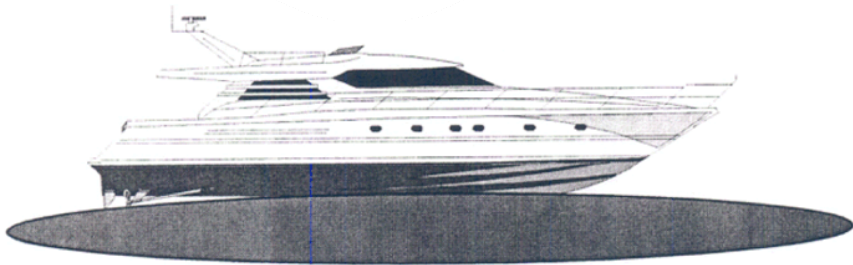




SPECIFIC PRECAUTIONS FOR BOAT OWNERS



General Precautions for Boat Owners

The key to protecting your boat from hurricanes or any severe threatening weather are planning, preparation and timely action. The following precautions and checklists are meant as guides only. Each boat owner needs a plan unique to the type of boat, the local boating environment, severe weather conditions likely to occur in the region, and the characteristics of safe havens and/or other plans for protection. The following preparation and precautionary suggestions are issued as guidelines to be used by the marine community. While these suggestions may not be applicable to everyone in all instances, common sense and good judgment should prevail. **Should even one of these suggestions save a life, prevent injury, or reduce property damage, their purpose will have been served.**

1. Prior to the hurricane season, develop a detailed plan of action to: secure your vessel in the marina, if permitted; remove your boat from the threatened area; or take your boat to a previously identified hurricane refuge. Specifically identify and assemble needed equipment and supplies. Keep them together and practice your plan to ensure it works before hurricane season.

2. Arrange for a friend to carry out your plans if you are out of town during the hurricane season.

3. Check your lease or storage rental agreement with the marina or storage area. Know your responsibilities and liabilities as well as those of the marina.

4. Consolidate all records including insurance policies, a recent photo of your vessel, boat registration, equipment inventory, lease agreement with the marina or storage area, and telephone numbers of appropriate authorities, i.e., Harbor Master, Coast Guard, insurance agent, National Weather Service, etc., and keep them in your possession. You may need them when you return to check on your boat after the hurricane.

“Do not remain on your boat during severe weather.”

5. Maintain an inventory of both the items removed and those left on board. Items of value should be marked so that they can be readily identified.

6. Before a hurricane threatens, analyze how you will remove valuable equipment from the boat and how long it will take so you will have an accurate estimate of the time and work involved. When a hurricane is impending, and after you have made anchoring or mooring provisions, remove all movable equipment such as canvas, sails, dinghies, radios, cushions, biminis and roller furling sails. Lash down everything you cannot remove such as tillers, wheels, booms, etc. Make sure the electrical system is cut off unless you plan to leave the boat in the water, and remove the battery to eliminate the risk of fire or other damage.

NOTE: When wind and seas warrant, marine agencies remove their boats from services and will not be able to rescue foolish boaters.

This is what can happen to boat owners who do not take proper precautions.



In addition to these general steps, which should be taken no matter where you plan to leave your boat during a hurricane or other severe weather, the following specific steps should be taken depending on option you select.

Trailerable Boats

1. Determine the requirement to load and haul your boat to a safer area. Be sure your tow vehicle is capable of properly and adequately moving the boat. Check your trailer; tires, bearings and axles should all be in good condition. Too often flat tires, frozen bearings or broken axles prevent an owner from moving a boat.

2. Once at a “safe” place, lash your boat to the trailer and place blocks between the frame members and the axle inside each wheel. Owners of lightweight boats, after consulting with the manufacturer, may wish to consider letting about half the air out of the tires, then filling the boat one-third full of water to help hold it down. (The blocks will prevent damage to the trailer springs from the additional weight of the water.)

3. Secure your boat with heavy lines to fixed objects. Try to pick a location that allows you to secure it from four directions because hurricane winds rotate and change direction. The boat can be tied down to screw anchors secured in the ground. The boat can be tied down to screw anchors secured in the ground. boat with heavy lines to fixed objects. screw

Non-trailerable boats in dry storage

1. Determine the safest, most realistic and obtainable haven for your boat and make arrangements to move your boat there. When selecting a "safe" location, be sure to consider whether storm surge could rise into the area. Wherever you choose to locate your boat for the duration of the hurricane, lash the boat to its cradle with heavy lines and consider adding water to the bilge to help hold it down.

2. Never leave a boat in davits or on a hydro-lift.

Non-trailerable boats in wet storage

The owner of a large boat, one usually moored in a berth, has three options:

1. Secure the boat in the marina berth.

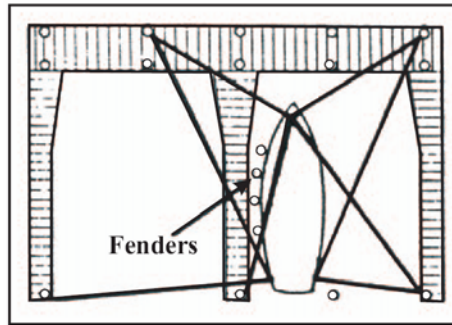
2. Moor the boat in a previously identified safe area.

3. Haul the boat. Each action requires a separate strategy. Another alternative, running from the storm, is not encouraged except for large commercial vessels.

Boats Remaining In Marina Berth

1. Double all lines. Rig crossing spring lines fore and aft. Attach lines high on pilings to allow for tidal rise or surge. Make sure lines will not slip off pilings. Inspect pilings and choose those that seem strongest, tallest and those that are properly installed.

2. Cover all lines at rough points to prevent chafing. Wrap with tape, rags, rubber hoses, etc. Install



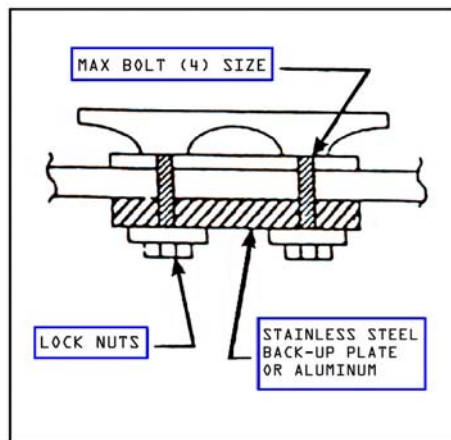
The longer the dock lines, the better a boat will be at coping with high tides. It is also essential to double up on all lines and use chafe protectors at any potential chafe points.

fenders to protect the boat from rubbing against the pier, pilings and other boats.

3. Assess attachments of primary cleats, winches and chocks. These should have substantial backplates and adequate stainless steel bolt sizes.

4. Batteries should be fully charged and checked to ensure their capacity to run automatic bilge pumps during the storm. Consider backup batteries. Turn off all devices consuming electricity except bilge pumps.

5. **Do not stay aboard.** Winds during any hurricane can exceed 100 miles per hour and tornadoes are often associated with these storms. First and foremost, safeguard human life.



Reinforced and properly backed cleat. Note the washers and the backing plate. These are essential in a hurricane and a good idea in quieter times as well.

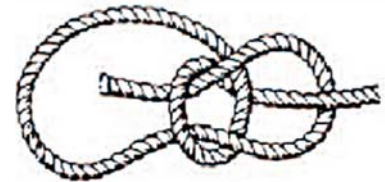
Nautical Knots



Figure Eight



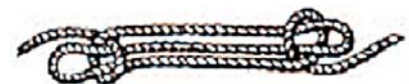
Square or Reef Knot



Bowline



Two Half Hitches



Sheepshank

Specific Precautions for Boat Owners

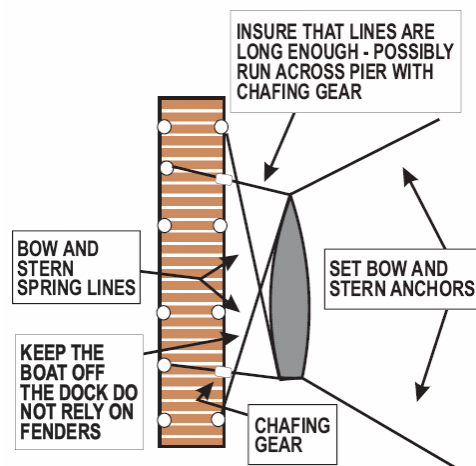
Marine facilities, marine related service organizations and insurance companies expect boat owners to take the time and effort to plan necessary actions to protect their vessels.

The following should be considered in formulating an overall hurricane plan for your vessel. Necessary arrangements should be made in advance. If you will be away, a Captain or caretaker should be designated to carry out your plan.

Prior to hurricane season

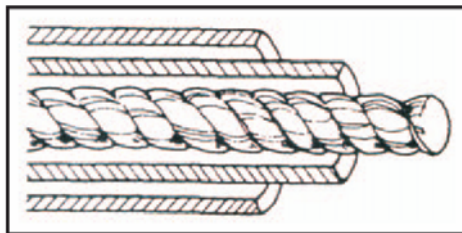
1. Make sure your vessel is in sound condition. This includes the hull, deck hardware, rigging, ground tackle, machinery and electronics. Absentee owners should arrange for a boatyard haul-out or a supervised inspection of the vessel before each hurricane season. This includes making sure batteries are charged, bilge pumps operate and all equipment is secured.
2. Enhance the watertight integrity of your boat, both above and below the water line. Seal windows, doors and hatches if necessary with duct tape. Shut sea cocks and cap off or plug unvalved through-hull fittings such as sink drains.
3. Inspect the vessel's deck hardware in light of planned mooring arrangements. Assess the size and structural attachment of the primary chocks. Cleats, bits, bollards, and winches. These high load/high stress points should have substantial backplates; secure them with the largest bolts they will accept.
4. Avoid chafing mooring lines. Double neoprene hose chafing gear works well.

5. Storm moorings, whether at dock or otherwise, should have double lines. The second set of lines should be a size larger than the normal lines, including spring lines at a dock.



Mooring alongside a dock or barge.
Note: Do not allow line to pull sideways on cleat. Always lead line along the cleat using chocks.

6. Purchase necessary materials ahead of time such as additional lengths of mooring lines, screw anchors, fenders, fender boards, chafing gear, and anchors. These items may not be readily available during the hurricane season or just before a hurricane.



For a super system, if your chocks are large enough, fit a second, larger-diameter hose around another hose that fits snugly to the line. Drill holes in both hoses and use cord to tie them securely to the line. In a pinch, you can use a single hose.

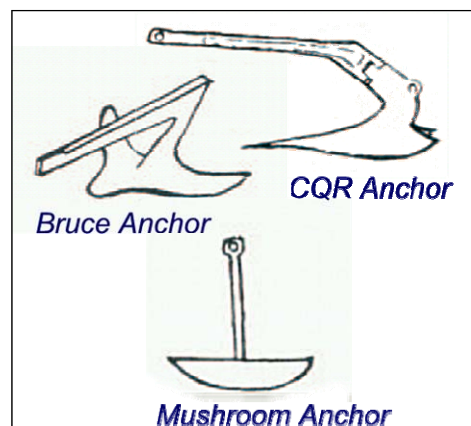
7. If the vessel is to be unattended during the hurricane season, it should be hauled to a storage yard or on its trailer, if trailerable. Arrangements for wet storage at a protected dock, mooring or marina is another alternative.

8. Make up an inventory of all vessel equipment. Note items to be removed from vessel. Keep a copy of the inventory list on board and ashore.

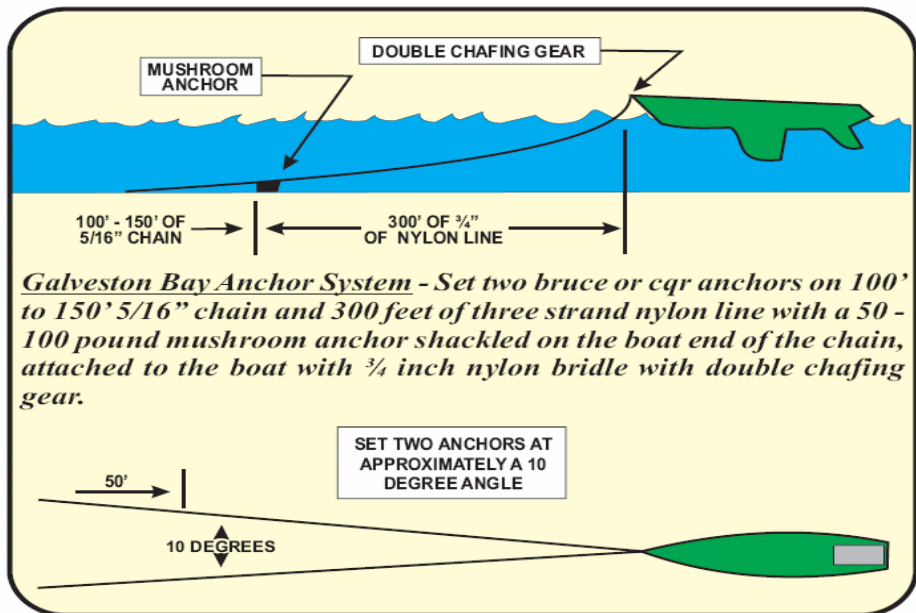
9. For wet berthing locations, ensure that sea walls and docks are sound, mooring bits and cleats are secure, dock pilings and dolphins are in good condition.

10. At private berthing and dock facilities in residential areas, check with neighbors and other vessel owners in the area. Coordinate safety and mooring arrangement plans.

11. At marina facilities, find out from the dock master or marina management personnel what their hurricane plans and/or procedures are for vessels left at the facility.



The Bruce anchor will bury deeper the harder the boat pulls and holds in a 360-degree rotation. After surviving the storm, the anchor may be in so deep it will have to be sacrificed.



12. Check with local marine and law enforcement organizations for local plans. This is especially important in boating centers of South Florida where access to inland protected rivers and canals is limited by bridges that may be permanently closed for land evacuation routes when a hurricane warning is issued.

13. If your plan calls for moving your vessel from its current berthing location to an inland waterway location, know your route, your vessel navigation requirements at different tides and the restrictions along the route such as bridges (auto and train) and channels. This is especially important for sailboats.

14. Rehearse your planned vessel movement, including an actual visit to the alternate dock or hurricane mooring/anchoring location. If rental of a protected dock or slip space is required, make arrangements well ahead of time.

15. Be sure that your family and/or key crew members know your hurricane plan and that everyone that may be involved knows how to contact you, your designated representative or agent.

16. Key your plan on quick response. Moving a vessel, stripping sails, derigging, and anchoring in rough seas and 35 mph winds is extremely difficult. It is impossible in 45 mph winds.

17. Prepare your hurricane plan in writing and make copies of it. Keep a copy on the vessel and one at home. Extra copies should also be made for marina or yacht club facilities which may require you to have one on file with them.

18. Make sure your insurance policy is current. Read the policy thoroughly. There is quite a bit of helpful and advisory information in the policy telling what the vessel owner should do and should not do if there is a storm or hurricane related loss or damage to the vessel. Understand the coverages, exclusions and your duties as a vessel owner.

One of many possible arrangements that can be used to secure a boat in a hurricane hole.

Prior to the hurricane

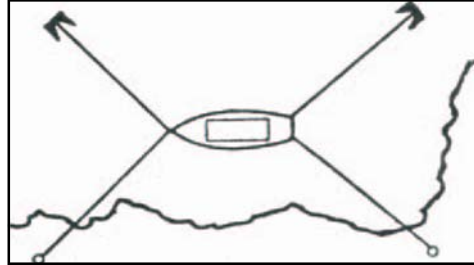
1. If your plan calls for moving your vessel and you have sufficient notice, do it at least 48 to 72 hours (or earlier) before the hurricane is estimated to strike the area. This may be before a hurricane watch is issued.

2. Make sure that:
- (a) fuel tanks are full;
 - (b) fuel filters are clean;
 - (c) batteries are charged;
 - (d) bilges are clean;
 - (e) cockpit drains are free and clear;
 - (f) fire fighting equipment is in good order;
 - (g) lifesaving equipment is in good condition, in place and readily accessible. (These items will be secured later.)

3. Remove and/or secure all deck gear, portable gear, radio antennas, outriggers, fighting chairs, deck boxes, bimini tops and side canvas/curtains, sails, boom, dorades, extra halyards, canister rafts, and dinghies. Make sure that you secure all hatches, ports, doors, lazarettes and sailboat rudder. (You may need the dinghy to take lines ashore.)

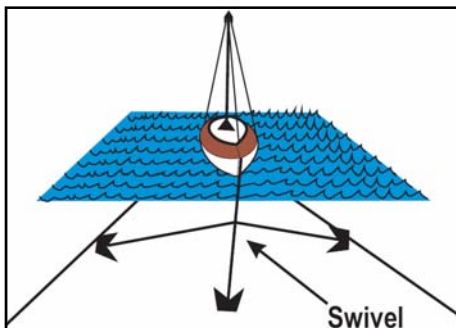
4. If your vessel is moored at a dock on a canal, river or in a marina near the gulf, it is possible that with an additional 5-10 feet or greater storm surge, the vessel could take a beating against the dock or even impale itself on the pilings.

5. The best offshore mooring location for a vessel to ride out a storm is in the center of a canal or narrow river where at least double mooring lines can be secured to both shores, port and starboard, fore and aft.



6. Do not raft vessels together at moorings or docks, especially if larger and smaller vessels are involved. Mooring vessels singly reduces the possibility of damage.

7. If the vessel must remain dockside at a private dock or marina, heavy duty fender boards (2"x6") should be used on a bare wood center piling or otherwise installed to prevent damage. Lines should be doubled and even tripled where necessary to hold a vessel in the center of a berth or off seawall or dock pilings. Preventers should be installed at the top of the pilings so lines cannot slop off the top. Note that nylon line will stretch five to ten percent of it's length.



Using three anchors set 120 degrees apart allows the boat to swing and face the wind. This is an especially good technique in crowded harbors because the boat will not swing in as wide an arc as a boat that is riding on only two anchors.

During the hurricane

1. **Do not stay aboard any vessel during a hurricane.** If you have taken all the preliminary precautions previously outlined, you have done all that can be done in anticipation of the storm.

2. Stay in a protected and safe place. Attend to the safety of family, home and other personal property.

3. Stay tuned to news broadcasts and weather advisories concerning the hurricane so that you will know when the danger has passed.

After the hurricane

1. After the hurricane has passed, there may be extensive damage in the area. While checking the condition of your vessel is an important concern, there may be limitations such as flooded roads and downed power lines. A check of the vessel should be made as soon as practicable to determine its condition and security.

2. Other vessels may be up river behind your vessel mooring location. This may require that you modify your mooring if you are in the center of a canal or stream so that other vessels may navigate past you. If you don't, others may just cut your mooring lines and let your vessel drift, causing more damage than the hurricane.

3. A check of vessel security is important if damage has occurred. One security aspect that must be considered is the prevention of looters or others who feel that a damaged vessel is "abandoned" and thus theirs to take.

4. If there has been any theft or vandalism loss or damage to the vessel, other than storm related, a report should be made to local law enforcement authorities so that appropriate action can be taken. The incident report number and, if possible, a copy of the incident report should be obtained to substantiate any insurance claim or IRS property loss report.

5. If the vessel incurs damage, take immediate action to save the vessel and/or equipment and prevent further loss or damage. All insurance policies require this action. Insurers expect vessel owners to take those actions that a "prudent uninsured person" would take to save and , preserve his property.

6. If the vessel appears to be irreparable (constructive total loss), you must make arrangements to remove the hull from any navigable

waterway as government authorities will probably require this. The vessel should be moved to a yard or salvage facility storage area.

7. If salvage removal of your vessel is required (emergency or otherwise) and you are unable to receive advice from your insurance company, agent, marina or yacht club, screen the salvage contractor for competence and cost. Read the contract, know where your vessel is going, and the level of security provided at the location. Save as much equipment from the vessel as possible.

8. Where vessel damages are repairable, immediate arrangements should be made with a reputable repair yard to have the vessel moved there, if necessary, for repairs. Make a list of repair facilities that you would like to work with. Obtain estimates before proceeding with repairs. Those who act quickly will be back in the water first.

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