2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Each boat shall comply with the US Sailing Special Equipment Requirements in effect as of March 1, 2021, except as modified below. Collectively, the SER as modified are referred to as the Pacific Cup Equipment Requirements or PCER. For convenience, the entire SER are reproduced here. Section names have been added for ease of use. As in the original SER, numbering is not continuous.

Section Name	Requirement
SER 1.0.1 Definition	Ocean: Long distance races, well offshore, where rescue may be delayed
SER 1.1 Overall	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.
SER 1.2 Responsibility	The safety of a boat and her crew is the sole and inescapable responsibility of the "person in charge", as per RRS 46, who shall ensure that the boat is seaworthy and manned by an experienced crew with sufficient ability and experience to face bad weather. S/he shall be satisfied as to the soundness of hull, spars, rigging, sails and all gear. S/he shall ensure that all safety equipment is at all times properly maintained and safely stowed and that the crew knows where it is kept and how it is to be used.
SER 1.2.1 Investigation	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.
SER 1.3 Inspections	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.
PC 1.3.1 Post Finish Inspection	Boats may be required to proceed directly to a place of inspection after finishing.
SER 1.4 Equipment and Knowledge	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.

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
SER 1.5 Overall: Secure Storage	A boat's heavy items such as batteries, stoves, toolboxes, anchors, chain and internal ballast shall be secured.
SER 1.6 Overall: Strength of Build	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.
SER 1.7 Overall: Watertight Integrity	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.
~~**SER 1.8 Overall: Scantlings**~~	~~Hull Construction Standards - Scantlings with plan review approval - (See Appendix)~~
PC 1.8 Stability and Scantlings	SER 1.8 and 2.2.1 are replaced with: A boat may be required to submit a review of her scantlings and of her minimum limit of positive stability. A minimum limit of 105 degrees will be enforced.
SER 2.1.1 Hull Openings	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.
SER 2.1.2 Hatchboards	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.
PC 2.1.2.1 Hatchboards	A companionway hatch shall be fitted with a strong securing arrangement which shall be operable from the exterior and interior including when the yacht is inverted
SER 2.1.3 Cockpit	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.
SER 2.1.4 Cockpit Drains	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.
SER 2.1.5.1 Cockpit Volume	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 0.06 x LOA x Max. Beam x Freeboard aft. The cockpit sole shall be at least 0.02 x LOA above LWL.
SER 2.1.6 Through Hulls	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.

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
~~**SER 2.2.1 Stability**~~	~~The boat must have a stability index greater than or equal to 115, or meet the requirements of ISO 12217-2A~~
SER 2.2.3 Stability	A boat with moveable or variable ballast (water or canting keel) shall comply with the requirements of Appendix K.
PC 2.2.3 Movable Ballast	A boat with moveable or variable ballast (water or canting keel) shall comply with the requirements of SER Appendix K. If this conflicts with 1.7, the boat shall contact the Technical Committee for resolution.
SER 2.3.1 Head	A boat shall be equipped with a head or a fitted bucket.
SER 2.3.2 Bunks	A boat shall have bunks sufficient to accommodate the off watch crew.
SER 2.3.3 Stove	A boat shall have a stove with a fuel shutoff.
SER 2.3.4 Water	Boats shall carry water as required by the Notice of Race such that a single failure of a tank or delivery system will not allow the loss of more than half the water.
PC 2.3.4.a Ten Gallons	A boat shall have a minimum of 10 gallons of water per crew member at the start in addition to the "emergency water" set out in PC 3.37. • Water shall be carried in a way that complies with SER 2.3.4. If all in containers, the containers shall be in at least two separate locations. • Water in the life raft is not counted toward the total.
PC 2.3.4.b Prudent consumption	Whether or not there is an onboard water maker, each boat shall consume its potable water in a prudent and timely fashion, and shall not rely on a water maker as an alternative supply of potable water, except in emergencies.
SER 2.3.5 Hand Holds	A boat shall have adequate hand holds below decks.
SER 2.4.1 Enclosure	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.
SER 2.4.2 Stanchions	A boat's stanchion and pulpit bases shall be within the working deck.
SER 2.4.3 Pulpit	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).
SER 2.4.4 Lifelines	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.

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
SER 2.4.4.1 Lifelines Taut	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.
SER 2.4.5 Lifelines Spacing	The maximum spacing between lifeline supports (e.g. stanchions and pulpits) shall be 87" (2.2m).
~~**SER 2.4.6 Lifelines Small Boats**~~	~~Boats under 30' (9.14m) shall have at least one lifeline with 18" (457mm) minimum height above deck, and a maximum vertical gap of 18" (457mm). Taller heights will require a second lifeline. The minimum diameter shall be 1/8" (3mm).~~
PC 2.4.6 Lifeline Diameter and height	Replace SER 2.4.6 with: Boats under 30' (9.14m) shall have at least one lifeline with 15" minimum height above deck, and a maximum vertical gap of 18". Taller heights will require a second lifeline. The minimum diameter shall be 1/8" (3mm). A class or design of boats with an extraordinary requirement may petition for an alternate arrangement.
SER 2.4.7 Lifelines >30'	Boats 30' and over (9.14m) shall have at least two lifelines with 24" (762mm) minimum height above deck, and a maximum vertical gap of 15" (381mm). The minimum diameter will be 5/32" (4mm) for boats to 43' (13.1m) and 3/16" (5mm) for boats over 43' (13.1m).
SER 2.4.8 Toe Rails	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.
SER 2.4.9 Trimarans	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.

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
SER 2.5.1 Dewatering pumps	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.
SER 2.5.2 Dewatering pumps	A boat shall have a second permanently installed manual bilge pump of at least 10 GPM (37.8 liter per minute) capacity, operable from below deck, meeting the same criteria as above.
PC 2.5.2.1 Dewatering pump	One dewatering pump may be mounted on a secure, removable platform.
SER 2.6 Mast and Rigging	A boat shall have the heel of a keel-stepped mast securely fastened to the mast step or adjoining structure.
SER 2.7.1 Mechanical Propulsion	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 (1.81 times the square root of the waterline in meters) for 10 hours.
PC 2.7.1 Fuel	At the start, a boat shall carry enough fuel capacity, in addition to daily charging requirements, to meet the minimum speed for 8 hours if an inboard engine and 4 hours if an outboard engine
SER 2.7.3 Mechanical Propulsion Installation	The boat's engine and generator installation (if so equipped) must conform to ABYC, ISO, or U.S. Coast Guard standards.
PC 2.7.3 Fuel storage	Gasoline and Propane must be stowed in suitable containers above the working deck or in vented compartments having no possibility of leaking into the cabin, except that small (1 liter) canisters may be stored below decks in locations reasonably secure from damage.
SER 3.1.1 Life Jackets	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.
PC 3.1.1.1 Inspect Life Jackets	The Person in Charge shall inspect each life jacket within 60 days before the start of the race. The boat shall have at least one replacement CO2 cartridge and rearming kit for each inflatable lifejacket in this section.

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
SER 3.1.2 Life Jacket Features	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.
SER 3.1.4 Harness	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.
SER 3.2.1 Jacklines	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.
SER 3.2.2 Clipping Points	A boat shall have adequate clipping points or jacklines that allow the crew to clip on before coming on deck and unclip after going below.
SER 3.2.3 Deck Safety	Multihulls must have jacklines or attachment points that are accessible when the boat is inverted.
SER 3.3.1 Navigation Lights	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.
SER 3.3.2 Navigation Lights	A boat shall have a second set of navigation lights that comply with US Coast Guard or applicable government requirements and which can be connected to a different power source than the primary lights.
PC 3.3.2.1 Spare Navigation Lights	A masthead tricolor is recommended as the primary navigation lights, and when so used the normal bow and stern lights will satisfy the PCER when usable with a separate battery and wiring. A common battery switch is acceptable.
SER 3.4 Fire Extinguishers	A boat shall carry fire extinguisher(s) that meets U.S. Coast Guard or applicable government requirements, when applicable.
PC 3.4.1 Fire Blanket	A boat shall additionally carry a fire blanket.
SER 3.5 Sound Producing Equipment	A boat shall carry sound-making devices that meets U.S. Coast Guard or applicable government requirements, when applicable.
SER 3.6.1 Smoke Flares	A boat shall carry two SOLAS orange smoke flares not older than the expiration date.
SER 3.6.3 Hand Flares	A boat shall carry four SOLAS red hand flares not older than the expiration date.

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
SER 3.6.5 Raft Flares	Boat flares stored inside of life rafts may not be used to satisfy the flare requirement.
PC 3.6.3.1 Flares	SOLAS parachute flares may be substituted for hand flares.
SER 3.7.1 Crew Overboard Sling	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.
SER 3.7.2 Crew Overboard Pole	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".
SER 3.7.3 Throw Line	A boat shall have a throwing sock-type heaving line of 50' (15m) or greater of floating polypropylene line readily accessible to the cockpit.
SER 3.7.4 Throwable	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.
SER 3.8.1 Emergency Communications	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.
PC 3.8.1.1 VHF Antenna	A cable which meets the specifications set out in the "VHF CABLE REFERENCE" on the Pacific Cup website shall be deemed to satisfy the <40% loss requirement. If the masthead antenna is at least 36" tall, a cable loss up to 50% is permitted. Note that other races may not permit this.
SER 3.8.2 VHF	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.
SER 3.8.4 VHF Antenna	A boat shall have an emergency VHF antenna with sufficient coax to reach the deck, and have a minimum antenna length of 15" (381mm).

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
SER 3.9 AIS	All boats shall have an AIS Transponder, sharing a masthead VHF antenna via a low loss AIS antenna splitter. An acceptable alternative is a dedicated AIS antenna that is a minimum of 0.9 meters long, mounted with its base at least 3 meters above the water, and fed with coax that has a maximum 40% power loss. AIS requirement for Coastal is effective January 1, 2024.
PC 3.9.a Tracker	A boat shall carry and deploy as instructed a tracker provided by PCYC.
PC 3.9.b Email	A boat shall have a means of sending and receiving email daily.
PC 3.9.c Satellite Voice	A boat shall have an Iridium or Inmarsat voice communication system (e.g.phone or "GO!"), operable from below deck with an external antenna, preprogrammed with race, medical, and safety telephone numbers as specified by the Communications Plan and powered or rechargeable from the boat's electrical system.
PC 3.9.d Battery	A boat shall have a provision to power the Comms gear from either the engine starting battery or, if there is none, a separately-provided battery of at least 12 amp hours.
SER 3.13 Weather	A boat shall have a method of receiving weather information in addition to the fixed mount and hand held VHF radio.
SER 3.14 GPS	A boat shall carry a GPS receiver.
SER 3.15 MOB Button	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.
SER 3.16.1 EPIRB	A boat shall carry a 406MHz EPIRB that is properly registered to the boat. This device shall be equipped with an internal GPS.
PC 3.16.1 Raft EPIRB	A device packed in a life raft does not meet the EPIRB requirement.
SER 3.17 Knot Meter	A boat shall have a knotmeter and/or distance-measuring instrument.
SER 3.18 Depth	A boat shall have a permanently installed depth sounder that can measure to depths of at least 200 ft. (61m).
SER 3.19.1 Compass	A boat shall have a permanently mounted magnetic compass independent of the boat's electrical system suitable for steering at sea.
SER 3.19.2 Another Compass	A boat shall have a second magnetic compass suitable for steering at sea which may be handheld.

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
SER 3.20 Charts	A boat shall have non-electronic charts that are appropriate for the race area.
PC 3.20.1 Kaneohe Chart	A boat shall carry a current paper chart of Kaneohe Bay (No. 19359).
SER 3.21 Alt Sail Number	A boat shall have the ability to display sail numbers and letters of the size carried on the mainsail by an alternative means when none of the numbered sails is set.
PC 3.21.1 Sail Number	Amending RRS 77 and Appendix G, each boat must have a number of the specified size on her mainsail which must be unique within the Pacific Cup fleet. In the event of conflict, priority will be given to officially-assigned numbers and then order of entry, with the later boat being required to change. Class and nationality insignia are not required. Contravening nationality letters are allowed. A boat shall have the ability to display sail numbers and letters of the size carried on the mainsail by an alternative means when none of the numbered sails is set.
SER 3.22 Plugs	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.
~~**SER 3.23 Anchoring**~~	~~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.~~
PC 3.23 Anchors	SER 3.23 is replaced by A boat 28' or under shall have at least one anchor and rode, and over that size shall have at least two. • Each rode shall consist of chain and a single continuous (not spliced or tied except to the chain) length of nylon line, where the chain is at least half the boat's LOA and the total rode length is 200' plus LOA/2 for the primary and 150' plus LOA/2 for the secondary. • The anchors, chains, and lines shall meet the requirements set out in the “Anchor Appendix”. • The primary anchor must meet the anchor manufacturer’s guidelines for use on a vessel of your size and design. For boats that carry two anchors, the second anchor may be smaller by no more than one size per the anchor manufacturer’s guideline. Where two anchors are carried, one may be carried in a disassembled state.
SER 3.24.1 Searchlight	A boat shall carry a watertight, high-powered searchlight, suitable for searching for a person overboard at night or for collision avoidance.
SER 3.24.2 Flashlights	A boat shall carry a watertight flashlight for each crewmember with spare batteries in addition to the above.
SER 3.25 Medical Kits	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.

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
SER 3.26 Radar Reflectors	A boat shall carry an 11.5" (292mm) diameter or greater octahedral radar reflector or one of equivalent performance.
SER 3.27.1 Buckets	A boat shall carry two sturdy buckets of at least two gallons (8 liters) capacity with lanyards attached.
SER 3.28 Safety Diagram	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.
SER 3.29.1 Emergency Tiller	A boat shall have an emergency tiller, capable of being fitted to the rudder stock.
SER 3.30 Spare Parts	A boat shall carry tools and spare parts, including an effective means to quickly disconnect or sever the standing rigging from the hull.
PC 3.30.1 Cutting Tools	A boat shall have an effective means to quickly disconnect or sever the standing rigging from the hull which shall be bolt cutters capable of cutting the boat's heaviest stay or at least two hacksaws with carbide blades.
PC 3.30.2 Binding tools	A boat shall have one of the following approved repair tools: (a) Band-It brand clamping tool with suitable supply of steel strap and clips or similar steel/stainless steel banding tools. [Note: “Feedwheel” style tools are not recommended because tension is usually lost when tool is removed.] OR (b) At least 100 feet of UHMW polyethylene (e.g. Spectra or Dyneema) or similar line with several suitable levers to make Spanish windlass lashings. PCYC recommends the use of line that is at least 3/16” diameter.
SER 3.31 Identification	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.
SER 3.32 Cockpit Knife	A boat shall carry a strong, sharp knife, sheathed and securely restrained which is readily accessible from the deck and/or cockpit.
SER 3.33.1 Mainsail Reefing	A boat shall have a mainsail reefing capable of reducing the luff length by at least 10%.
SER 3.33.2 Trysail	A boat shall carry a trysail, with the boat's sail number displayed on both sides, which can be set independently of the main boom, has an area less than 17.5% of E x P, and which is capable of being attached to the mast. Storm sails manufactured after 01/01/2014 shall be constructed from a highly visible material. A mainsail with a reef of at least 50% of P is an acceptable substitute for a trysail.
SER 3.33.3 Heavy Weather Jib	A boat shall carry a heavy-weather jib (or heavy-weather sail in a yacht with no forestay) of area not greater than 13.5% height of the foretriangle squared.

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
SER 3.33.4 Storm Jib	A boat shall carry a storm jib not exceeding 5% of the yacht's I dimension squared, an equipped with an alternative means of attachment to the headstay in the event of a failure of the head foil. Storm sails manufactured after 01/01/2014 shall be constructed from a highly visible material.
PC 3.33.5 Heavy Weather Sails	SER. 3.33.1-3.33.3 are amended to allow a boat to carry TWO of the otherwise required three heavy weather sails. A boat may count a mainsail reefable to 50% of P as a trysail if it also carries a storm jib
SER 3.35 Halyards	A boat shall not be rigged with any halyard that requires a person to go aloft in order to lower a sail.
PC 3.35 Halyard to Water	At least one halyard shall be long enough to reach from a winch to the waterline and shall be strong enough to hoist the heaviest crew, in wet clothes and gear, aboard.
SER 3.36 Boom Support	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.
~~**SER 3.37 Water**~~	~~A boat shall carry 1 gallon (3.785 liters) per crewmember of emergency drinking water in sealed containers in addition to any other water carried aboard the boat and it shall be aboard after finishing.~~
PC 3.37 Emergency Water	Replace SER 3.37 with: A boat shall have 1 gallon (3.785 liters) per crewmember of emergency drinking water in sturdy containers that are factory-sealed or sealed by PCYC in addition to any other water carried aboard the boat and it shall be aboard with seals intact after finishing.
~~**SER 3.39 Life Rafts**~~	~~A boat shall carry adequate inflatable life raft(s) designed for saving life at sea with designed capacity for containing the entire crew. The raft shall be SOLAS, ISAF, ISO 9650-1 or ORC approved. The raft shall be stored in such a way that it is capable of being launched within 15 seconds. Boats built after 01/06/2001 shall have the life raft stowed in a deck mounted rigid container or stowed in watertight or self-draining purpose built rigid compartment(s) opening adjacent to the cockpit or the working deck. Boats built prior to 01/06/2001 may alternatively stow the life raft in a valise not weighing over 88 lbs. securely below deck and adjacent to the companionway. The life raft(s) shall hold current certificate(s) of inspection.~~

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
PC 3.39 Life Rafts	SER 3.3.9 is replaced with: A boat shall have adequate inflatable life raft(s) designed for saving life at sea with designed capacity for containing the entire crew. The raft shall be certified by the manufacturer or inspection certificate as compliant with • ISO 9650-1, or • SOLAS, or • ISAF (if made before 2016), or • ORC (if made before January 1, 2004) Each raft shall have an insulated floor and be provided with the equipment pack appropriate to its certification, which shall be ISO pack 1 or 2, SOLAS A or B, ORC, E-Pack, or ISAF. A liferaft may be stowed in any location where it is secure from loss and damage, not obstructed by other gear, and demonstrably capable of being brought to the lifelines within thirty seconds. If deployment requires lifting out of a locker or from below deck, the raft may not exceed 40kg (88lb). The trigger lanyard must be enclosed but readily accessible for rafts stowed below deck. Each raft shall hold a current certificate of inspection. The following portion of the life raft's supplies may be stored in the grab bag: first aid kit, seasick pills, up to half the pyrotechnic signals, thermal protective aids, water, food, portable sail numbers.
SER 3.40 Life Rafts	A boat shall have a grab bag with a lanyard and clip for each life raft. The grab bag shall have inherent flotation and be of a bright fluorescent color containing at least an EPIRB, and a watertight handheld VHF radio. The VHF radio and EPIRB need not be in addition to the prior requirements.
PC 3.41 Mooring	A boat shall have four dedicated mooring/dock lines and four fenders, all adequately sized to the boat. Boats shall be equipped and prepared to dock along a similar sized boat or Med-style, if requested.
~~**SER 4.1.1 Skills: Emergency Steering**~~	~~A boat's crew shall be aware of multiple methods of steering the boat with the rudder disabled, and shall have chosen and practiced one method of steering the boat with the rudder disabled and be prepared to demonstrate said method of steering both upwind and downwind.~~

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
PC 4.1.1 Emergency Steering	SER 4.1.1 is replaced with: A boat's crew shall be aware of multiple methods of steering the boat with the rudder disabled. Where a dual rudder is accepted as satisfying this requirement, the boat shall carry a drogue. Before the start of the race, the skipper shall submit a certification that the skipper and crew have deployed and tested at least one alternative method of steering under sail in no less than ten knots of wind and successfully demonstrated the ability of the method to steer the boat both upwind and downwind. This form will be found with other inspection materials at the race website. The inspector may require a demonstration or video of the emergency steering test.
~~**SER 4.2 Skills: Man Overboard**~~	~~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.~~
PC 4.2 MOB Practice	Within six months before her start, two-thirds of the boat's racing crew shall practice man-overboard procedures appropriate for the boat's size and speed, in no less than ten knots of wind, and wholly under sail. 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. A video of the practice shall be uploaded and posted as directed.
~~**SER 4.3.1 Safety at Sea Training**~~	~~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 one-day or two-day US Sailing Safety at Sea Seminar within the last 5 years, including onlnie courses when available, or other courses as accepted by US Sailing or other national authority.~~

2022 Pacific Cup Notice of Race Appendix III
Equipment Requirements

Section Name	Requirement
PC 4.3.1 **SAS Training**	Replace SER 4.3.1 with: Within five years before the start: • At least 30% of those aboard the boat, but not fewer than two members of the crew and including the person in charge, shall have completed the “International Offshore Safety at Sea with Hands-On” course sanctioned by US Sailing (also referred to as "Two-Day" or "ISAF"), and • at least 60% of the total of those aboard the boat will have taken either that course or the US Sailing “Offshore Safety at Sea” course online or in person (also referred to as "One-Day"). Non-US residents may petition to substitute equivalent courses meeting World Sailing standards certified by their national sailing authority. PCYC will monitor the availability of such courses and may amend this requirement.
SER 4.4 **Crew Training**	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.
~~**SER 4.6**~~ ~~**Skills: Crew Training**~~	~~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.~~
PC 4.6 **Life Jackets**	SER 4.6 is replaced by: A Life Jacket as described in SER 3.1 shall be worn when on deck: a) between the hours of sunset and sunrise if prescribed by the person in charge and at any other time they prescribe, b) when alone on deck, c) when reefed, d) when the true wind speed is 25 knots or above, or e) when the visibility is less than 1 nautical mile.
PC 4.7 **Qualifying Voyage**	The skipper and at least one member of the 2022 Pac Cup crew shall have completed and certified, no later than fourteen days prior to the Skippers' meeting, a nonstop voyage of at least 150 miles and encompassing at least one night aboard the entered sailboat. This voyage shall be primarily under sail and primarily outside protected waters (e.g. outside of San Francisco Bay).