brief Marina personnel, tenants and volunteers on severe weather preparedness plans.
- _____ Coordinate plan’s requirements with local authorities.
- _____ Check first-aid and emergency supplies and restock.
- _____ Inspect buildings, piers, and docks.

PHASE THREE

72 - 48 HOUR PRIOR TO HURRICANE’S ETA

- _____ Initiate hurricane warning and activate communication plans.
- _____ Schedule Marina’s crew for storm duties. Include “shore leave” for crew to prepare homes and families at the first notice of storm.
- _____ After phase three is set, release unnecessary Marina personnel so that they can prepare their homes and gather their personal belongings.
- _____ Update posted storm information and disseminated other information to employees, boat owners and volunteers.
- _____ Begin preparation of Marina grounds:
 - Secure outdoor furniture, large signs, flags, trash cans, carts, fire extinguishers, antennas and other loose items that can be affected by wind.

- Secure all loose items on docks and grounds. Police Marina and dock areas to stow away or secure loose equipment and items that could become missile hazards in high winds.
- Secure all flammable, explosive, or other hazardous materials.

_____ Start plans to evacuate personnel and equipment in flood prone (low-land) locations.

PHASE TWO

48 - 24 HOURS PRIOR TO ETA

- _____ Maintain contact with the local weather bureau / oceanographic center.
- _____ Ensure Marina is secured from non-essential traffic.
- _____ Move files, and expensive equipment to higher shelves and drape with plastic.
- _____ Remove or lock all dock boxes and check tie downs.
- _____ Secure waterside sewage pump-outs and Wi-Fi antennas.
- _____ Continue to inspect Marina docks and grounds, and secure all loose items.
- _____ Shut down and secure the fuel system.

PHASE ONE

24 - 0 HOURS PRIOR TO ETA

- _____ Secure Marina. Remove all excess gear from piers and dock areas.
- _____ Remove and secure dock carts and recycle bins.
- _____ Brief released personnel on recall procedures.
- _____ Respond to last minute items.
- _____ When appropriate (extra high tide or storm surge expected) loosen floating dock ramps from hinges and secure.
- _____ At last call, remove outside life rings and fire extinguishers from floats and other outside locations.
- _____ Secure power and water to the Marina if evacuated.
- _____ Coordinate status reports on hurricane position and intensities to Marina staff and tenants.
- _____ Evacuate Marina if directed by Marina Management or Board.

RESPONSIBILITIES PRIOR TO HURRICANE SEASON

INSTRUCTIONS FOR VESSEL OWNERS

Prior to the hurricane season tenants will fill out Tab B and carry out the following functions.

Review Severe Weather Preparedness Plan.

Vessel owners are required to:

- Keep current at the Marina Regime/HOA office the following information:
 - Telephone numbers.
 - Copy of boat insurance policy.
- Keep sufficient inventory of storm gear aboard and maintain adequate dock lines.
- Ensure that your boat can get underway with its own power at all times.
- Ensure that your boat is adequately covered with liability insurance. The boat owner is liable for damages caused to the marina by his/her boat.
- All tenants renting slips will be required to sign a slip rental agreement and have an individual severe storm action plan.

HURRICANE RESPONSE CHECKLIST FOR VESSEL OWNERS:

PHASE FOUR

AUTOMATICALLY SET 1 JUNE THROUGH 30 NOVEMBER

- _____ Review severe weather preparedness plan, update and submit to administration.
- _____ Update Marina Tenants Severe Weather Questionnaire and return to HOA office.
- _____ Know your evacuation route and shelter plan.
- _____ Ensure that your emergency gear is serviceable and ready for use.

PHASE THREE

72 - 48 HOURS PRIOR TO HURRICANE'S ETA

- _____ Secure your boat in accordance with your pre-approved plan. Extra lines and fenders. Utilize multiple cleats instead of many lines on one cleat.

PHASE TWO

48 - 24 HOURS PRIOR TO ETA

- _____ Evacuate the area.

RESPONSIBILITIES DURING STORM PHASES

DISCUSSION

Numerous tasks and precautions must take place in preparation for the hurricane or severe weather. The extent of the tasks and the number of personnel available will determine the amount of time required for the marina to complete the preparation. However, 72 hours is the minimal time allowable in most instances and is the criteria for implementing the following:

PHASE THREE (ALERT)

72 - 48 HOUR PRIOR TO HURRICANE'S ETA

(EARLIER IF A WEEKEND IS INVOLVED).

- Notify all personnel that the facility is on a hurricane alert. All personnel will commence preparations for putting the Severe Weather Preparedness Plan in action.
- At 72 hours prior to ETA, initiate plans to evacuate personnel and equipment in the flood prone (low-land) locations.
- Begin facility protection preparations by policing all marina grounds and dock areas to stow away or secure loose equipment and items. Store in sheltered areas.
- Secure all flammable, explosive or other hazardous materials, such as compressed gas cylinders, in a safe, protected secure area.
- If other companies or concerns have supplies or equipment in your facility, request that they have their items removed.
- Take down large signs, antennas or other removable items subject to wind damage.
- Commence facility protection precautions. Storm shutters or other protective equipment and windows will be taped with masking tape to reduce the possibility of flying glass.
- Monitor storms progress.

PHASE TWO (WATCH)

48 - 24 HOURS PRIOR TO ETA. Commence and or complete the following actions.

- Notify all personnel that the marina is on hurricane watch. Continue to monitor the storm's progress.
- Complete securing operations in lowland locations. All dock structures, field buildings and offices will be secured.
- In areas subject to flooding, move vehicles and/or equipment to the highest point available. If outside storage is necessary, do not park under trees, towers, signs, or power lines.
- All electrical power supplies to areas that may be flooded will be secured by turning off the power at the main breaker switch.
- All fuel supply tanks and lines will be secured at the shore side installation.

PHASE ONE WARNING

24 - 0 HOURS PRIOR TO ETA

In these hours prior to the projected arrival of the hurricane, the "Hurricane Warning" advisory will have been issued and it is highly likely that the hurricane will make landfall or pass near the marina facility. The following activities will be in progress or nearing completion:

- Notify all personnel that the facility is on hurricane warning.
- Continue to monitor the storm's progress.
- With all vessel protection and securing operations completed, make a final check of doubled mooring lines, tied off with sufficient slack and fenders and/or other protective equipment in place.
- Secure as necessary any remaining operational facility buildings.
- Employees who are not manning facilities during the storm will be released no later than twelve hours prior to the storm. Instructions for reporting back to work after the storm will be given at that time.
- Whether manning or evacuating the facility, ensure that all perimeter access points in the form of fences, gates, and building doors are locked and secured, except the main entrance gate.
- All facility preparations will be completed twelve hours prior to the storm's arrival. Depending on the track of the storm, the extent of preparation based on information received may or may not be adequate. All precautions taken as a result of the hurricane warning should be based on the belief that the storm will directly hit the marina with its full force. If the full precautionary measures have not been taken, there is probably little that can be done at this point to improve preparation. This is especially true if authorities issue an evacuation notice to the facility location or area. In that case, evacuate the area and hope that the measures taken will suffice. The protection of human life is more important than property loss or damage.

EMERGENCY SHUT DOWN - AT PHASE ONE

1. **Shut fuel line valves off.**
2. Shut dock water off at the roadside meter.
3. Shut down all electricity at the emergency shutoff located on the main walkway.
4. Remove all computers and expensive equipment from the dock office.
5. Secure fire extinguishers, dock carts, and garbage/recycle bins.

DURING THE HURRICANE

The following suggestions are issued in the interest of personal safety:

- When your local emergency management advises evacuation -- do so !
- For vessels remaining occupied, extreme caution will be exercised in all outdoor activities. In the event of injury, outside medical aid will probably not be immediately available.
- No one will attempt to move or re-secure a loose vessel or equipment during the storm period.
- Life jackets will be worn by anyone required to perform any activities on or near the docks or piers during severe storm phases.
- No vehicles or equipment will be operated during the storm period unless absolutely necessary.
- Stay tuned to updated weather broadcasts concerning the hurricane's movement so you will know when the danger has passed. Hurricanes can take between 6 and 8 hours to pass through an area.
- Do not assume that the calm of the "eye" of the hurricane means the storm has passed. If the "eye" passes over you, there is still the other side of the hurricane to contend with. Remember, when the "eye" passes over you the wind will be in the opposite direction when it starts back up on the back side.

AFTER THE HURRICANE

The following should be considered when returning to the area:

- Extensive damage may have been caused by the hurricane while checking the condition of the Marina facility is of a main concern, there may be limitations to access to the facility or at the facility itself. Flooded roads, downed power lines, washed out areas of beach or river areas are just a few of the problems. An inspection of the facility will be made as soon as practicable to determine conditions, damages and security of premises.
- Be alert to flash flooding that may occur due to heavy rains upstream or flooded canal areas even after the storm has ended. Also, be alert for tornadoes which are frequently associated with hurricanes or occur after the hurricane has passed. In crossing water, do not try to cross a stream or a pool of water unless you are certain that the water will not be above your knees (or above the middle of your car's wheels) all the way across.
- Post storm security should be addressed as soon as you return to the Marina to protect against vandalism.
- Personnel returning to the facility and beginning the preliminary damage assessment are to be aware of the following:
 - Be aware of possible downed electrical wires which should be considered "Hot" and avoided until the power company or facility electrical maintenance personnel service the wires.
 - Electrical equipment of the facility that has been submerged in water is not to be started until it has been checked and repaired as necessary.

- Broken sewer or water mains are to be reported immediately to either the utility company responsible for repair or to the Marina Management if owned and maintained by the facility.
- Building's and dock's electrical wiring is to be checked completely prior to turning on the main power switch.
- Wet electrical appliances, such as hot plates, toasters, calculators, typewriters, etc. will be inspected, and repaired or replaced as necessary, prior to operation.

Plan to return to the Marina as soon as possible after the storm has passed, civil defense clearance given, and your family is taken care of. Telephone communications may not be possible at this time, so listen to the public radio broadcast for information, civil defense clearance, etc. on returning to the area.

As soon as the facility has been deemed safe for complete inspection, and where damage has occurred, a complete survey of the facilities, inventories, equipment and stocks will be made and documented with photographs or video where possible. Any losses or damages should be reported immediately to the insurance agent of the Marina.

A written assessment of damages will be prepared as soon as possible. Estimated damages to docks and piers and other Marina facilities, toilets, showers, lockers, HOA office, fuel dock and office, electrical transformers, electrical service, and telephones are to be included in the assessment.

After making damage assessments, plan repairs and implement a repair program as soon as possible.

While it is understandable that immediate repairs may need to be undertaken, all actions taken during the course of repairs prior to any insurance adjustment will be properly documented and filed. In the case of facility property damages, appraisers assigned by the insurance company will be involved in assisting with the claims. Insurance companies usually establish storm claims offices to handle the numerous claims after a hurricane strikes. In catastrophic situations, extra personnel are called in to handle the volume of claims.

If there has been any theft or vandalism loss or damage to the facility, other than storm related, a report will be made to local police or other law enforcement authorities so that appropriate actions can be taken. The incident report number and, if possible, a copy of the incident report, is to be obtained from the police to substantiate any insurance claim or tax property loss reporting.

It is obvious that vessel owners, captains, caretakers and others with vessel interests will inquire as to the status of their vessels. These inquiries should be fielded as best as possible, especially if there is no damage to their property. Notification of any vessel damage should be made as soon as possible. Consider dedicating a phone line with a pre-recorded message to cut down on answering these calls. While it is understandable that vessel owners may want to return to marinas or yard facilities as soon as possible, they will be advised as to the situation at the facility and as to the availability of berthing facilities for their vessel as soon as practical. If damages preclude the facility from providing a berthing space for the vessels, the owners will be notified and advised as to when the facility may be available to provide a berth.

If the facility is relatively undamaged, then efforts will be made to become operational and provide facility services to those who are not so fortunate.

TAB A
Emergency Listings
Hurricane / Severe Weather Information
The Harborage at Ashley Marina

HOA Manager: **Dawes Cook**

Dockmaster: **Phillip Holley**

Communications:

HOA Emergency Dockmaster (843)300-5682

HOA Operations (843) 284-9942

Email maintenance@myashleymarina.com

SHM-Ashley Fuels:

Sammy Landrum: (843) 990-1810

David Isom: (843) 723-5098

Leasing/Fuel: (843) 722-1996

Emergency Phone Numbers:

Reliable Weather Information: VHF Channel # 1

National Weather Service (744-3207)

Nearest Coast Guard Unit Sector Charleston: (843) 740-7050

American Red Cross: (843) 554-9900

Local Police (843) 743-7200 or 911

State Police (843) 554-4700

Basic Boat Owner Responsibilities:

1. Boat Owner must secure vessel (Fenders, extra lines)
2. All power will be shut off, the boat must be self-contained.

Instructions for Transient Boat Owners/Operators:

1. None allowed entry during high alert status.

Recommended Evacuation Routes: 17 North to I-26 West

Location of Marina Severe Weather Preparedness Plan: HOA Office, www.harborageatashleymarina.com

Special Instructions: Marina Operations will restart at Marina Manager's discretion, or by designated replacement.

TAB B

Vessel Contact Form

Boat Owner Name: _____

Slip Number(s): _____

Telephone: _____

Email: _____

Emergency Contact Name: _____

Emergency Phone: _____

Please ensure the information is correct. It is the slip owner's responsibility to update HOA Management with any contact info changes.

As of June 1, hurricane season begins, which will run through November 30.

To help you and The Harborage at Ashley Marina in the event of a hurricane making landfall in the Charleston area, we have on file a severe weather preparedness plan.

If you intend to remove your vessel from the Marina, your plans will have to be made at this time. If you choose to leave, we will run the fuel docks until Phase Two is put into effect, 48 - 24 hours ETA of a hurricane. At this time, The Harborage at Ashley Marina will start securing all docks and remaining vessels. At the announcement of Phase One, 24 hours ETA a hurricane, The Harborage at Ashley Marina will shut down all services including all electrical service to docks and fuel pump, and secure the Marina at 12 hours ETA a hurricane. The Marina will be evacuated by all personnel. Every attempt will be made to keep your vessel safe, but as we all know only so much can be done to control Mother Nature.

We hope this schedule of emergency shut down of The Harborage at Ashley Marina will help you in making plans to secure your vessel in the event of a hurricane. Now is the time to make your plans. If we can help in any way, please don't hesitate to call on us.

In the event phone service is lost, we will monitor VHF channel 16.