

WAVE HEIGHT DUE TO WIND SPEED, STORM DURATION, AND/OR FETCH



Begin with WIND SPEED on left (local or forecast, blue lines, noted in knots) and track horizontally to right

WAVE HEIGHTS (brown lines, noted in feet) are driven by both DURATION of storm (aqua lines, in hours) and FETCH distance (dark blue vertical lines in nautical miles)

Tracking your windspeed horizontally, find the predominant wave driver: first to the right (FETCH or DURATION)

> Example 1 Local wind = 25 kts Fetch from anchorage = 15 nm Storm Duration = 4 hours Probable Wave Height = 3'+

Example 2 Local wind = 33 kts Fetch from anchorage = 45 nm Storm Duration = 3 hours **Probable Wave Height = 8'+**

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- **Check all ports and skylights** for water-tightness on a sunny day.
- Before the storm, run the engine to charge batteries.
- When did you last **replace your bilge pump impeller**? This year? (It's a good sunny-day project.)
- **Lash the tiller or wheel amidships.**
- Move any deck feature either below or ashore if it adds windage or might blow away: dodgers, spray cloths, bimini tops, ventilators, tender, unneeded line, cockpit cushions, man-overboard gear, outboard, antennae, canvas covers, etc.
- **Take sails off the boom** and stow them below or ashore, or at least furl them very compactly and use extra sail stops to secure them tightly.
- **Rig boom and gaff preventers to secure spars amidships.**
- Rig all halyard shackles to a single line cleated aft, and raise them all to the **mast truck** (or as high as you can go, if you have a fractional rig), reducing the windage of multiple lines. Secure and lash down loose halyard line.
- **Unstow and lay out an emergency bilge pump**, just in case it's needed.

Close all seacocks with the prime exception of the bilge pump and cockpit drains.

- **If you're in a slip, double up the spring lines** (forward to aft, aft to forward) and lengthen all dock lines to allow for a tidal surge. This means running lines to pilings or cleats farther than normal from the boat, and is standard procedure at most marinas facing a major storm threat.
- **Install chafe guards** everywhere a line passes through a chock or rests against a metal fitting or another line.
- **Remove jibs and staysails** and stow them below or ashore. This includes roller-furled sails, because wind can tease them out so they exert enormous force on mast, rigging, and mooring. If the jib can't be struck, reroll it tightly, finishing with at least four turns of the sheets around the sail, and securing the port and starboard sheets positively. Adding sail stops as high as safely possible on the rolled sail is not overkill.
- Secure the roller drum of furler(s) at their bases as a backup to the roller-furling lines. This could be another line or some kind of clamp that would prevent the drum from rotating.
- Shut down the electric panel, with the exception of one battery and **the bilge pump**, which is usually installed with a three-way switch in the positive lead so it can be turned to automatic, to manual, or completely shut off. However your bilge pump is wired, ensure it's on and at the ready.
- Check all shackles, cotter pins, and fittings for standing rigging.
- Shift to the storm-mooring pennant and lash down shipboard eyesplices with special attention to robust chafe armor.
- **Take all of your valuables ashore**—electronics, binoculars, navigation equipment, clock, books, radio, foulweather gear-anything that might be scavenged by storm pirates.
- **Leave your companionway unlocked**; in the case of an unforeseen disaster, a neighbor or boatyard mate could save your boat by boarding it.

Print out this checklist and keep it onboard. Better yet, laminate it and use an erasable marker to check off items each time a storm threatens.







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