US Sailing Coastal Safety Requirements

Humboldt Yacht Club will apply these standards to all keelboat races out of Humboldt Bay.

Definition: Coastal: Races not far removed from shorelines, where rescue is likely to be quickly available

1.1 Minimum Standards Initial .

The Safety Equipment Requirements establish uniform minimum equipment and training standards for a variety of boats racing in differing conditions. These regulations do not replace, but rather supplement, the requirements of applicable local or national authority for boating, the Racing Rules of Sailing, the rules of Class Associations and any applicable rating rules.

1.2.1 Responsibility Initial .

Should there be an incident during a race the Organizing Authority or US Sailing may conduct an investigation to determine the facts of the incident and provide recommendations. By participating in a race conducted under the SER, the person in charge, each competitor and boat owner agrees to reasonably cooperate with the organizing authority and US Sailing in the development of an independent incident report.

1.3 Inspection by Race Committee Initial .

A boat may be inspected at any time by an equipment inspector or measurer appointed for the event. If she does not comply with these regulations, her entry may be rejected or she will be subject to a protest filed by the RC. A Violation of the Safety Equipment Requirements may result in a penalty other than disqualification.

1.4 Equipment in Working Order Initial .

All equipment required shall function properly, be regularly checked, cleaned and serviced, and be of a type, size and capacity suitable for the intended use and size of the boat and the size of the crew. This equipment shall be readily accessible while underway and, when not in use, stored in such a way that deterioration is minimized.

1.5 Proper Storage Initial .

A boat's heavy items such as batteries, stoves, toolboxes, anchors, chain and internal ballast shall be secured.

1.6 Strong Boat **Initial .**

A boat shall be strongly built, watertight and, particularly with regard to hulls, decks and cabin trunks, capable of withstanding solid water and knockdowns. A boat shall be properly rigged and ballasted, be fully seaworthy and shall meet the standards set forth herein. A boat's shrouds and at least one forestay shall remain attached at all times.

1.7 Boat Watertight **Initial .**

A boat's hull, including, deck, coach roof, windows, hatches and all other parts, shall form an integral watertight unit, and any openings in it shall be capable of being immediately secured to maintain this integrity.

2.1.1 Companion Way **Initial .**

A boat's companionway(s) shall be capable of being blocked off to main deck level (sheerline). The method of blocking should be solid, watertight, and rigidly secured, if not permanent.

2.1.2 Hatch Boards **Initial .**

A boat's hatch boards, whether or not in position in the hatchway, shall be secured in a way that prevents their being lost overboard.

2.1.3 Cockpit **Initial .**

A boat's entire cockpit shall be solid, watertight, strongly fastened and/or sealed. Weather-tight seat hatches are acceptable only if capable of being secured when closed.

2.1.4 Cockpit Drain **Initial .**

A boat's cockpit drains shall be capable of draining six inches of water in 5 minutes. One square inch (645mm2) of effective drain per eight square feet (0.743m2) of cockpit sole will meet this requirement.

2.15.2 Cockpit Volume **Initial .**

A boat's maximum cockpit volume for cockpits not open to the sea, including any compartments capable of flooding, to lowest points of coaming over which water can adequately escape, shall not exceed 0.08 x LOA x Max. Beam x Freeboard aft. The cockpit sole shall be at least 0.02 x LOA above LWL.

2.1.6 Through-Hull **Initial .**

A boat's through-hull openings below the waterline shall be equipped with sea cocks or valves, except for integral deck scuppers, speed transducers, depth finder transducers and the like; however a means of closing such openings shall be provided.

2.2.2 Stability **Initial .**

The boat must have a stability index greater than or equal to 103 or meet the requirements of ISO 12217-2B.

If Not PLB for All Crew. **Initial .**

2.2.3 Canting Keel **Initial .**

A boat with moveable or variable ballast (water or canting keel) shall comply with the requirements of Appendix K.

2.4.1 Lifelines **Initial .**

A boat's deck including the headstay shall be surrounded by a suitably strong enclosure, typically consisting of lifelines and pulpits, meeting the requirements in 2.4.2 to 2.4.8.

Crew must have PLB or Tethered to boat at all times **Initial .**

2.4.2 Stanchions **Initial .**

A boat's stanchion and pulpit bases shall be within the working deck.

Crew must have PLB or Tethered to boat at all times **Initial .**

2.4.3 Bow Pulpit **Initial .**

Bow pulpits may be open, but the opening between the vertical portion of stanchion pulpit and any part of the boat shall not exceed 14.2" (360mm).

2.4.4 LifeLines **Initial .**

Lifelines shall be-uncoated stainless steel wire. A multipart-lashing segment not to exceed 4" per end termination for the purpose of attaching lifelines to pulpits is allowed. Lifelines shall be taut.

Dynema or Coated Stainless Steel Lifelines okay. Inspect on day of race. **Initial .**

2.4.4.1 LifeLines **Initial .**

Lifeline deflection shall not exceed the following: a) When a deflecting force of 9 lbs (40N) is applied to a lifeline midway between supports of an upper or single lifeline, the lifeline shall not deflect more than 2” (50mm). This measurement shall be taken at the widest span between supports that are aft of the mast. b) When a deflecting force of 9 lbs (40N) is applied midway between supports of an intermediate lifeline of all spans that are aft of the mast, deflection shall not exceed 5” (120mm) from a straight line between the stanchions.

2.4.5 Supports **Initial .**

The maximum spacing between lifeline supports (e.g. stanchions and pulpits) shall be 87" (2.2m).

2.4.8 Boats under 30ft **Initial .**

Toe rails shall be fitted around the foredeck from the base of the mast with a minimum height of 3/4" (18mm) for boats under 30' (9.14m) and 1" (25mm) for boats over 30'. An additional installed lifeline that is 1-2" (25-51mm) above the deck will satisfy this requirement for boats without toerails.

If not then crew must be tethered at all times **Initial .**

2.4.9 Boats over 30ft Initial .

Trimarans are exempted from the lifeline requirement where there is a trampoline outboard of the main hull, except that a lifeline must run from the top of a bow pulpit to the forward crossbeam at the outboard edge of the bow net or foredeck. Catamarans with trampoline nets between the hulls are exempted from the lifeline requirement. All catamarans are exempted from the need for pulpits and lifelines across the bow.

2.5.1 Bilge Pump Permanent Initial .

A boat shall have a permanently installed manual bilge pump of at least a 10 GPM (37.8 liter per minute) capacity and which is operable from on deck with the cabin closed with the discharge not dependent on an open hatch. Unless permanently attached to the pump, the bilge pump handle shall be securely attached to the boat in its vicinity via a lanyard or catch. A bilge pump discharge shall not be connected to a cockpit drain. The bilge pump shall not discharge into a cockpit unless that cockpit opens aft to the sea.

2.5.3 Bilge Pump Initial .

A boat shall have a manual bilge pump of at least a 10 GPM (37.8 liter per minute) capacity.

2.7.2 Mechanical Propulsion Initial .

A boat shall have a mechanical propulsion system that is quickly available and capable of driving the boat at a minimum speed in knots equivalent to the square root of LWL in feet (1.8 times the square root of the waterline in meters) for 4 hours.

2.7.3 Engine ABYC Initial .

The boat's engine and generator installation (if so equipped) must conform to ABYC, ISO, or U.S. Coast Guard standards.

3.1.1 PFD Initial .

Each crewmember shall have a life jacket that provides at least 33.7lbs (150N) of buoyancy, intended to be worn over the shoulders (no belt pack), meeting either U.S. Coast Guard or ISO specifications. Alternatively, each crewmember shall have an inherently buoyant off-shore life jacket that provides at least 22lbs (100N) of buoyancy meeting either U.S. Coast Guard or ISO specifications.

3.1.2 PFD Crotch Straps Initial .

Life jackets shall be equipped with crotch or leg straps, a whistle, a waterproof light, be fitted with marine-grade retro-reflective material, and be clearly marked with the boat's or wearer's name, and be compatible with the wearer's safety harness. If the life jacket is inflatable, it shall be regularly checked for air retention.

No Crotch Straps needed **Initial .**

3.1.4 Safety Harness Initial .

Each crewmember shall have a safety harness and compatible safety tether not more than 6'7" (2m) long with a minimum tensile strength of 4500 lb. (20kN). The tether shall have a snap hook at its far end and a means to quickly disconnect the tether at the chest end.

3.2.1 Jacklines Initial .

A boat shall carry jacklines with a breaking strength of at least 4500 lb. (20kN) which allow the crew to reach all points on deck, connected to similarly strong attachment points, in place while racing.

3.2.3 Multihull Jacklines Initial .

Multihulls must have jacklines or attachment points that are accessible when the boat is inverted.

3.3.1 Navigation Lights Initial .

A boat racing between sunset and sunrise shall carry navigation lights that meet U. S. Coast Guard or applicable government requirements mounted so that they will not be obscured by the sails nor be located below deck level.

3.4 Fire Extinguisher Initial .

A boat shall carry fire extinguisher(s) that meets U.S. Coast Guard or applicable government requirements, when applicable.

3.5 Sound Initial .

A boat shall carry sound-making devices that meets U.S. Coast Guard or applicable government requirements, when applicable.

3.6.2 Smoke Initial .

A boat shall carry one SOLAS orange smoke flares not older than the expiration date.

3.6.4 Red Flares Initial .

A boat shall carry three SOLAS red hand flares not older than the expiration date.

3.6.5 LifeRaft Flares Initial .

Boat flares stored inside of life rafts may not be used to satisfy the flare requirement.

3.6.6 Flares Initial .

A boat shall carry U.S. Coast Guard (or applicable government entity) flares meeting day-nightrequirements not older than the expiration date.

3.7.1 Life Sling **Initial .**

A boat shall carry a Lifesling or equivalent man overboard rescue device equipped with a self igniting light stored on deck and ready for immediate use.

Not Needed **Initial .**

3.7.2 MOB Pole **Initial .**

A boat shall have a man overboard pole and flag, with a lifebuoy, a self-igniting light, a whistle, and a drogue attached. A self-inflating Man Overboard Module, Dan Buoy or similar device will satisfy this requirement. Self-inflating apparatus shall be tested and serviced in accordance with the manufacturer's specifications. These items shall be stored on deck, ready for immediate use, and affixed in a manner that allows for a "quick release".

3.7.3 Throwing Line **Initial .**

A boat shall have a throwing sock-type heaving line of 50' (15m) or greater of floating polypropylene line readily accessible to the cockpit.

3.7.4 Life Ring **Initial .**

A boat shall carry a Coast Guard or applicable government approved "throwable device". If the device carried under 3.7.1 or 3.7.2 satisfies this requirement, then no additional device is needed.

3.8.1 VHF Radio **Initial .**

A boat shall have a permanently installed 25-watt VHF radio connected to a masthead antenna by a co-axial feeder cable with no more than a 40% power loss. Such radio shall have DSC capability, have an antenna of at least 15" (381mm) in length, be connected to or have an internal GPS, and have the assigned MMSI number (unique to the boat) programed into the VHF.

15ft external antenna for handheld vhf **Initial .**

3.8.2 HandHeld Vhf **Initial .**

A boat shall have a watertight handheld VHF radio or a handheld VHF radio with waterproof cover. This radio shall have DSC/GPS capability with an MMSI number properly registered to the vessel.

3.14 GPS **Initial .**

A boat shall carry a GPS receiver.

Waterproof Cell with MOB APP **Initial .**

3.15 MOB TRACK **Initial .**

A boat shall carry an electronic means to record the position of a man overboard within ten seconds. This may be the same instrument listed in 3.14.

Waterproof Cell with MOB APP **Initial .**

3.16.2 EPERB **Initial .**

A boat shall carry either a 406MHz EPIRB which is properly registered to the boat, or a floating 406MHz Personal Locator Beacon, registered to the owner with a notation in the registration that it is aboard the boat. This device shall be equipped with an internal GPS.

Not Needed **Initial .**

3.18 Depth Sounder **Initial .**

A boat shall have a permanently installed depth sounder that can measure to depths of at least 200 ft. (61m).

Not Needed **Initial .**

3.19.1 Compass **Initial .**

A boat shall have a permanently mounted magnetic compass independent of the boat's electrical system suitable for steering at sea.

3.2 Charts **Initial .**

A boat shall have non-electronic charts that are appropriate for the race area.

3.22 Through-hull Plugs **Initial .**

A boat shall carry soft plugs of an appropriate material, tapered and of the appropriate size, attached or stowed adjacent to every through-hull opening.

3.23 Anchor **Initial .**

A boat shall carry one anchor, meeting the anchor manufacturer's recommendations based on the yacht's size, with a suitable combination of chain and line.

3.24.1 FlashLight **Initial .**

A boat shall carry a watertight, high-powered searchlight, suitable for searching for a person overboard at night or for collision avoidance.

High Powered LED Flashlight **Initial .**

3.24.3 Flashlight **Initial .**

A boat shall carry at least two watertight flashlights with spare batteries in addition to the requirement of 3.24.1.

3.25 First Aid Kit **Initial .**

A boat shall carry a first aid kit and first aid manual suitable for the likely conditions of the passage and the number of crew aboard.

3.26 Radar Reflector **Initial .**

A boat shall carry an 11.5" (292mm) diameter or greater octahedral radar reflector or one of equivalent performance.

3.27.1 Bucket with Lanyard **Initial .**

A boat shall carry two sturdy buckets of at least two gallons (8 liters) capacity with lanyards attached.

3.28 Safety Diagram **Initial .**

A boat shall post a durable, waterproof diagram or chart locating the principal items of safety equipment and through hulls in the main accommodation area where it can be easily seen.

3.29 Wheel Steered Boats **Initial .**

Wheel steered boats shall have an emergency tiller, capable of being fitted to the rudder stock.

3.31 Reflective Material **Initial .**

All lifesaving equipment shall bear retro-reflective material and be marked with the yacht's or wearer's name. The exception would be for new equipment or rented equipment (e.g. life rafts) that would require the unpacking of sealed equipment in order to meet this requirement. The boat name shall be added during the first servicing of any new equipment.

3.33.1 Reefing **Initial .**

A boat shall have a mainsail reefing capable of reducing the luff length by at least 10%.

3.35 Rigging **Initial .**

A boat shall not be rigged with any halyard that requires a person to go aloft in order to lower a sail.

3.36 Boom **Initial .**

A boat over 30' LOA (9.14m) shall have a means to prevent the boom from dropping if support from the mainsail or halyard fails.

4.12 Steering Disabled **Initial .**

Crews must be aware of methods of steering the yacht with the rudder disabled.

4.2 Man Overboard **Initial .**

Annually, two-thirds of the boat's racing crew shall practice man-overboard procedures appropriate for the boat's size and speed. The practice shall consist of marking and returning to a position on the water, and demonstrating a method of hoisting a crewmember back on deck, or other consistent means of reboarding the crewmember.

4.32 Safety at Sea Training **Initial .**

At least 30% of those aboard the boat, but not fewer than two members of the crew, unless racing single handed, including the person in charge, shall have attended a half-day, one-day, or two-day US Sailing Safety at Sea Seminar within the last 5 years, including online courses when available, or other courses as accepted by US Sailing or other national authority.

4.4 Emergency Knowledge **Initial .**

As required in 1.2 above the person in charge shall ensure that all crew members know where all emergency equipment is located and how to operate the equipment. In addition, the person in charge and crew should discuss how to handle various emergency situations including Crew Overboard, Grounding, Loss of steering, Flooding, Fire, Dismasting, and Abandon Ship.

4.6 PFD **Initial .**

Lifejackets as described in 3.1.1 – 3.1.3 should be worn by all crew on deck in any conditions where recovery may be difficult. It is recommended that lifejackets be worn by all crew on deck unless the person in charge has indicated that they may be set aside.