

HOUSTON YACHT CLUB

EMERGENCY PREPAREDNESS PLAN

—
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DIVISION A

SECTION I

INTRODUCTION AND SUMMARY OF PLAN

The HYC Emergency Preparedness Plan is a comprehensive action plan initiated by the Commodore according to pre-set storm criteria. **The purpose of the plan is to prepare the Club facilities for a pending hurricane or storm, and to assist club members to protect boats and equipment.** This manual provides the methodology, organization and procedures to facilitate the action plan. As with any plan, flexibility is required to meet the demands of a particular situation and therefore, this plan may be modified by the Commodore/Storm Command Team to respond to the expected conditions. Under this plan, the first priority is to protect the Club property and take any action deemed appropriate to meet this goal.

Current State of Texas law establishes conditions under which mandatory evacuations will be ordered. This plan attempts to operate in a manner consistent with state guidelines and rules. Information pertaining to state laws is available at the Harris County Office of Emergency Management at WWW.HCOEM.ORG.

The plan is premised on the full cooperation of the membership for the evacuation of the harbor and dry storage areas and securing the club facilities and grounds. **HYC is not responsible for taking care of your boat for you.** Each member is expected to read and study this plan, pre-determine your own individual action plan for securing your boats and equipment at the beginning of hurricane season. You should then notify the Harbormaster of your intended evacuation plan, and support the Club in an emergency. It is very important that every member have Boat Buddy who will assume responsibility for your boat if you are unable to do so.

Date Plan Filed in HYC Harbormaster's Office: _____
Harbormaster Initial _____
Boat Buddy _____

Alert Criteria

The HYC Commodore will activate the emergency action plan at approximately 72 hours prior to predicted storm landfall based on the preset criteria outlined in this plan. Weather information sources used to arrive at decisions will include the National Weather Service/NOAA and private official sources.

Communications

A communication center will be established at the 72-hour alert to serve as a message center during the storm period. The HYC communications center may be activated earlier based upon the perceived needs. The primary source of communications will be through emails directly to club members. (Some general information will be posted on HYC's web site) Typically during a pre-storm evacuation cell signals make communication via cell phone difficult. Texting and emailing usually remain effective during this time. It is important that you

provide current email or text message addresses to the club office for purposes of receiving updated information remotely if possible. Contact with the Club in the event regular landline contact is lost can be established by use of the published cellular phone number which will be stationed in the Club's communication center. This phone number will be communicated via email when the plan is initiated. The communication center will also have information available on the Club's web page with updates at 72 hours and thereafter as possible.

Houston yacht club landline: 281-471-1255

Cellular Phone Number: _____

HYC web site: HoustonYachtClub.com

NOTE: please limit your calls to HYC during these emergency periods to only those absolutely necessary.

Individual Plans

This plan provides detailed action steps for the various groups of boats at the Club. Currently the four groups included are:

<u>Group</u>	<u>Description</u>
A	Board Boats & Dinghies
B	Trailerable Boats with trailers hauled on Club cranes
C	Large non-hauled boats

Detailed plans for each of these groups are included in Section II. It should be noted that the inner harbor will only be evacuated in the event of predicted Category III or worse storm conditions at HYC.

Volunteers

Many of the tasks necessary to secure the club will be performed by the staff. However, Volunteers are the keystone of this plan and many are needed to implement it. Those members volunteering for work crews should proceed to the Club and check in with either the club manager or harbormaster as more fully described in Division B. The primary role of the volunteers is to assist in securing club assets where appropriate. Volunteers should plan to bring their own foul weather gear and flashlight, though some gear will be on reserve at the Club for this purpose.

Action Plan Sequence

Phase 1	Phase 2	Phase 3
(72-48 hrs before landfall)	48-mandatory evacuation	24 hrs before landfall
Alert	House and Grounds secured	
Grounds Begin securing harbor and house and grounds	Harbor Secured	
Mobilize communications		Storm Watch
Evacuate or move Group A & B boats	Evacuate Group C Boats At 48 prior to expected landfall	

Post Storm Period

Strict control of security will be exercised by the Club. Access to the Club grounds by news media and salvage operators will be limited. As soon as possible hours after the storm, emergency operations office will be set up at the Club to manage recovery operations and assist members with insurance claims and salvage operations.

SECTION II

BOAT OWNERS ACTION PLAN-ALL GROUPS

BOAT OWNERS ACTION PLAN GROUP A

Board Boats & Dinghies

GROUP A boat removal will be initiated during Phase One (72-48 hours before landfall). Boat owners should remove boats from the Club property (including back parking lots) as soon as possible after notification of Phase One. Boat owners are responsible for necessary labor, lines, tools, and tackle to evacuate their own boats. All sunfish and optimists are to be removed from lockers by the owners of those boats. Please make certain that your trailer, and trailer tires are in usable condition.

NOTE: GROUP A boats will not be stored on the lawn or tied to playground equipment. Owners of GROUP A boats who fail to remove them from the Club grounds do so at their own risk.

BOAT OWNERS ACTION PLAN GROUP B

Trailerable Boats

The Facilities Manager will survey all trailers stored at the Club each month. The owners of defective trailers will be notified and required to repair or to remove the trailer from the grounds within 30 days. If the defective trailer is not repaired or moved, the Board will request that the Harbor Master instigates these repairs immediately and bill the owner's account for reasonable time and expense charges.

Trailerable boats will be evacuated during Phase I (72-48 hours before landfall). Plans should be made to remove boats and trailers from the Club grounds. Movement should be initiated at least 60 hours before landfall. Some storage space is available in the west parking lot and the

grassy area outside the club entrance for trailerable boats that are properly secured. Remember wooden chocks will float away unless they are secured around the tires.

Masts should be un-stepped before moving a boat to the west parking lot or grassy area. Spars and rigging should be securely fastened to the boat and trailer. Boats should be stripped of all other equipment. Boat owners are responsible for necessary labor, lines, tools, and tackle to evacuate or secure their own boats. Loose small boats or equipment can be lethal projectiles during a storm.

Trailers cannot be left in dry storage areas.

BOAT OWNERS ACTION PLAN GROUP C

Those large boats in the outer harbor are to be evacuated when Category I conditions are predicted for HYC. Those boats in the inner harbor are to be evacuated when Category III or worse conditions are expected.

Large boats will be evacuated during the Phase Two (48 before landfall). The evacuation of the harbor is the individual responsibility of boat owners, supported where possible by the volunteer harbor operations work crews. Two options exist for large boats and are dealt with separately in detail:

- Option 1: Relocation of the Boat to alternate dock sites
- Option 2: Anchoring in open water
- Option 3: Temporary haul out

The individual boat owner should consider the following principles for hurricane preparation.

- A. Prepare a written plan for what you intend to do in a hurricane alert and provide a copy to the Facilities Manager by June 1st of each year.
- B. Have a Boat Buddy who is familiar with your plan, your equipment, the operation of the boat, and has your boat keys so he can act in your absence.
- C. Rehearse the plan with your family and Boat Buddy in the spring, including a visit to alternate dockage or hurricane anchorage.
- D. Do not rely on harbor staff or volunteer work crews to look after your boat for you.
- E. Prior to the critical months of June through September, service your boat, i.e. clean fuel filters, top off fuel tanks, change batteries, inspect ground tackle and docking and make an inventory list on the boat.

F. Key your plan on early evacuation. Moving the boat, stripping sails, de-rigging and mooring boat in 35 mph+ winds is extremely difficult and impossible in 45 mph wind and sea conditions.

Boat owners are responsible for necessary labor, line, tools, and tackle to evacuate or secure their boats.

Option 1 - Alternate Dockage Site

Each season the club will attempt to maintain a listing and contact information for area marinas that have available slips. Please contact the HYC Facilities Manager for access to the listing. Members may contact those operators to determine actual availability and make necessary arrangements for access to those slips. Owners are responsible for finding a slip and payment for alternate slip will be borne by the boat owner. It is recommended that each boat owner make their boat's evacuation plan early in the spring of each year.

Owners moving their boats to alternate dockage facilities must provide their own dock lines, chafing gear, and fenders. Also consider that other harbors may barricade their harbor entrances to prevent intruders late in the storm approach or in the immediate post storm period.

Doubling the lines:

The owner should double the dock lines going one size larger for the second set of lines, and double fore and aft spring lines. Three strand ½ to ¾ inch nylon lines should be used. Also, verify the proper operation your tide riser system to allow the boat to rise with a surge. Secondary lines should be loose enough and below the riser systems so as to not impede that operation.

Chafing Gear:

Special attention should be given to avoiding chafing which is the single most critical failure point in mooring the lines. A successful chafing gear system used in Hurricane Alicia was to double neoprene hose (¾ three strand nylon, inside 1" ID, thick wall neoprene, both inside a second 2" ID neoprene hose). This or a similar system should be used at all chafe points.

Storm Surge Tide and Flooding

Dock and spring lines should be secured to accommodate a tide surge. In harbors with fixed piers, the steel rods used for self adjusting line should not be used for hurricane mooring. Dock line should be secured directly to the pilings.

Stripping the Boat:

All necessary steps should be taken to reduce windage. Before leaving the boat, strip all sails including self-furling jibs and running rigging, booms and moveable deck equipment,

ventilators, anchors, life rings, and other loose gear causing windage. Secure all radio antennas, hatches and tape them shut. Remove all loose gear from cabinets and storage bins, e.g. binoculars, and secure cabinet doors. Roller furling jibs must be lowered and removed from the boat.

Cleats, Winches and Chocks:

In designing your storm mooring system (dock lines, chafing gear, cleats and winches) assess the structural attachment of the primary cleats, winches and chocks on the boat. These high load stress points should have substantial backing plates, and adequate bolt size. The primary jib winches can be used to reduce the loading on the primary mooring cleats.

Option 2 - Anchoring in Open Water

There are numerous ways to set up your ground tackle. Through interviewing experienced Club members we have pieced together a ground tackle system for Galveston Bay. (See diagram at end of this Section).

- A. Double anchors set at a narrow angle – less than 45 degrees.
- B. Two Bruce anchors, 45 lbs. Minimum depending on the size of your vessel, or a combination Bruce and plow CQR.
- C. 100' - 150' of 5/16" chain followed with 300' of 3/4" nylon anchor rope.
- D. Double or triple chafing gear on a bridle though the chocks with enough chafing gear to protect the line should it wrap around the bow of the boat.

After cleating, the bridle can be led through chocks to reinforced bow cleats; onto the primary winches; then to the primary jib cleats.

The violent vertical movement of the bow (as much as 35') will tend to jerk the anchor out. To prevent this, a heavy storm anchor or paravane should be attached to the boat end of chain to serve as a shock absorber and to help keep the anchor chain parallel to the bottom.

Setting the Anchors

With this double anchor system, take time to set each anchor properly. Try backing down on each anchor for several minutes. If your boat has a weak reverse try turning the boat around 180 degrees to set the anchor with the boat in forward gear then turning the boat head to wind to secure the anchor to the bow.

CAUTION: The Danforth anchor is more difficult to set hard in the Galveston Bay mud bottom as it does not dig in as deeply as the Bruce, and once loose, will tend to skip along the bottom.

Anchor Bearing

Stay on the boat for awhile if it is blowing monitor movement by taking bearings, or by using ranges, which is easier and more accurate. After returning to shore, take careful anchor bearings on the boat to monitor movement. A hand-bearing compass is most useful from shore to check bearing to the boat.

Securing the Boat:

In addition to stripping the boat of all sails, furling gear, boom, halyards, ventilators, spinnaker poles, antennas, life ring, etc.; be sure the fuel filters are clean as the violent movement of the boat will shake sediment loose in the tank to clog the filter when you start the engine after the storm. Uprooted spade rudders should be secured with shock cord to avoid damage to the rudder shaft or key way at the tiller fitting.

BOAT OWNERS SHOULD NOT ATTEMPT TO RIDE OUT THE STORM ON BOARD THEIR BOAT ANCHORED IN THE BAY.

Option 3: Temporary Haul Outs

Recent experience and current State of Texas rules on evacuation have made it difficult to secure a commitment from local crane operators to mobilize a crane for haul outs in the days leading up to a storm. If a member or group of members have access to a crane and wish to bring it in for haul outs they may do so in coordination with the Facilities Manager. Scheduling of this operation should be done in conjunction with the other aspects of this plan.

The member bears responsibility for the haul out and will be responsible for any damages to club property that may result from the cranes operation while on club property.

INSURANCE:

The harbor rules and harbor lease agreement establish requirements for boat owner insurance including liability coverage. A copy of your insurance certificate should be on file with the Facilities Manager. Please review the harbor rules, your lease agreement and review your policies to be sure they are current. General information on boat owner insurance policies and recommended due diligence pre and post storm is contained in Appendix B of this plan document.

DIVISION B

MANUAL FOR STORM ACTION PERSONNEL

SECTION I THE STORM COMMAND TEAM

The Emergency Action Plan is premised on the full cooperation of the Club membership to take action according to the predetermined plan.

The emergency team, staffed by volunteers, will be activated by the Commodore to assist and direct Club members implementing the plan.

The Commodore and the General Manager will consult to determine the level of club services and operations that will be maintained throughout the storm period.

CHAIN OF COMMAND

Consistent with Club policy, the harbor employees will report to and take direction from the Facilities Manager, who in turn is responsible to the General Manager. During storm preparations individual club members are not to direct the harbor employees. The Commodore or his or her designee will work with the Facilities Manager to set priorities and make employee work assignments.

Employees will be released from service in accordance with State Law on evacuations and the common sense discretion of the General Manager..

SPECIFIC RESPONSIBILITIES OF THE GENERAL MANAGER

The following tasks are performed by the General manager and the Facilities Manager through their delegation to club staff and volunteers as needed. These are general duties and are geared toward securing the club assets.

- Clubhouse and dining room begin restricting regular service.
- Begin preparation of House and Grounds.
 - Check emergency equipment list.
 - Arrange staff schedules, security, and request volunteers
 - Secure outdoor furniture
 - Make sure the generator is in working order.

- Provide support for volunteers assisting other members evacuating boats
- Provide support for members evacuating boats
- Prepare for actions necessary if alert progresses to Phase 2

- Final securing of the clubhouse
- Move computer equipment, club records, and radio equipment to the higher elevation.
- Evacuate all remaining volunteer personnel
- Arrange staff schedules, security and request volunteers
- Final securing of the clubhouse
- Back up computer files and remove computer equipment, club records, and radio equipment to upper levels of clubhouse.

ANNUAL PREPAREDNESS ACTION

Ensure that emergency power is available for refrigeration and freezer units, a nominal amount of lighting, and the switchboard.

Check and ensure that emergency equipment is available

Specific Responsibilities of the Facilities Manager

- Begin preparations to secure Harbor areas
- Arrange staff schedules and request volunteers
- Remove furniture from the beachcomber.
- Check harbor cranes and hoists
- Secure Race Committee and other club boats
- Remove and secure trash cans
- Final securing of the harbor.
- Fuel dock secured.
- The shower and locker facilities on the north and south jetties will be secured.
- Electrical and water service to the harbor will be shut-off.

SECTION II

STORM PERIOD

Organization of staff and membership remaining at the Club

- The Club assumes no liability or responsibility for the safety of members remaining at the Club during the storm period.

Life Safety Recommendations

- No one shall be permitted to remain on a boat in the HYC harbor during the storm period.
- Life jackets shall be worn when walking the docks at night or when wind velocities are in excess of 40 mph, or when the docks become submerged.
- No one should attempt to go out on any dock or finger pier alone once the wind speed exceeds 50 mph. Boat owners and inspection party volunteers should be accompanied by at least one other adult.
- Vehicles should not be driven on the jetties during the storm period when winds are in excess of 65 mph.
- Members should not attempt to move or re-secure loose boats during the storm period.
- Extreme caution should be exercised in all outdoor activities. In the event of injury, outside medical aid will probably not be available.

SECTION III

THE DAY AFTER CLUB OPERATIONS

Damage Assessment Team will be established by the flag in consultation with the club manager. An email communication with a general update and information on access to Shore Acres and the Club grounds will be distributed as soon as possible after the storm passes and communications are restored.

Immediately following the storm, access to the Club Grounds, and Harbor will be strictly limited to Club members. Insurance adjusters must be Pre- registered by a Club member prior to access to the grounds or Harbor.

As soon as practical following the passage of the storm, the Storm Command Group will return to the Club to conduct a preliminary assessment of damage to the clubhouse, grounds, and harbor.

Club Staff

The Club staff will be requested to report for service within as soon as possible after the storm subject to State of Texas evacuation guidelines.

HYC Emergency Board Meeting

The Board of Trustees will meet within 72 hours or as soon as practical after the storm to review the damage assessment report and to take necessary action to effect emergency repairs to the Club and to restore the Club to normal operations as soon as possible.

The Board will publish an email to the membership reporting the damage assessment and the action taken at this meeting.

THE DAY AFTER
SALVAGE

Salvage Contractor Pre-Qualification

Following Hurricane Alicia in 1983, the Board of Trustees established pre-qualification criteria for salvage contractors operating in the HYC harbor:

- * References
- * Insurance (including Workman's Compensation)
- * Performance Bond
- * Release

Salvage Contractors must be approved by the flag before they will be allowed on HYC's grounds.

APPENDIX A

INSURANCE

The following guidelines for member boat owners were prepared by the Marine Insurance Division of the Boat Owners Association of the United States, 880 South Pickett Street, Alexandria, VA, 22304, (703) 823-9550. You should discuss these and other guidelines with your insurance carrier.

PROPOSED INSURANCE POLICY ENDORSEMENT (To deal with Potential Liability resulting from Emergency Operations.)

Notwithstanding any other provision of this policy, the company agrees to hold harmless the Houston Yacht Club, its officers, members and employees for any damages occurring during, or resulting from, actions taken while conducting emergency salvage operations. Emergency salvage operations include any activity which the Houston Yacht Club Harbor Master or the Houston Yacht Club Officers deem necessary to protect persons from injury or property from damage.

ACTIONS EXPECTED OF BOAT OWNERS TO SECURE AND PROTECT THEIR PROPERTY

It is reasonable to expect a boat owner to take the time and effort to secure the vessel in a safe mooring and take the steps necessary to secure the property from loss - short of riding out of the storm aboard.

ACTIONS TO SECURE AND PROTECT

Be familiar with and committed to the Houston Yacht Club Emergency Preparedness Plan. The boats designated for relocation should be moved as quickly as possible.

Be sure your family and key crew members know the plan.

Remove as much gear as possible from the boat. What is not ruined by the storm stands a good chance of being broken or pilfered by vandals or salvage crews.

Enhance the water tight integrity of your boat, both above and below the water line. Seal windows, doors and hatches with duct tape. Shut sea cocks and cap off or plug unvalved fittings such as sink drains.

Remove important papers for safe keeping. They might be needed for an insurance claim.

Devote considerable time to the art of tying up or mooring your boat and attaching appropriate chafing gear. Secure roller furling systems so they cannot be unfurled by force of winds.

Most importantly, go home!! Do not attempt to ride out a hurricane on your boat. Too many people lose their lives attempting to ride out catastrophic storms in crowded harbors and moorings. Do the best you can to prepare and secure, and depend on your insurance policy beyond that.

STEPS THE BOAT OWNER SHOULD TAKE IMMEDIATELY FOLLOWING THE LOSS

Get down to your boat as quickly as possible following the storm. Do the best you can to pick up and clean up parts and equipment regardless of the condition they seem to be in.

Call your insurance company and give them details on the exact location and condition of the boat. Is there major structural damage such as holes, dislodged bulkheads or broken spars? Minor damage such as gouges, scratches, etc.? Was the interior wet? Machinery wet? Will the boat have to be moved immediately?

If salvage or removal is required your insurance company should direct this activity through local adjusters and catastrophe teams. If emergency removal or salvage is required, do the best you can to screen the contractors for competence and cost and attempt to talk to your insurance representative before contracting services. The Houston Yacht Club should be encouraged to take whatever emergency steps are necessary to protect life and property.

Make a list of repair facilities that you would/would not like to work with. If you are able to get these facilities to estimate repair costs quickly, you are likely to be repaired and back on the water before most boaters.

Begin clean up. Remove salt, mud, and sand from all parts of the boat. Remove wet carpets, drapes, etc. Check machinery. Flush and dry starters, pumps, and engines. Start and run engines if feasible. If the engines were wet and you act quickly, they can be saved. Call a mechanic for help if needed - this "Sue and Labor" effect is covered by the BOAT/U.S. Yacht Policy.

GENERAL GUIDELINES FOR SECURING BOAT INSURANCE

1. The policy should be an "All Risk", Agreed Hull Value Yacht Policy. With this policy form, causes of loss not covered must be specifically excluded in the policy provisions. In the event of a total or constructive total loss the amount of insurance stated on the declarations page is paid to the owner without deduction for depreciation.
2. This policy form typically covers boating equipment normally carried for safety or navigation both aboard and when separated from the boat and stored ashore. It should specifically extend coverage to a dinghy or tender to the boat. Boat owners should check the specific provisions in their policies as they vary from company to company.
3. Dock boxes owned by individual members would be considered personal effects in the BOAT/U.S. program and not automatically included in the Yacht Policy.

Coverage is easily added to the BOAT/U.S. Yacht Policy with a personal effects rider. VHF radios and other navigational aids are considered boating equipment and automatically covered under the Yacht Policy's "hull and machinery" coverage. The personal effects rider would cover sporting goods, personal gear, and the dock box. If members own their own dock box they should check with their insurance agent to see if they are covered for loss of the box and/or its contents.

4. Boat owners should be required to purchase both Hull and P&I (Protection and Indemnity) coverage. P&I is a marine liability coverage. BOAT/U.S. recommends \$300,000 liability limits but in no event less than \$100,000. The incremental premium for the higher coverage is insignificant relative to the increased protection and the need for the protection.
5. Coverage for the cost of removing wrecks is normally found in the policy's liability section. Most good Yacht Insurance Companies will provide this protection and boat owners should check to see that it's there. If the member has elected to do without any liability coverage, there is a good chance that he won't be covered.

HOUSTON YACHT CLUB

EMERGENCY PREPAREDNESS PLAN

[June, 2010]