

The Boat Owner's Job When a Storm is Heading Towards to You

I. Introduction:

- Once whitecaps from the approaching hurricane have started to lap at the sides of your boat, your job is done – for better or for worse.
- Before that happens, you have three basic choices:
 - Have the boat pulled on land
 - Anchor out
 - Tie up to a dock

II. Typical Boat-owners Hurricane Response Timetable

- **STAGE 1** (72 to 48 hours prior to projected storm arrival)
 - Monitor NOAA weather reports
 - Coordinate with marina/dockmaster and knowledgeable boating partner.
 - Move all trailerable boats to dry land
 - Move the bow of all docked boats to point towards the longest fetch
 - Remove all loose gear from the boat
 - Be sure the automatic bilge pump is functioning
 - If you plan to anchor out, now is the time to move your boat.
- **STAGE 2** (48 to 24 hours prior to projected storm arrival)
 - Double all dock lines and add chafe gear
 - Remove and store shore power cords
 - Remove and store canvas and sails.
- **STAGE 3** (less than 24 hours prior to projected storm arrival)
 - Final check
 - Leave the boat – don't be on the dock or boat when the wind velocity exceeds 50 mph.
- **STAGE 4** (post storm recovery)
 - Beware of snakes, downed electrical wires, electrical/electronic equipment, leaking gas or fuel.
 - Survey your boat and note all damage – take pictures

III. Decision Time:

- **As early as possible**
 - If time permits, pull the boat. This is always the best idea. (many insurance policies cover at least part of the cost for a named storm)
 - Trailer-able boats should be out of the water
 - If you will be away from your boat during hurricane season, put it on the "hard".
 - If you can't pull the boat, collect all the necessary materials well in advance of hurricane season. (Additional lines chafe guards, anchors, etc.)
 - Leave phone numbers with dockmasters or other marina personnel to notify you of an approaching storm.
 - Work out an agreement with a knowledgeable associate to care for each others boat if one is not available.
- **If you don't pull the boat, think through your storm plan well in advance:**
 - **Anchor out:**
 - This is generally considered the 2nd best choice but it requires planning:
 - a. Is the anchorage protected from surges and long fetches?
 - b. What is the condition of the bottom?
 - i. Solid mud, sand or clay bottoms are usually good.
 - ii. Rocks, grass or soft mud are not so good.
 - iii. Consider your anchors, chafing gear and ground tackle

- Like having the yard pull you boat, first come-first served on the best spots.
- **Tying up to floating docks:**
 - This option is as good as the docks are solid.
 - Have multiple lines and good fenders.
- **Tying up to fixed docks:**
 - This can be a very dicey option
 - You want to ‘suspend’ your boat between fixed finger piers.
 - You have to allow for very large swing in tides. That means very long dock lines.
 - If possible, put your boat in an ‘oversized’ slip. The bigger the better.
- **Tying up to a bulkhead.**
 - This is usually the least desirable option.
 - If at all possible, set anchors to keep the boat off the bulkhead.

IV. Anchoring Out:

- While generally considered the best of the ‘in water’ options, it takes a lot of work:
- **Location:**
 - You need to find a well protected location with a good holding bottom in a place you can get to and away from in a reasonable amount of time.
 - You need plenty swing room – a scope of 10 to 15 is minimum.
- **Anchors:**
 - There is no such thing a ‘Too Big’ storm anchor.
 - While ‘Danforth’ type anchors tend to hold very well in the soft Pamlico mud, they do not re-set well. In most hurricanes, the wind reverses when the storm moves through.
 - A ‘Bruce’ or ‘Plow’ type anchor is generally better at re-setting after a wind shift.
 - **Multiple anchors:**
 - The so called ‘Bahamian Moor’ – two anchors set at 120° to each other – is fine to reduce swing room under normal conditions. In a storm, the likely outcome is that the anchors will twist and foul on each other resulting in disaster.
 - A very useful option is to use 3 anchors set at 120° to each other and at least 100’ apart. The anchors are attached by chain to a shackle at the center of the triangle and the boat is secured to the shackle by anchor rode. – NOTE: this setup is as strong as the weakest anchor.
 - Another useful storm technique is called “Backing”. A second anchor is attached to the crown of the first with a 15’ length of chain. While cumbersome, it is quite secure.
 - **Anchor Rode:**
 - For storm conditions, properly sized chain is strongest, but it does not cushion shock from waves.
 - Properly sized nylon rode cushions well, but it is very sensitive to chafe while under tension.
 - Chafe gear is essential:
 - a. Run all anchor lines through secure chocks
 - b. Chafe gear is needed on chain to protect the boat – chain will saw through wood and fiberglass
 - c. Chafe gear is needed on nylon anchor line to protect the line wherever it touches anything. – REMEMBER: nylon line stretches over 30% while under tension.

V. Tying up at the Dock:

- At a fixed, floating or bulkhead dock, the general idea is to secure the boat in such a way that it will never touch the dock structure.
 - Use as many lines as you can. When done, you want it to look like a ‘spider web’. All line should have the same amount of tension. Spring lines are critical.
 - Dock lines can stretch over 30%. Be sure your boat will not hit the dock when the line stretches in the storm.

- Point the bow of the boat in the direction of the longest fetch.
- While fenders may be effective under normal conditions, in a storm they are generally useless. Even the strongest fender will be ground to dust between a boat and the dock under storm conditions.
- Tie off to as many solid cleats on both the boat and dock as are available. Don't tie dock lines to insecure fixtures, e.g.: bimini supports, handrails, etc.
- **Floating Dock:**
 - At a floating dock, you have tied your boat's safety to the integrity of the dock system.
 - Dock line should be as long and as tight as possible. You want your boat to move with the floating dock.
 - A good rule of thumb – “dock lines should never be in the water”.
- **Fixed Dock:**
 - The dock is fixed – almost. The dock structure may move several feet in response to the water surge. Your boat will move: the line will stretch and the tide may move up and down over 10 feet. You don't want it to hit the dock.
 - Make the dock lines as long as possible to accommodate the change in tide. Use cleats from adjoining slips when possible.
 - Think 'spider web'
- **Bulkhead Dock:**
 - Use anchors to keep the boat off the bulkhead dock.
 - As with any fixed dock setup, make dock lines as long as possible.

VI. Summary:

- DEVELOP A PLAN:
- HAVE ALL NECESSARY EQUIPMENT AT HAND:
- IDENTIFY A LIKEMINDED PARTNER:
- LISTEN TO THE WEATHER FORECAST AND COORDINATE WITH LOCAL DOCKMASTER OR YARD
- ACT EARLY
- GET OFF THE DOCKS AND BOATS BEFORE THE STORM ARRIVES.

VII. Prepared by Bill Sholl, Cypress Landing Yacht Club, using Resources:

- <http://www.boatus.com/hurricanes/tracking.asp>
- http://www.nhc.noaa.gov/HAW2/english/disaster_prevention.shtml