

2012 Certification of Compliance Special Regulations for PHRF of the Chesapeake, Inc.

Sailing is an inherently risky activity and it is the ultimate and final responsibility of the skipper, owner and crew to use their best judgment regarding participating in any race, continuing in a race, and use of safety equipment and procedures. The skipper and/or owner are responsible for assuring that the yacht is seaworthy and equipped with all safety equipment appropriate for the prevailing and expected conditions. Each crewmember shall familiarize themselves with the location and proper use of all such equipment. The skipper and/or owner and crew shall utilize all appropriate safety equipment whenever conditions warrant. The safety requirements for equipment and procedures are as follows:

1. Requirements of the applicable US Coast Guard Regulations for type and size of vessel (summary of requirements at http://www.uscgboating.org/safety/fedreqs/equ_refchart.htm).
2. Requirements as stated in one design class or applicable handicap rule.
3. Requirements as stated in the regatta's Notice & Conditions of Race and Sailing Instructions.
4. For races conducted on the Chesapeake Bay, boats shall meet either PHRF 4P or PHRF 5P safety regulations as defined below:

4.1 PHRF 4P:

a. For races conducted in the main body of the Chesapeake Bay, or as required by the CBYRA General Sailing Instructions or in paragraph 3 above, competing boats shall meet the 2006-2007 ISAF Offshore Special Regulations, Category 4 (requirements are at: <http://www.phrfchesbay.com/specregs.pdf>), as modified by PHRF of the Chesapeake, Inc.

b. In the event that the applicable class rules for a CBYRA recognized one-design class conflict with these regulations, the class rules shall take precedence. If the class rules defer to ORC safety regulations as prescribed in the Sailing Instructions, the 4P regulations shall be used and take precedence.

c. Boats including CBYRA recognized One-design classes that otherwise meet the special regulations for safety requirements but whose manufactured as-built design does not meet the ORC Category 4 requirements for lifelines may be allowed to sail in Category 4P races provided: 1) all competitors wear personal flotation from the warning signal of their start until the boat has finished racing and 2) all competitors wear safety harnesses and are clipped in from sunset until sunrise or if the Race Committee so prescribes.

4.2 PHRF 5P:

a. For races conducted in creeks, rivers and other sheltered areas close to land, competing boats shall meet the 2006-2007 ISAF Offshore Special Regulations, Category 5 (requirements are at: <http://www.phrfchesbay.com/specregs.pdf>), as modified by PHRF of the Chesapeake, Inc.

b. In the event that the applicable class rules for a CBYRA recognized one-design class conflict with these regulations, the class rules shall take precedence. If the class rules defer to ORC safety regulations as prescribed in the Sailing Instructions, the 5P regulations shall be used and take precedence.

c. Boats including CBYRA recognized One-design classes that otherwise meet the special regulations for safety requirements but whose manufactured as-built design does not meet the ORC Category 4 requirements for lifelines may be allowed to sail in Category 5P races provided: 1) all competitors wear personal flotation from the warning signal of their start until the boat has finished racing and 2) all competitors wear safety harnesses and are clipped in from sunset until sunrise. The organizing authority or Race Committee may specifically exempt competitors from (1) and/or (2) above if required.

4.3 PHRF 6P:

a. Category 6P regulations are the minimum requirements recommended by PHRF of the Chesapeake for short races in protected (rivers and creeks) waters. This category only is intended to relax accommodation requirements, not open water (i.e. Chesapeake Bay and areas of confluence with major tributaries) safety requirements. These requirements may be modified by the organization sponsoring the race.

b. In the event that the applicable class rules for a CBYRA recognized one-design class conflict with these regulations, the class rules shall take precedence. If the class rules defer to ORC safety regulations as prescribed in the Sailing Instructions, the 6P regulations shall be used and take precedence.

c. Boats including CBYRA recognized One-design classes that otherwise meet the special regulations for safety requirements but whose manufactured as-built design does not meet the ORC Category 4 requirements for lifelines may be allowed to sail in Category 6P races provided: 1) all competitors wear personal flotation from the warning signal of their start until the boat has finished racing and 2) all competitors wear safety harnesses and are clipped in from sunset until sunrise. The organizing authority or Race Committee may specifically exempt competitors from (1) and/or (2) above if required.

5. A man overboard practice maneuver shall be practiced by all competitors at least once a year. At least two persons shall be on board during a race unless specifically exempted by the organizing authority.

6. Recommendation. Reminder on Rendering Assistance: Racing Rules of Sailing Fundamental Rule 1.1 states: "A boat or competitor shall give all possible help to any person or vessel in danger."

A SIGNED COPY OF THIS DOCUMENT SHALL BE KEPT ABOARD THE BOAT DURING ALL PHRF EVENTS SANCTIONED BY CBYRA AND AVAILABLE FOR INSPECTION UPON REQUEST.

Boat Name: _____ Sail Number: _____

Complies with PHRF of the Chesapeake Special Regulation Category _____ 4P, _____ 5P, _____ 6P

Owner/Skipper: _____ Date: _____
Signature

2012 PHRF of the Chesapeake Category 4P Special Regulations

Modified from ISAF Category 4 Regulations. Because this is an extract not all paragraph numbers will be present
CATEGORY 4, SECTION 1 - FUNDAMENTAL AND DEFINITIONS

1.01 Purpose and Use

- 1.01.1 It is the purpose of these Special Regulations to establish uniform minimum equipment, accommodation and training standards for monohull and multihull yachts racing offshore. A Proa is excluded from these regulations.
- 1.01.2 These Special Regulations do not replace, but rather supplement, the requirements of governmental authority, the Racing Rules and the rules of Class Associations and Rating Systems. The attention of persons in charge is called to restrictions in the Rules on the location and movement of equipment.
- 1.01.3 These Special Regulations, adopted internationally, are strongly recommended for use by all organizers of offshore races. Race Committees may select the category deemed most suitable for the type of race to be sailed.

1.02 Responsibility of Person in Charge

- 1.02.1 The safety of a yacht and her crew is the sole and inescapable responsibility of the person in charge who must do his best to ensure that the yacht is fully found, thoroughly seaworthy and manned by an experienced crew who have undergone appropriate training and are physically fit to face bad weather. He must be satisfied as to the soundness of hull, spars, rigging, sails and all gear. He must ensure that all safety equipment is properly maintained and stowed and that the crew know where it is kept and how it is to be used.
- 1.02.2 Neither the establishment of these Special Regulations, their use by race organizers, nor the inspection of a yacht under these Special Regulations in any way limits or reduces the complete and unlimited responsibility of the person in charge.
- 1.02.3 Decision to race -The responsibility for a yacht's decision to participate in a race or to continue racing is hers alone - RRS Fundamental Rule 4.

1.03 Definitions, Abbreviations, Word Usage

- 1.03.1 Definitions of Terms used in this document

TABLE 1

Age Date	Month/year of first launch
AIS	Automatic Identification Systems
CEN	Comité Européen de Normalisation
CPR	Cardio-Pulmonary Resuscitation
Coaming	includes the transverse after limit of the cockpit over which water would run in the event that when the yacht is floating level the cockpit is flooded or filled to overflowing.
DSC	Digital Selective Calling
EN	European Norm
EPFS	Electronic Position-Fixing System
EPIRB	Electronic Position-Indicating Radio Beacon
FA Station	The transverse station at which the upper corner of the transom meets the sheerline.
Foul-Weather Suit	A foul weather suit is clothing designed to keep the wearer dry and maybe either a jacket and trousers worn together, or a single garment comprising jacket and trousers.
GMDSS	Global Maritime Distress & Safety System
GNSS	Global Navigation Satellite System
GPIRB	EPIRB, with integral GPS position-fixing
ITU	International Telecommunications Union
GPS	Global Positioning System
Hatch	The term hatch includes the entire hatch assembly and also the lid or cover as part of that assembly (the part itself may be described as a hatch).

INMARSAT	International Maritime Satellite Organization
IMO	International Maritime Organisation
IMSO	International Mobile Satellite Organisation (works closely with INMARSAT)
ISAF	International Sailing Federation.
ISO	International Standard or International Organization for Standardization.
Lifeline	wire line rigged as guardrail / guardline around the deck
LOA	Length overall not including pulpits, bowsprits, boomkins etc.
LWL	(Length of) loaded waterline
Monohull	Yacht in which the hull depth in any section does not decrease towards the centre-line.
Moveable Ballast	Lead or other material including water which has no practical function in the boat other than to increase weight and/or to influence stability and/or trim and which may be moved transversely but not varied in weight while a boat is racing.
ORC	Offshore Racing Congress (formerly Offshore Racing Council)
OSR	Offshore Special Regulation(s)
Permanently Installed	Means the item is effectively built-in by eg bolting, welding, glassing etc. and may not be removed for or during racing.
PLB	Personal Locator Beacon
Proa	Asymmetric Catamaran
RRS	ISAF - Racing Rules of Sailing
SAR	Search and Rescue
SART	Search and Rescue Transponder
Series Date	Month/year of first launch of the first yacht of the production series
SOLAS	Safety of Life at Sea Convention
Safety Line	A tether used to connect a safety harness to a strong point
Securely Fastened	Held strongly in place by a method (e.g. rope lashings, wing-nuts) which will safely retain the fastened object in severe conditions including a 180 degree capsize and allows for the item to be removed and replaced during racing
Static Ballast	Lead or other material including water which has no practical function in the boat other than to increase weight and/or to influence stability and/or trim and which may not be moved or varied in weight while a boat is racing.
Static Safety Line	A safety line (usually shorter than a safety line carried with a harness) kept clipped on at a work-station
Variable Ballast	Water carried for the sole purpose of influencing stability and/or trim and which may be varied in weight and/or moved while a boat is racing.

1.03.2 The words "shall" and "must" are mandatory, and "should" and "may" are permissive.

1.03.3 The word "yacht" shall be taken as fully interchangeable with the word "boat".

CATEGORY 4, SECTION 2 - APPLICATION & GENERAL REQUIREMENTS

2.01 Categories of Events. In many types of race, ranging from trans-oceanic sailed under adverse conditions to short-course day races sailed in protected waters, six categories are established, to provide for differences in the minimum standards of safety and accommodation required for such varying circumstances:

2.01.5 Category 4. Short races, close to shore in relatively warm or protected waters normally held in daylight.

2.02 Inspection. A yacht may be inspected at any time. If she does not comply with these Special Regulations her entry may be rejected, or she will be liable to disqualification or such other penalty as may be prescribed by the national authority or the race organizers.

2.03 General Requirements

- 2.03.1 All equipment required by Special Regulations shall:-
- a) function properly
 - b) be regularly checked, cleaned and serviced
 - c) when not in use be stowed in conditions in which deterioration is minimized
 - d) be readily accessible
 - e) be of a type, size and capacity suitable and adequate for the intended use and size of the yacht
- 2.03.2 Heavy items:
- a) ballast, ballast tanks and associated equipment shall be permanently installed
 - b) heavy movable items including e.g. batteries, stoves, gas bottles, tanks, toolboxes and anchors and chain shall be securely fastened
 - c) heavy items for which fixing is not specified in Special Regulations shall be permanently installed or securely fastened, as appropriate
- 2.03.3 When to show navigation lights
- a) navigation lights (OSR 3.27) shall be shown as required by the International Regulations for Preventing Collision at Sea, (Part C and Technical Annex 1). All yachts shall exhibit sidelights and a sternlight at the required times.

CATEGORY 4, SECTION 3 - STRUCTURAL FEATURES, STABILITY, FIXED EQUIPMENT

- 3.01 Strength of Build, Ballast and Rig.** Yachts shall be strongly built, watertight and, particularly with regard to hulls, decks and cabin trunks capable of withstanding solid water and knockdowns. They must be properly rigged and ballasted, be fully seaworthy and must meet the standards set forth herein. Shrouds shall never be disconnected.
- 3.02 Watertight Integrity of a Hull**
- 3.02.1 A hull, including, deck, coach roof, windows, hatches and all other parts, shall form an integral, essentially watertight unit and any openings in it shall be capable of being immediately secured to maintain this integrity.
- 3.02.2 Centerboard and dagger board trunks and the like shall not open into the interior of a hull except via a watertight inspection/maintenance hatch of which the opening shall be entirely above the waterline of the yacht floating level in normal trim.
- 3.02.3 A canting keel pivot shall be completely contained within a watertight enclosure, which shall comply with OSR 3.02.2. Access points in the watertight enclosure for control and actuation systems or any other purpose shall comply with OSR 3.02.1.
- 3.02.4 Moveable ballast systems shall be fitted with a manual control and actuation secondary system, which shall be capable of controlling the full sailing load of the keel in the event of failure of the primary system. Such failures would include electrical and hydraulic failure and mechanical failure of the components and the structure to which it mounts. The system must be capable of being operational quickly and shall be operable at any angle of heel. It would be desirable if this system was capable of securing the keel on the centerline.
- 3.04 Stability - Monohulls**
- 3.04.2 A yacht shall be designed and built to resist capsize.
- 3.04.3 A National Authority or race organizer should require compliance with a minimum stability or stability/buoyancy index. Attention is drawn to the stability index in IMS Regulation 201.
- 3.04.4 Achievement of Design Category C under ISO 12217-2 may be accepted by a race organizer as a guide to general suitability for competition in a Special Regulations Category 4 race.
- 3.04.5 Use of the ISO or any other index does not guarantee total safety or total freedom of risk from capsize or sinking.
- 3.04.6 For boats with moveable or variable ballast the method in OSR 3.04.4 shall apply plus the relevant additional requirement of OSR Appendix K.
- 3.04.7 Tanks for variable ballast shall be permanently installed and shall be provided with a system of isolating valves and pump(s) capable of manual operation at any angle of heel. A plan of the plumbing system shall be displayed aboard the boat
- 3.06 Exits - Monohulls**

TABLE 4

LOA	Earliest of Age or Series Date	Detail
8.5 m (28 ft) and over	1/95 and after	Yachts shall have at least two exits. At least one exit shall be located forward of the foremost mast except where structural features prevent its installation.

3.08 Hatches & Companionways

- 3.08.1 No hatch forward of the maximum beam station shall open in such a way that the lid or cover moves into the open position towards the interior of the hull (excepting ports having an area of less than 0.071m² (110 sq in)).
- 3.08.2 A hatch shall be:
 - b) permanently attached
 - c) capable of being firmly shut immediately and remaining firmly shut in a 180 degree capsize (inversion)
- 3.08.3 A companionway hatch extending below the local sheer line, shall:
 - a) not be permitted in a yacht with a cockpit opening aft to the sea (OSR 3.09.6)
 - b) be capable of being blocked off up to the level of the local sheer line, provided that the companionway hatch shall continue to give access to the interior with the blocking devices (e.g. washboards) in place
- 3.08.4 A companionway hatch shall:
 - a) be fitted with a strong securing arrangement which shall be operable from the exterior and interior including when the yacht is inverted. Separate securing means for interior and exterior operation are acceptable.
 - b) have any blocking devices
 - i. capable of being retained in position with the hatch open or shut
 - ii. whether or not in position in the hatchway, secured to the yacht (e.g. by lanyard) for the duration of the race, to prevent their being lost overboard
 - iii. permit exit in the event of inversion

3.09 Cockpits - Attention is Drawn to ISO 11812

- 3.09.1 Cockpits shall be structurally strong, self-draining quickly by gravity at all angles of heel and permanently incorporated as an integral part of the hull.
- 3.09.2 Cockpits must be essentially watertight, that is, all openings to the hull must be capable of being strongly and rigidly secured
- 3.09.3 A bilge pump outlet pipe shall not be connected to a cockpit drain . See OSR 3.09.8 for cockpit drain minimum sizes
- 3.09.4 A cockpit sole shall be at least 2% LWL above LWL (or in IMS yachts first launched before 1/03, at least 2% L above LWL)
- 3.09.5 A bow, lateral, central or stern well shall be considered a cockpit for the purposes of OSR 3.09
- 3.09.6 In cockpits opening aft to the sea structural openings aft shall be not less in area than 50% maximum cockpit depth x maximum cockpit width.
- 3.09.7 Cockpit Volume

TABLE 5

earliest of age or series date	Detail
before 4/92	the total volume of all cockpits below lowest coamings shall not exceed 9% (LWL x maximum beam x freeboard abreast the cockpit). Sailboats built before January 1980 shall not be required to retrofit provided that their maximum cockpit volume does not exceed 12% of LWL x Max Beam x Freeboard Aft.
4/92 and after	as above for the appropriate category except that "lowest coamings" shall not include any aft of the FA station and no extension of a cockpit aft of the working deck shall be included in calculation of cockpit volume

- 3.09.8 Cockpit Drains. See OSR 3.09.1. Cockpit drain cross section area (after allowance for screens if fitted) shall be:
 - a) in yachts with earliest of age or series date before 1/72 or in any yacht under 8.5m (28ft) LOA - at least that of 2 x 25mm diameter (one inch) unobstructed openings or equivalent
 - b) in yachts with earliest of age or series date 1/72 and later - at least that of 4 x 20mm diameter (3/4 inch) unobstructed openings or equivalent

US SAILING prescribes that cockpit drains shall be accessible for cleaning

- 3.10 Sea Cocks or Valves.** Sea cocks or valves shall be permanently installed on all through-hull openings below LWL on boats built after January 1976 except integral deck scuppers, speed indicators, depth finders and the like, however a means of closing such openings shall be provided.
- 3.11 Sheet Winches.** Sheet winches shall be mounted in such a way that an operator is not required to be substantially below deck.
- 3.12 Mast Step.** The heel of a keel stepped mast shall be securely fastened to the mast step or adjoining structure.
- 3.14 Pulpits, Stanchions, Lifelines - Attention is Drawn to ISO 15085**
- 3.14.1 Sailboats built before January 1980 shall not be required to retrofit to comply with the new details of construction in relation to the bow pulpits, stern pulpits, and lifelines.
- 3.14.2 Lifelines required in Special Regulations shall be "taut".
- a) As a guide, when a deflecting force of 50 N (5.1 kgf, 11.2 lbf) is applied to a lifeline midway between supports, the lifeline should not deflect more than 50 mm.
- 3.14.3 The following shall be provided:
- a) a bow pulpit forward of the headstay (however on yachts under 8.5 m (28 ft) the bow pulpit may be aft of the headstay provided the forward upper rail is within 405 mm (16 in) of the headstay) with vertical height and openings essentially conforming to Table 7 Bow pulpits may be open but the opening between the pulpit and any part of the boat shall never be greater than 360mm (14.2") (this requirement shall be checked by presenting a 360mm (14.2") circle inside the opening)
- b) a stern pulpit, or lifelines arranged as an adequate substitute, with vertical openings conforming to Table 7
- c) lifelines (guardlines) supported on stanchions, which, with pulpits, shall form an effectively continuous barrier around a working deck for man-overboard prevention. Lifelines shall be permanently supported at intervals of not more than 2.20m (86.6") and shall not pass outboard of supporting stanchions
- d) upper rails of pulpits at no less height above the working deck than the upper lifelines as in Table 7.
- e) Openable upper rails in bow pulpits shall be secured shut whilst racing
- f) Pulpits and stanchions shall be permanently installed. When there are sockets or studs, these shall be through-bolted, bonded or welded. The pulpit(s) and/or stanchions fitted to these shall be mechanically retained without the help of the life-lines. Without sockets or studs, pulpits and/or stanchions shall be through-bolted, bonded or welded.
- g) The bases of pulpits and stanchions shall not be further inboard from the edge of the appropriate working deck than 5% of maximum beam or 150 mm (6 in), whichever is greater.
- h) Stanchion bases shall not be situated outboard of a working deck. For the purpose of this rule a stanchion or pulpit base shall be taken to include a sleeve or socket into which a stanchion or pulpit tube is fitted but shall exclude a baseplate which carries fixings into the deck or hull.
- i) Provided the complete lifeline enclosure is supported by stanchions and pulpit bases effectively within the working deck, lifeline terminals and support struts may be fixed to a hull aft of the working deck
- j) Lifelines need not be fixed to a bow pulpit if they terminate at, or pass through, adequately braced stanchions set inside and overlapping the bow pulpit, provided that the gap between the upper lifeline and the bow pulpit does not exceed 150 mm (6 in).
- k) Stanchions shall be straight and vertical except that:
- i) within the first 50 mm (2 in) from the deck, stanchions shall not be displaced horizontally from the point at which they emerge from the deck or stanchion base by more than 10 mm (3/8 in), and
- ii) stanchions may be angled to not more than 10 degrees from vertical at any point above 50 mm (2 in) from the deck.
- 3.14.5 Lifeline Height, Vertical Openings, Number of Lifelines

TABLE 7

LOA	earliest of age/series/date	minimum requirements
under 8.5 m(28 ft)	before 1/92	taut single lifeline at a height of no less than 450 mm (18 in) above the working deck. No vertical opening shall exceed 560 mm (22 in).
under 8.5 m(28 ft)	1/92and after	as for under 8.5 m(28 ft) in table 7 above, except that when an intermediate lifeline is fitted no vertical opening shall exceed 380 mm (15 in).
8.5 m (28 ft) and over	before 1/93	taut double lifeline with upper lifeline at a height of no less than 600 mm (24 in) above the working deck. No vertical opening shall exceed 560 mm (22 in)
8.5 m (28 ft)and over	1/93 and after	as 8.5 m (28 ft) and over in Table 7 above, except that no vertical opening shall exceed 380 mm (15 in).
all	all	on yachts with intermediate lifelines the intermediate line shall be not less than 230 mm (9 in) above the working deck and shall be of the same construction and general arrangements as required for the upper.

3.14.6 Lifeline Minimum Diameters, Required Materials, Specifications

a) All lifelines shall be stranded stainless steel wire of minimum diameter in table 8 below. Lifelines shall be uncoated and used without close-fitting sleeving.

Notwithstanding 3.14.6 (a), temporary sleeving may be fitted provided it is regularly removed for inspection

b) Grade 316 stainless wire is recommended.

c) A taut lanyard of synthetic rope may be used to secure lifelines provided the gap it closes does not exceed 100 mm (4 in).

d) All wire, fittings, anchorage points, fixtures and lanyards shall comprise a lifeline enclosure system which has at all points at least the breaking strength of the required lifeline wire.

TABLE 8

LOA	Minimum wire diameter. For boats whose manufactured as-built design includes covered or uncovered stainless steel lifelines of at least 1/8 in minimum diameter, the original lifelines if still installed, or replacement lifelines meeting the original manufacturer's specifications and installed prior to March 31, 2008, will be considered to meet the requirements. All replacement lifelines manufactured after April 1, 2008 must conform to the requirements below.
under 8.5 m (28ft)	3mm (1/8 in)
8.5m - 13 m	4mm (5/32 in)
over 13 m (43 ft)	5mm (3/16 in)

3.14.7 Pulpits, Stanchions, Lifelines - Limitations on Materials

TABLE 9

Earliest of Age or Series Date	detail
before 1/87	carbon fibre is not recommended in stanchions pulpits and lifelines.
1/87 and after	stanchions, pulpits and lifelines shall not be made of carbon fibre.

3.18 Toilet

3.18.2 A toilet, permanently installed or fitted bucket

3.19 Bunks

3.19.2 Bunks, permanently installed

3.22 Hand Holds

Adequate hand holds shall be fitted below deck so that crew members may move about safely at sea.

A hand hold should be capable of withstanding without rupture a side force of 1500N - attention is drawn to ISO 15085.

3.23 Bilge Pumps and Buckets

- 3.23.1 No bilge pump may discharge into a cockpit unless that cockpit opens aft to the sea.
- 3.23.2 Bilge pumps shall not be connected to cockpit drains. (OSR 3.09)
- 3.23.3 Bilge pumps and strum boxes shall be readily accessible for maintenance and for clearing out debris
- 3.23.4 Unless permanently installed, each bilge pump handle shall be provided with a lanyard or catch or similar device to prevent accidental loss
- 3.23.5 The following shall be provided:
 - e) one manual bilge pump
 - f) two buckets of stout construction each with at least 2 US gallons capacity. Each bucket to have a lanyard.

3.24 Compass

- 3.24.1 The following shall be provided:-
 - a) a marine magnetic compass, independent of any power supply, permanently installed and correctly adjusted with deviation card, and

3.25 Halyards.

No mast shall have less than two halyards, each capable of hoisting a sail.
 Boom Support. US SAILING prescribes that some means must exist to prevent the boom from dropping if support from the mainsail and/or halyard fails. Topping lifts or supporting vang are acceptable for this purpose.

3.27 Navigation Lights (see OSR 2.03.3)

- 3.27.1 Navigation lights shall be mounted so that they will not be masked by sails or the heeling of the yacht.
- 3.27.2 Navigation lights shall not be mounted below deck level and should be at no less height than immediately under the upper lifeline. Sailboats manufactured before January of 1980 shall not be required to retrofit provided they meet the requirements of 3.27.1.
- 3.27.3 Navigation light intensity

US SAILING prescribes that in the US compliance with the recommendations of USCG COLREGS shall suffice in satisfying these regulation, USCG COLREGS requirements are as follows;

TABLE 14

LOA	Light	Luminous Intensity	Minimum Range of visibility
under 39.4 ft	Side	0.9 candelas	1 mile
	Stern	4.3 candelas	2 miles
39.4 ft and above	Side	4.3 candelas	2 miles
and less than 164 ft	Stern	4.3 candelas	2 miles

- 3.27.5 spare bulbs for navigation lights shall be carried, or for lights not dependent on bulbs, appropriate spares.

3.28 Engines, Generators, Fuel

- 3.28.1 A propulsion engine shall be provided, either inboard or outboard with associated tanks and fuel supply systems complying with USCG requirements.
- 3.28.2 A propulsion engine shall:
 - a. Provide a minimum speed in knots of the square root of LWL in feet.
 - b. Have a minimum amount of fuel which may be specified in the Notice of Race but if not specified, shall be able to motor at the above minimum speed for at least two hours as the boat leaves the dock to race.

3.29

- 3.29.1 The following shall be provided:
 - f) Independent of a main radio transceiver, a radio receiver capable of receiving weather bulletins

- 3.29.2 Yachts are reminded that no reflector, active or passive, is a guarantee of detection or tracking by a vessel using radar.
- a) The attention of persons in charge is drawn to legislation in force or imminent affecting the territorial seas of some countries in which the carriage of an AIS set is or will be mandatory for certain vessels including relatively small craft.

CATEGORY 4, SECTION 4 - PORTABLE EQUIPMENT & SUPPLIES for the yacht (for water & fuel see OSR 3.21 and OSR 3.28)

4.01 Sail Letters & Numbers

- 4.01.1 Yachts which are not in an ISAF International Class or Recognized Class shall comply with RRS 77 and Appendix G as closely as possible, except that sail numbers allotted by a State authority are acceptable .
- 4.01.2 Sail numbers and letters of the size carried on the mainsail must be displayed by alternative means when none of the numbered sails is set.

4.03 Soft Wood Plugs

Soft wood plugs, tapered and of the appropriate size, shall be attached or stowed adjacent to the appropriate fitting for every through-hull opening shall be provided.

- 4.05.1 Fire extinguishers, at least two, readily accessible in suitable and different parts of the yacht

4.06 Anchor(s)

- 4.06.1 An anchor or anchors shall be carried according to the table below:

TABLE 12

LOA	detail
any	1 anchor, readily accessible

4.07 Flashlight(s)

- 4.07.1 The following shall be provided:-
- b) a watertight flashlight with spare batteries and bulb

4.08 First Aid Manual and First Aid Kit

- 4.08.1 A suitable First Aid Manual shall be provided. In the absence of a National Authority's requirement, the latest edition of one of the following is recommended:-

- b) First Aid at Sea, by Douglas Justins and Colin Berry, published by Adlard Coles Nautical,London
- c) Le Guide de la medecine a distance, by Docteur J Y Chauve, published by Distance Assistance BP33 F-La Baule, cedex, France. An English translation may be available.

US SAILING endorses the above and additionally recommends the following manuals: Advanced First Aid by Peter Eastman, M.D., Cornell Maritime Press and A Comprehensive Guide to Marine Medicine by Eric A. Weiss, M.D. and Michael E. Jacobs, M.D., Adventure Medical Kits.

- 4.08.2 A First Aid Kit shall be provided
- 4.08.3 The contents and storage of the First Aid Kit should reflect the guidelines of the Manual carried, the likely conditions and duration of the passage, and the number of people aboard the yacht.
- 4.08.4 At least one member of the crew shall be familiar with First Aid procedures, hypothermia and relevant communications systems (see OSR 6.02.7, 6.03.3, 6.03.4)

4.09 Foghorn

A foghorn shall be provided

4.10 Radar Reflector, AIS (Automatic Identification System)

- 4.10.1 A passive Radar Reflector (that is, a Radar Reflector without any power) shall be provided
- a) If a radar reflector is octahedral it must have a minimum diagonal measurement of 10 in, or if not octahedral must have a documented RCS (radar cross-section) of not less than 10 m². The minimum effective height above water is 4.0 m (13 ft).
US SAILING prescribes that in the US, radar reflectors shall have a minimum documented "equivalent echoing area" of 6 sq. m. Octahedral reflectors shall have a minimum diameter of 10 inches.
 - b) The passive and active devices referred to in these notes and in 4.10.1 and 4.10.2 above are primarily intended for use in the X (9GHz) band
- 4.10.2 The most effective radar response from a yacht may be provided by an RTE (Radar Target Enhancer) which may be on board in addition to the required passive reflector. An RTE should conform to Recommendation ITU-R 1176. An RTE is strongly recommended.
- b) The display of a passive reflector or the operation of an RTE is for the person in charge to decide according to prevailing conditions.
- 4.10.3 A passive reflector in compliance with revised ISO8729 (revision in progress at 1/06) offers improved performance over earlier models and has a size typified by a cylinder of not more than weight 5kg, height 750mm (29.5 in) and dia 300mm (12.8 in) When revised ISO 8729 is published the Special Regulations regarding radar reflectors will be reviewed and may be changed.
- 4.10.4 S (3GHz) band radar is often used by ships to complement X (9GHz) band radar. On S (3GHz) band a conventional reflector or RTE offers about 1/10 the response obtained on the X (9GHz) band.
- 4.11 Navigation Equipment**
- 4.11.1 Charts. Navigational charts (not solely electronic), light list and chart plotting equipment shall be provided
- 4.12 Safety Equipment Location Chart.** A safety equipment location chart in durable waterproof material shall be displayed in the main accommodation where it can best be seen, clearly marked with the location of principal items of safety equipment.
- 4.13 Echo Sounder or Lead Line**
- 4.13.1 An echo sounder or lead line shall be provided
- 4.16 Tools and Spare Parts.** Tools and spare parts, including effective means to quickly disconnect or sever the standing rigging from the hull shall be provided.
- 4.17 Yacht's name.** Yacht's name shall be on miscellaneous buoyant equipment, such as lifejackets, cushions, lifebuoys, lifeslings, grab bags etc.
- 4.18 Marine grade retro-reflective material**
Marine grade retro-reflective material shall be fitted to lifebuoys, lifeslings, liferafts and lifejackets. See OSRs 5.04, 5.08.
- iv) in a yacht with age or series date before 6/01, a liferaft may be packed in a valise not exceeding 40kg securely stowed below deck adjacent to a companionway.
- 4.22 Lifebuoys**
- 4.22.1 The following shall be provided within easy reach of the helmsman and ready for instant use:
- a) a lifebuoy with a waterproof light and a drogue or a Lifesling with a waterproof light and without a drogue. A light is not required if the race will be conducted in closed waters only during daylight hours.
For Category 4, US SAILING prescribes that the lifebuoy must be inherently buoyant.
- 4.22.3 Each inflatable lifebuoy and any automatic device (eg pole and flag extended by compressed gas) shall be tested and serviced at intervals in accordance with its manufacturer's instructions.
- 4.22.4 Each lifebuoy or lifesling shall be fitted with marine grade retro-reflective material (4.18).
- 4.23 Pyrotechnic Signals**
- 4.23.1 Pyrotechnic signals shall be provided meeting the USCG requirements for the size of vessel and stowed in a waterproof container.

4.24 Heaving Line

- a) a heaving line shall be provided 15 m - 25 m (50 ft - 75 ft) length readily accessible to cockpit.
- b) the "throwing sock" type is recommended - see Appendix D

US SAILING prescribes that the heaving line be of 1/4 in. (6 mm) minimum diameter, floating, UV-inhibited and readily accessible to the cockpit.

4.25 Cockpit Knife

A strong, sharp knife, sheathed and securely restrained shall be provided readily accessible from the deck or a cockpit.

4.26 Storm & Heavy Weather Sails

4.26.1 Design

- a) it is strongly recommended that persons in charge consult their designer and sailmaker to decide the most effective size for storm and heavy weather sails. The purpose of these sails is to provide safe propulsion for the yacht in severe weather -they are not intended as part of the racing inventory. The areas below are maxima. Smaller areas are likely to suit some yachts according to their stability and other characteristics.

4.26.2 High Visibility

- a) it is strongly recommended that every storm sail should either be of highly-visible coloured material (eg dayglo pink, orange or yellow) or have a highly-visible coloured patch added on each side; and also that a rotating wing mast used in lieu of a trysail should have a highly-visible coloured patch on each side

4.26.3 Materials

- a) aromatic polyamides, carbon and similar fibres shall not be used in a trysail or storm jib but spectra/dyneema and similar materials are permitted.
- b) it is strongly recommended that a heavy-weather jib does not contain aromatic polyamides, carbon and similar fibres other than spectra/dyneema.

4.26.4 The following shall be provided:-

- a) sheeting positions on deck for each storm and heavy-weather sail.
- b) for each storm or heavy-weather jib, a means to attach the luff to the stay, independent of any luff-groove device. A heavy weather jib shall have the means of attachment readily available;
- c) when a storm trysail is required by OSR 4.26.4 (d) it shall be capable of being sheeted independently of the boom with area not greater than 17.5% mainsail luff length x mainsail foot length. The storm trysail shall have neither headboard nor battens;
- d) a heavy-weather jib (or heavy-weather sail in a yacht with no forestay) of an area not greater than 13.5% height of the foretriangle squared and without reef points, or a storm trysail as defined in OSR 4.26.4 (c), or mainsail reefing to reduce the luff by at least 40%.
- e) no mainmast shall have less than two halyards each capable of hoisting a sail.

CATEGORY 4, SECTION 5 - PERSONAL EQUIPMENT

5.01 Lifejacket

5.01.1 Each crew member shall have a USCG approved Personal Flotation Device (PFD). It is strongly recommended that the device meets the following:

- a) equipped with a whistle
- b) fitted with marine grade retro-reflective material (OSR 4.18)
- c) compatible with the wearer's safety harness
- d) if inflatable, regularly checked for air retention
- e) clearly marked with the yacht's or wearer's name

5.02 There shall be sufficient safety harnesses for 50% of the crew.

5.02.6 Warning - a safety harness is not designed to tow a person in the water and it is important that a harness is used to minimize or eliminate the risk of a person's torso becoming immersed in water outside the boat. The diligent use of a properly adjusted safety harness is regarded as by far the most effective way of preventing man overboard incidents.

b) it is recommended that a foul weather suit should be fitted with marine-grade retro-reflective material, and should have high-visibility colours on its upper parts and sleeve cuffs. See OSR 4.18

5.09 Annual Man-Overboard Practice

US SAILING prescribes that the "Quick-Stop" man-overboard procedure shall be practiced aboard the yacht at least once annually. A certificate of such practice shall be signed by participating crew members and kept aboard the yacht.

5.10 CPR Training

US SAILING recommends that at least two members of the crew be currently certified in cardiopulmonary resuscitation.

5.11 Preventer or Boom Restraining Device

US SAILING recommends that a preventer or boom restraining device should be rigged in such a manner that attachment can be easily and quickly made, with the boom fully extended (running) without leaving the deck or leaning overboard. A process and plan for its use should be part of the crew's training and practice. Recommended for all boats in all categories.

6.04 Routine Training On-Board

6.04.1 It is recommended that crews should practice safety routines at reasonable intervals including the drill for man-overboard recovery

2012 PHRF of the Chesapeake Category 5P Special Regulations

Modified from ISAF Category 5 Regulations. Because this is an extract not all paragraph numbers will be present

Category 5 Special Regulations are intended for races conducted in creeks, rivers and other sheltered areas close to land, held in daylight only.

US Sailing prescriptions are printed in bold italic letters.

Category 5 - Part A Basic

The following regulations shall be observed:-

Because this is an extract not all paragraph numbers will be present

CATEGORY 5, SECTION 1 - FUNDAMENTAL AND DEFINITIONS

1.02 **Responsibility of Person in Charge**

The safety of a yacht and her crew is the sole and inescapable responsibility of the person in charge who must do his best to ensure that the yacht is fully found, thoroughly seaworthy and manned by an experienced crew who have undergone appropriate training and are physically fit to face bad weather. He must be satisfied as to the soundness of hull, spars, rigging, sails and all gear. He must ensure that all safety equipment is properly maintained and stowed and that the crew know where it is kept and how it is to be used.

CATEGORY 5, SECTION 2 - APPLICATION & GENERAL REQUIREMENTS

2.03 **General Requirements**

- 2.03.1 Suitability of Equipment. All equipment required by Special Regulations shall:
- function properly
 - be regularly checked, cleaned and serviced
 - when not in use be stowed in conditions in which deterioration is minimized
 - be readily accessible
 - be of a type, size and capacity suitable and adequate for the intended use and size of the yacht

CATEGORY 5, SECTION 3 - STRUCTURAL FEATURES, STABILITY, FIXED EQUIPMENT

3.08 **Hatches & Companionways**

- 3.08.1 No hatch forward of the maximum beam station shall open in such a way that the lid or cover moves into the open position towards the interior of the hull (excepting ports having an area of less than 0.071m² (110 sq in)).
- 3.08.2 A hatch shall be:
- permanently attached
 - capable of being firmly shut immediately and remaining firmly shut in a 180 degree capsized (inversion)
- 3.08.3 A companionway hatch extending below the local sheerline, shall:
- not be permitted in a yacht with a cockpit opening aft to the sea (OSR 3.09.6)
 - be capable of being blocked off up to the level of the local sheerline, provided that the companionway hatch shall continue to give access to the interior with the blocking devices (e.g. washboards) in place
- 3.08.4 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. Separate securing means for interior and exterior operation are acceptable.
 - have any blocking devices
 - capable of being retained in position with the hatch open or shut
 - whether or not in position in the hatchway, secured to the yacht (e.g. by lanyard) for the duration of the race, to prevent their being lost overboard
 - permit exit in the event of inversion

3.08.5 Hatches may be of any material provided they are capable of providing an essentially watertight seal when closed

3.09 Cockpits - Attention is Drawn to ISO 11812

3.09.1 Cockpits shall be structurally strong, self-draining quickly by gravity at all angles of heel and permanently incorporated as an integral part of the hull.

3.09.2 Cockpits must be essentially watertight, that is, all openings to the hull must be capable of being strongly and rigidly secured

3.09.3 A bilge pump outlet pipe shall not be connected to a cockpit drain . See OSR 3.09.8 for cockpit drain minimum sizes

3.09.4 A cockpit sole shall be at least 2% LWL above LWL (or in IMS yachts first launched before 1/03, at least 2% L above LWL)

3.09.5 A bow, lateral, central or stern well shall be considered a cockpit for the purposes of OSR 3.09

3.09.6 In cockpits opening aft to the sea structural openings aft shall be not less in area than 50% maximum cockpit depth x maximum cockpit width.

3.09.7 Cockpit Volume

i. age or series date before 4/92: the total volume of all cockpits below lowest coamings shall not exceed 9% (LWL x maximum beam x freeboard abreast the cockpit). Sailboats built before January 1980 shall not be required to retrofit provided that their maximum cockpit volume does not exceed 12% of LWL x Max Beam x Freeboard aft.

ii. age or series date 4/92 and after: as in (i) above except that "lowest coamings" shall not include any aft of the FA station and no extension of a cockpit aft of the working deck shall be included in calculation of cockpit volume.

iii. IMS-rated boats may instead of the terms LWL, maximum beam, freeboard abreast the cockpit, use the IMS terms L, B and FA.

3.09.8 Cockpit Drains. Cockpit drain cross section (after allowance for screens (if fitted) shall be:

i. in yachts with earliest of age or series date before 1/72 or in any yacht under 8.5m (28ft) LOA - at least that of 2 x 25mm diameter (one inch) unobstructed openings or equivalent

ii. in yachts with earliest of age or series date 1/72 and later - at least that of 4 x 20mm diameter (3/4 inch) unobstructed openings or equivalent

US SAILING prescribes that cockpit drains shall be accessible for cleaning

3.18 Toilet

3.18.2 A toilet, permanently installed or fitted bucket

3.19 Bunks

3.19.2 Bunks, permanently installed

3.23 Bilge Pumps and Buckets

3.23.5 The following shall be provided:

e) one manual bilge pump

f) one bucket of stout construction each with at least 2 US gallons capacity.

3.24 Compass

3.24.1 b. One compass (a hand-held is acceptable)

CATEGORY 5, SECTION 4 - PORTABLE EQUIPMENT & SUPPLIES

4.01.1 Sail numbers. Yachts which are not in an ISAF International Class or Recognized Class shall comply with RRS 77 and Appendix G as closely as possible, except that sail numbers allotted by a State authority are acceptable . Yachts which are not in an ISAF International Class or Recognized Class shall comply with RRS 77 and Appendix G as closely as possible, except that sail numbers allotted by a State authority are acceptable

4.05.1 Fire extinguisher(s), as required by USCG.

4.06.1 One anchor shall be provided.

4.07.1(a) A flashlight

4.08.2 A first aid kit.

4.13 An echo sounder or lead line

- 4.22.1 a. A lifebouy with a drogue, or a lifesling without a drogue. Marine.
- 4.23 Pyrotechnic signals as required by USCG
- 4.24 A "throwing sock" type of heaving line.

CATEGORY 5, SECTION 5 - PERSONAL EQUIPMENT

- 5.01.1 Each crew member shall have a USCG approved Personal Flotation Device (PFD). It is strongly recommended that the device meets the following:
 - a) equipped with a whistle
 - b) fitted with marine grade retro-reflective material (OSR 4.18)
 - c) compatible with the wearer's safety harness
 - d) if inflatable, regularly checked for air retention
 - e) clearly marked with the yacht's or wearer's name

Category 5 Recommendations

- 4.10 Radar reflector
- 4.11.1 A waterproof chart
- 4.16 Tools and spare parts
- 4.26.4(g) Mainsail reefing to reduce the luff by at least 40% or a storm trysail as in 4.26.4c.

US SAILING NOTE: As is true of all of these regulations, the prescriptions above do not necessarily replace the requirements of other governing bodies.

2012 PHRF of the Chesapeake Category 6P Special Regulations

Modified from ISAF Category 5 Regulations. Because this is an extract not all paragraph numbers will be present

Category 6P regulations are the minimum requirements recommended by PHRF of the Chesapeake for short races in protected (rivers and creeks) waters. This category only is intended to relax accommodation requirements, not open water (i.e. Chesapeake Bay and areas of confluence with major tributaries) safety requirements. These requirements may be modified by the organization sponsoring the race.

US Sailing prescriptions are printed in bold italic letters.

Category 6 - Part A Basic

The following regulations shall be observed (Because this is an extract not all paragraph numbers will be present):

CATEGORY 6, SECTION 1 - FUNDAMENTAL AND DEFINITIONS

1.02 Responsibility of Person in Charge

The safety of a yacht and her crew is the sole and inescapable responsibility of the person in charge who must do his best to ensure that the yacht is fully found, thoroughly seaworthy and manned by an experienced crew who have undergone appropriate training and are physically fit to face bad weather. He must be satisfied as to the soundness of hull, spars, rigging, sails and all gear. He must ensure that all safety equipment is properly maintained and stowed and that the crew know where it is kept and how it is to be used.

CATEGORY 6, SECTION 2 - APPLICATION & GENERAL REQUIREMENTS

2.03 General Requirements

- 2.03.1 Suitability of Equipment. All equipment required by Special Regulations shall:
- a) function properly
 - b) be regularly checked, cleaned and serviced
 - c) when not in use be stowed in conditions in which deterioration is minimized
 - d) be readily accessible
 - e) be of a type, size and capacity suitable and adequate for the intended use and size of the yacht

CATEGORY 6, SECTION 3 - STRUCTURAL FEATURES, STABILITY, FIXED EQUIPMENT

3.08 Hatches & Companionways

- 3.08.2 A hatch shall be:
- b) permanently attached
 - c) capable of being firmly shut immediately and remaining firmly shut in a 180 degree capsize (inversion)
- 3.08.4 A companionway hatch shall:
- a) be fitted with a strong securing arrangement which shall be operable from the exterior and interior including when the yacht is inverted. Separate securing means for interior and exterior operation are acceptable.
 - b) have any blocking devices
 - i. capable of being retained in position with the hatch open or shut
 - ii. whether or not in position in the hatchway, secured to the yacht (e.g. by lanyard) for the duration of the race, to prevent their being lost overboard
 - iii. permit exit in the event of inversion
- 3.08.5 Hatches may be of any material provided they are capable of providing an essentially watertight seal when closed.

Cockpits - Attention is Drawn to ISO 11812

3.09

- 3.09.1 Cockpits shall be structurally strong, self-draining quickly by gravity at all angles of heel and permanently incorporated as an integral part of the hull.
- 3.09.2 Cockpits must be essentially watertight, that is, all openings to the hull must be capable of being strongly and rigidly secured
- 3.09.3 A bilge pump outlet pipe shall not be connected to a cockpit drain .
- 3.09.4 A cockpit sole shall be at least 2% LWL above LWL (or in IMS yachts first launched before 1/03, at least 2% L above LWL)
- 3.09.5 A bow, lateral, central or stern well shall be considered a cockpit for the purposes of OSR 3.09
- 3.09.8 Cockpit Drains. Cockpit drain cross section (after allowance for screens, if fitted) shall be:
- i. in yachts with earliest of age or series date before 1/72 or in any yacht under 8.5m (28ft) LOA - at least that of 2 x 25mm diameter (one inch) unobstructed openings or equivalent
 - ii. in yachts with earliest of age or series date 1/72 and later - at least that of 4 x 20mm diameter (3/4 inch) unobstructed openings or equivalent
- US SAILING prescribes that cockpit drains shall be accessible for cleaning*

3.18 Toilet

- 3.18.2 A toilet, permanently installed or fitted bucket

3.23 Bilge Pumps and Buckets

- 3.23.5 The following shall be provided:
- e) one manual bilge pump
 - f) one bucket of stout construction each with at least 2 US gallons capacity.

3.24 Compass

- 3.24.1 b. One compass (a hand-held is acceptable)

CATEGORY 6, SECTION 4 - PORTABLE EQUIPMENT & SUPPLIES

- 4.01.1 Sail numbers. Yachts which are not in an ISAF International Class or Recognized Class shall comply with RRS 77 and Appendix G as closely as possible, except that sail numbers allotted by a State authority are acceptable . Yachts which are not in an ISAF International Class or Recognized Class shall comply with RRS 77 and Appendix G as closely as possible, except that sail numbers allotted by a State authority are acceptable .
- 4.05.1 Fire extinguisher(s), as required by USCG.
- 4.06.1 One anchor shall be provided.
- 4.22.1 a. A lifebouy with a drogue, or a lifesling without a drogue. Marine.
- 4.23** Pyrotechnic signals as required by USCG

CATEGORY 6, SECTION 5 - PERSONAL EQUIPMENT

- 5.01.1 Each crew member shall have a USCG approved Personal Flotation Device (PFD). It is strongly recommended that the device meets the following:
- a) equipped with a whistle
 - b) fitted with marine grade retro-reflective material (OSR 4.18)
 - c) compatible with the wearer's safety harness
 - d) if inflatable, regularly checked for air retention
 - e) clearly marked with the yacht's or wearer's name

Category 6, Recommendations

4.07.1(a) A flashlight

4.08.2 A first aid kit.

4.11.1 A waterproof chart

4.13 An echo sounder or lead line

4.16 Tools and spare parts

4.24 A "throwing sock" type of heaving line.

4.26.4(g) Mainsail reefing to reduce the luff by at least 40% or a storm trysail as in 4.26.4c.

US SAILING NOTE: As is true of all of these regulations, the prescriptions above do not necessarily replace the requirements of other governing bodies.