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1.0 OBJECTIVES

- 1.1 The South Shore Performance Handicap Racing Fleet, L.L.C, hereafter known as PHRFSS or PHRF-SS is established to promote fair sailing and competition between dissimilar boats by serving as a regional handicapping authority.
- 1.2 It shall further be an objective to maintain an association with US Sailing by actively supporting our mutual interests.

2.0 INTRODUCTION

- 2.1 PHRFSS desires to be a not-for profit member driven organization and is organized a Limited Liability Company (LLC) in the State of Ohio.
- 2.2 Inter-Lake Yachting Association (I-LYA) in its capacity as a Regional Sailing Association (RSA) of US Sailing Association announced the charter of PHRFSS on June 28, 2017.
- 2.3 PHRFSS does not act as, nor represent any Organizing Authority (OA) and does not dictate which boats may or may not participate in any given event nor does it dictate which safety requirements a boat must meet.
- 2.4 A vessel's safety preparedness must conform to federal, regional, and local laws, rules, and regulations for the body of water on which it operates and the rules under which it is sailing. Safety requirements are not part of these rules and are the responsibility of the OA to specify.
- 2.5 PHRFSS recognizes the differences in modern versus the more traditional boat designs and observes their performance differences in various wind and wave conditions. As a result, PHRFSS has created two separate classes, displacement (DSPL) and high-performance (HPRF) to aid organizing authorities in managing their events and establishing divisions and/or classes. At the discretion of the organizing authority, these classes may be combined.
- 2.6 The effectiveness of rating rules to fairly handicap competition is reliant on the boats having similar performance characteristics. As new boats become more 'racer' and less 'cruiser', generations of comfortable race boats found they were at a disadvantage on the prevailing windward-leeward courses. In essence, PHRF ratings are not a viable tool to handicap a fleet of boats with the wide variety of designs, displacements, and sail plans that make up a Racer Cruiser fleet. For this reason, PHRF-SS has established a High-Performance (HPRF) classification to aid Organizing Authorities (OA) in placing boats more effectively in classes having similar design characteristics.

3.0 MEMBERSHIP

- 3.1 PHRFSS members pay an annual membership/renewal fee of \$25.00 (US) which is principally used to offset administrative expenses.
- 3.2 The membership year runs from January 1st to December 31st and the certificate remain valid until March 31st of the ensuing year at which time they expire.
- 3.3 PHRFSS maintains a website at <https://phrfss.org>. This site allows access to base handicap lists, valid rating lists and handicap certificates.

4.0 CERTIFICATE TYPES AND CLASSIFICATIONS

- 4.1 PHRF-SS issues three standard certificates in one of two classifications. They are as follows:
- 4.1.1 **STND** (Standard) certificates are issued to displacement boats meeting the standard boat characterizations as enumerated in Section 5.0.
 - 4.1.2 **CLUB** (Club) certificates may be issued to boats which do not meet the standard boat characterization as stated in 5.0 and an unofficial CLUB certificate may be issued to support local yacht club racing programs. This classification is issued at the discretion of the Chief Handicapper and/or the HRB Committee. CLUB certificates are not valid outside the Club racing program for which they were issued.
 - 4.1.3 **PRLM** (Preliminary) classifications are issued to boats which have limited PHRF registrations and/or racing history. PRLM is monitored by the HRB Committee and adjusted as necessary as more performance data becomes available.
 - 4.1.4 **DISP** (Displacement) classifications are issued to production class boats in their original as-built configuration conforming to the characterizations as specified in Section 5.0.
 - 4.1.5 **HPRF** (High-Performance) classifications are issued to ultra-light boats with large sail areas and little or no accommodations. The type of spinnaker used is not relevant to this classification and the Chief Measurer or the Handicap Review Board (HRB) reserve the right of a final classification decision.

5.0 STANDARD BOAT CHARACTERIZATION

- 5.1 There is no definition of standard, so the term applies to such vessels that have a cabin with amenities that accommodate overnight use. This classification typically includes cruiser/racers which are a hybrid of the cruising boat built to accommodate overnight cruising but trimmed with the equipment for competitive racing. The average length of a standard boat in the PHRFSS database is approximately 32 feet and weighing an average of 9,000 pounds. Standard boats are characterized by the following:
- 5.1.1 Standard hull, interior, keel, rudder, and rig as built.
 - 5.1.2 Single hull with a self-bailing cockpit.
 - 5.1.3 Auxiliary propulsion system capable of propelling the boat at hull speed.
 - 5.1.4 Fuel capable of maintaining 90% hull speed for at least one hour.
 - 5.1.5 Equipped with a proper marine toilet or portable toilet (porta-potti).
Note: Buckets are not a suitable substitute.
 - 5.1.6 Spars banded for the proper P and E. Ketch and yawl rigs have Py and Ey banded.
 - 5.1.7 Sails cut to conform with the latest IMS requirements.
 - 5.1.8 Luff perpendicular (LP) of largest headsail less than 155% of J.
 - 5.1.9 Spinnaker pole length equal to or less than J.
 - 5.1.10 Fixed, folding or feathering propeller, outboard motor, or retractable propeller.
 - 5.1.11 Hull and appendages are unmodified from the as-built configuration except the owner may fair the hull, keel, and rudder to original design specifications.

6.0 HIGH PERFORMANCE (HPRF) CLASSIFICATION

- 6.1 There is an absence of an accepted high-performance definition. The nonconformity of high-performance boats with traditional designs and concepts has made their placement into racing outside of one design class races problematical.
- 6.2 High-performance (HPRF) boats are characterized by:
 - 6.2.1 Historically large sail areas for a given length, especially downwind.
 - 6.2.2 Light weight construction.
 - 6.2.3 Heavy reliance on crew weight to counterbalance heeling forces.
 - 6.2.4 Lifting keels for easy trailerability of a modern fin and bulb design
 - 6.2.5 Planing hulls which are designed to rise up and glide on top of the water under certain wind and sea conditions.
- 6.3 A planing (PLNG) hull will typically have a flat or concave bottom contour and plane up on top of the water. A displacement hull on the other hand has a belly, or convex, bottom contour which does not ride high on the water like a planing hull, instead plowing through and parting the water.
- 6.4 PHRFSS uses the following criteria to characterize a high-performance boat:
 - 6.4.1 Sail Area to Displacement ratio upwind (SDRU) greater than 29
 - 6.4.2 Sail Area to Displacement ratio downwind (SDRD) greater than 65
 - 6.4.3 Displacement to Length ratio (DLR) less than 105
 - 6.4.4 When SDRU and SDRD are combined and the sum is 94 or greater, then the boat is considered HPRF.
- 6.5 To be classified as high-performance (HPRF), at least two of the stated criteria in 6.4 must be met. These criteria are not absolute and there may be boats that are at a transition point between two different states. In these cases, the Chief Handicapper and/or HRB Committee will make the final determination.
- 6.6 At the discretion of the Organizing Authority, Displacement (DSPL) and High-Performance (HPRF) classifications may be combined.
- 6.7 Asymmetric spinnaker conversion does not apply to HPRF boats.

7.0 CLUB RATED BOATS

- 7.1 CLUB boats are non-conforming and do not meet the standard boat characterizations stated in 5.0. These boats may be issued a CLUB handicap certificate to support local yacht club racing programs and **are only valid for that purpose**. These are issued at the discretion of the Chief Handicapper and/or the HRB Committee. The decision to allow this classification to race in any organized PHRF event is the sole responsibility of the Organizing Authority (OA).

8.0 HANDICAPS

- 8.1 Handicaps are only issued to monohull sailboats.
- 8.2 PHRF is an empirical rule and uses a numerical measure of a boats speed based on observed performance.
- 8.3 Handicaps are expressed in seconds per nautical mile (sec/nm) and generally assigned in three second increments.
- 8.4 PHRFSS references the US Sailing PHRF Handicap database as an aid in assigning handicaps which are adjusted as necessary by review of performance-based criteria and

accumulated race results. Reviews of similar boats in other PHRF regions also aid in that effort.

- 8.5 Organizing authorities may assign temporary ratings but they must be made in consultation with a PHRFSS handicapper.
- 8.6 PHRFSS uses the manufacturer's design plan specifications (I, J, P, E, etc.) as a default to calculate various parameters. These specifications are reflected on the handicap certificate and are not necessarily the true physical measure of a specific boat.
- 8.7 Boats may not carry both symmetric and asymmetric spinnakers. The owner must declare the configuration prior to issue of the certificate. For example, owners may not arbitrarily select a symmetric or asymmetric sail based on single race conditions.

9.0 BOAT MODIFICATIONS

- 9.1 PHRFSS shall be notified in writing of any changes which modify a boat's design weight, trim, underwater shape of hull, keel or rudder and any modifications to the standing rigging or spars.
- 9.2 Work exempt from the reporting requirement is the repair of grounding damage or filling and fairing of the magnitude associated with batten sanding. Placement of deck hardware and other control or running rigging is unrestricted.
- 9.3 Boats shall race with at least all the equipment and furnishings supplied as standard by the manufacturer. Removal of a table, V-berth cushions, and all but one interior cabin door is permitted without penalty.
- 9.4 Drawers, headliners, cabinet and locker doors, steps, ladders, and engine enclosures shall remain in place as supplied. If they do not so remain, then the yacht shall be considered modified and rated accordingly.
- 9.5 Unreported changes in rig, sails, rudder, hull, keel, ballast, or spinnaker pole is a serious breach of the rules and will result in the immediate suspension of the PHRFSS certificate.

10.0 PERFORMANCE PREDICATION FACTOR

- 10.1 The performance predication factor upwind (PPFU) and downwind (PPFD) are used to predict the potential performance of a boat. The PPF is based on sail area, displacement, and length at the waterline.
- 10.2 PPF is only an estimate of potential performance and does not attempt to represent itself as a velocity prediction program.
 - 10.2.1 $PPFU = DLR/SDRU$ and $PPFD = DLR/SDRD$
- 10.3 PPF is offered to the organizing authorities as an aid in creating class splits.
- 10.4 PHRFSS recommends that the organizing authority consider placing boats into classes by PPF, then assigning their respective handicaps because of the disparity in design variations. Class splits by handicap alone may not yield the best result.

11.0 HANDICAP ADJUSTMENTS

11.1 Any credits and/or adjustments must be requested by the owner and verified by a PHRFSS measurer and/or handicapper.

11.2 PROPELLER (PROP)

No credits are given for any propeller on a retracting outboard motor, retracting propeller shaft, or any 2 or 3 bladed feathering propellers whether installed on an exposed shaft or in a hull aperture.

11.2.1 2-blade in aperture (2BA)..... no credit

11.2.2 3-blade in aperture (3BA).....+3 sec/nm

11.2.3 2-blade with exposed shaft (2BX)+ 6 sec/nm

11.2.4 3-blade with exposed shaft (3BX)+9 sec/nm

11.3 AUXILIARY POWER (PWR)

11.3.1 Retractable Outboard -6 sec/nm

11.3.2 Bow Thruster+3 sec/nm

11.4 ROLLER FURLED GENOA (RFG)

11.4.1 Above deck furling drum.....+3 sec/nm

11.4.2 RFG with UV cover on leech & foot+6 sec/nm

11.4.3 Below deck furling drum no credit

11.4.4 Standard production features..... no credit

11.5 ROLLER FURLED MAINSAIL (RFM)

11.5.1 Standard production feature no credit

11.5.2 In-the-boom furled mainsail+3 sec/nm

11.5.3 With battens.....+6 sec/nm

11.5.4 Without battens+9 sec/nm

11.6 MAINSAIL

11.6.1 One or more girth dimensions exceeded -3 sec/nm

11.6.2 Up to 10% increase in sail area -3 sec/nm

11.6.3 Each additional 10% increase in sail area -3 sec/nm

11.7 SQUARE HEADED MAINSAILS

11.7.1 0.1% to 3% increase in sail area -3 sec/nm

11.7.2 Every additional 3% increase -3 sec/nm

11.8 REDUCTION IN RIG MEASUREMENTS (I, J, P and/or E)

11.8.1 Up to 5%..... no credit

11.8.2 5% to 10%.....+3 sec/nm

11.8.3 Every additional 5%.....+3 sec/nm

11.9 CARBON RIG REPLACING ALUMINUM RIG

11.9.1 Boats 40 feet or less..... -3 sec/nm

11.9.2 Boats over 40 feet -6 sec/nm

11.10 SPINNAKER POLE

11.10.1 0% increase in SPL (J) 0 sec/nm

11.10.2 100% to 110% of J -3 sec/nm

11.10.3 110% to 120% of J -6 sec/nm

11.10.4 Each additional 10% -3 sec/nm

11.11 INCREASE IN SPINNAKER HOIST

- 11.11.1 Each 8% increase over base boat dimension..... -3 sec/nm
(or each fractional increase thereof).....
- 11.12 **ASYMMETRIC SPINNAKER MODIFICATION**
Applies only to heavy displacement boats that are converting from a symmetric to an asymmetric spinnaker with a fixed or extendable sprit permanently mounted on or near the centerline. See Section 20.0
 - 11.12.1 100%-115%.....+6 sec/nm
 - 11.12.2 115%-125%.....+3 sec/nm
 - 11.12.3 125%-135%..... 0 sec/nm
 - 11.12.4 135%-145%..... -3 sec/nm
 - 11.12.5 145%-155%..... -6 sec/nm
 - 11.12.6 > 155%..... HRB Committee Review
- 11.13 **INCREASE IN MAST HEIGHT**
 - 11.13.1 I = 101% to 102% of design -3 sec/nm
 - 11.13.2 I > 102% to 104% of design -6 sec/nm
 - 11.13.3 Each additional 2% -3 sec/nm
- 11.14 **INTERIOR FIXTURES (IFR)**
 - 11.14.1 Standard interior fixtures removed - 3 sec/nm
- 11.15 **UNDERSIZED SAIL PLAN**
 - 11.15.1 Reduction from designed sail plan..... no credit
- 11.16 **INCREASE IN RIG MEASUREMENTS**
 - 11.16.1 I & P increased 2% and each 2% increment..... -3 sec/nm
 - 11.16.2 P increased 6% and each 6% increment -3 sec/nm
 - 11.16.3 I increased 5% and each 5% increment -3 sec/nm
 - 11.16.4 E increased 10% and each increment -3 sec/nm
- 11.17 **ADDING WEIGHT/BALLAST**
 - 11.17.1 Changing the shape of the keel, putting the weight lower, improving the sail carrying capability results in an automatic -6 sec/nm.
 - 11.17.2 In general, appendage changes and modifications will be reviewed on an individual basis.
- 11.18 **CHANGING THE DRAFT**
 - 11.18.1 Change in draft results in a -3 sec/nm penalty for every 0.5 foot, or fraction thereof increase in depth.
 - 11.18.2 Change in the draft results in a 3 sec/nm credit for every 0.5-foot decrease in depth. Appendage changes and modifications will be reviewed on a case-by-case basis.
- 12.0 ONE DESIGN RATINGS (ODR)**
 - 12.1 To qualify for an ODR, the class must have a current and active one-design class association with a maintained web presence and an available set of current class rules.
 - 12.2 The owner must certify that current class rules are being adhered to.
 - 12.3 Assigning an ODR does not constitute certification by PHRFSS that the boat is class legal.
 - 12.4 Class designated crew weight limits do not apply for PHRF racing.

13.0 SCHELL HANDICAP (SHCP)

- 13.1 PHRFSS uses the Schell Regression Formula to calculate a boats handicap (SHCP) based on the manufacturer's design plan specifications. The formula assumes that boats are at rest and makes no attempt to account for wind and sea conditions or the variance caused by modern designs with planing hulls. The calculation is as follows:

$$SHCP = 610 - 8.36 \left(\frac{SA}{\sqrt[3]{D}} \right) + 0.0000511(SA^2) - 55(P/J+E) - 30.8 \left(\sqrt[2]{LWL} \right) - 602 \left(\frac{DR^2}{SA} \right)$$

- 13.2 PHRFSS uses only the observed performance to assign handicaps. The SHCP is used when no empirical data exists or when the boat presented has no observed performance data available. SHCP also facilitates a baseline comparison to assigned handicaps to evaluate differences.

14.0 NON-SPINNAKER HANDICAP (NSP)

- 14.1 Non-spinnaker (NSP) handicaps, also known as Jib and Main (JAM) are established to compensate boats that sail downwind using the same sails they use to sail upwind. These boats do not deploy spinnakers regardless of the point of sail.
- 14.2 JAM ratings are different than PHRF ratings and reflect the downwind efficiencies of various rig types. NSP or JAM ratings do not correlate to PHRF ratings for overall results.
- 14.3 The ratio (SR) of the headsail plus mainsail area to the spinnaker plus mainsail sail area is calculated. This ratio multiplied by a correction factor is then added to the base handicap which results in the non-spinnaker rating (NSP).
- 14.3.1 $NSP = (SR * 14.68) + HCP$
- 14.4 Free flying any headsail on a non-spinnaker boat is specifically prohibited.
- 14.5 A boat equipped with roller furling must always be in use. The headsail must be deployed and furled using the roller furling system.
- 14.6 Ketches and yawls may not fly staysails off the wind unless such sails are used when sailing upwind.

15.0 ROLLER FURLING CRUISNG CREDIT

- 15.1 To obtain a roller furling headsail credit, the foot offset or roach of the roller furled headsail shall not exceed 2% of the LP when measured perpendicular to the foot at mid-point. No other headsail may be substituted at any time for the qualified sail without losing the credit.
- 15.2 The headsail must remain on the furler except for sail changes.
- 15.3 The bottom of the roller furling drum must be above deck and it must be able to furl all qualified headsails.
- 15.4 Qualified roller furling headsails must be in the luff groove for the full luff of the sail, attached to a swivel at the head and to the drum swivel at the deck
- 15.5 No credit is given if the roller furled headsail was supplied with the original production yacht as equipped by the manufacturer.

16.0 MAXIMUM ALLOWED CREW WEIGHT

- 16.1 Each yacht shall be restricted to a maximum crew weight. It shall be the responsibility of the owner/skipper to ensure that the crew weight limit is adhered to.

16.2 Maximum crew weight for each yacht is calculated from the following:

$$CWT = 200 \left(\frac{\sqrt{400 - HCP}}{4} + \frac{LOA^{1.25}}{17.6} + \frac{(I * J) + (P * E)}{1000} \right)$$

17.0 RIG AND SAIL MEASUREMENTS

- 17.1 Measurement may be required for obtaining a full basic handicap. PHRFSS uses the manufacturer's design plan measurement data as the basis for calculations.
- 17.2 Sailmakers are familiar with the International Measurement System (IMS) rule concerning the design of sails. Sails used on PHRFSS boats are expected to meet the IMS guidelines.
- 17.3 Mainsail battens may be any layout consistent with the IMS guidelines. Mainsail penalties shall be calculated where one or more of the following mainsail girth dimensions are exceeded:
(ref ORC/IMS 2023 Rule "Part G - Sails")
- 17.3.1 MHB>0.040E(headboard)
 - 17.3.2 MUW>0.25E(7/8 girth)
 - 17.3.3 MTW>0.41E(3/4 girth)
 - 17.3.4 MHW>0.66E(1/2 girth)
 - 17.3.5 MQW>0.85E(1/4 girth)
- 17.4 Mainsails shall be penalized 3 sec/nm, plus an additional 3 sec/nm for each 5% increase of sail area calculated by the following:
 $MSA = P/8(E + 2MQW + 2MHW + 1.5MTW + MUW + 0.5MHB)$
- 17.5 A jib is defined as any sail, other than a spinnaker, which is to be set in the foretriangle. In any jib the mid-girth, measured between mid-point of luff and leech, shall not exceed 50% of the foot length nor shall the length of any intermediate girth exceed a value similarly proportionate to its distance from the head of the sail.
- 17.6 Luff Perpendicular (LP) of the headsail designates the shortest distance measured between clew and luff.
- 17.7 Effective Forestay Length (EFL) is a calculation based on the manufacturer's design plans of "I" and "J" and/or "ISP" and "JSP". EFL is used to establish the maximum allowed forestay length from which spinnaker luff lengths are calculated at 95% of the EFL.

18.0 BLOOPERS (ref: ORR)

- 18.1 Bloopers are measured as jibs and must be included in evaluating the LP of the largest jib for handicapping purposes. The blooper must have an LP no larger than the largest declared genoa LP and have a mid-girth no greater than 50% of the foot in length. A blooper cannot be flown in a non-spinnaker race as no free flying headsails are allowed.
- 18.2 Bloopers are only allowed on boats rated with a spinnaker pole, and not with a bowsprit.
- 18.3 The blooper shall be counted as headsail for purposes of the limit on number of headsails carried while racing.

19.0 SYMMETRICAL SPINNAKERS

- 19.1 All boats in the PHRFSS database are assumed to have a base symmetrical spinnaker. The area of such is calculated regardless of the actual configuration, symmetric or asymmetric. This calculation is based on the manufacturer's design plan specifications of "I" and "J". This parameter appears on the handicap certificate and is the maximum allowed area without penalty of a symmetrical spinnaker. It is also used to establish an asymmetric percentage increase over the maximum base symmetrical spinnaker area.
- 19.2 The allowed area for a symmetrical spinnaker, hereafter referred to as the "Base Spinnaker" shall be calculated as follows:
- 19.2.1 $AREA = (SLU * (SFL + 4 * SHW)) / 6$
 - 19.2.2 $SLU \text{ or } SLE \leq 0.95 * (I^2 + J^2)^{0.5}$
 - 19.2.3 $SHW \leq 1.8 * J$
 - 19.2.4 The mid-girth shall not be less than 75% of the foot length.
 - 19.2.5 The sail must be symmetrical about a line measured from the head to the center of the foot
 - 19.2.6 Spinnaker shall be sheeted from only one point on the sail.
 - 19.2.7 Battens shall not be used in spinnakers.

20.0 ASYMMETRICAL SPINNAKERS

- 20.1 The allowed area for an Asymmetrical spinnaker shall be calculated as follows:
- 20.1.1 $AREA = (ASL * (SFL + 4 * SHW)) / 6$
 - 20.1.2 $SLU / SLE \geq 1.1$
 - 20.1.3 $SHW < 1.8 * JSP$ and $\geq 75\%$ of the foot length
 - 20.1.4 $ASL \leq 0.95 * (ISP^2 + JSP^2)^{0.5}$
- 20.2 Code 0 sails are asymmetrical sails with a mid-girth of > 55% and < 75% of the foot length. The minimum penalty of a Code 0 sail will be 3 sec/nm adjusted for sail area.
- 20.3 **A Code Zero has a mid-girth of 75% of the foot length**, so it measures as a spinnaker but has a much bigger area than a genoa.
- 20.4 The spirit pole credits apply only to heavy displacement boats that convert to an asymmetrical spinnaker and not to boats that were so designed and equipped by the manufacturer.
- 20.5 A rating certificate is issued for either a configuration with the asymmetrical sprit credit or a standard symmetrical configuration, not both.
- 20.6 If using a standard spinnaker pole as a sprit to fly an asymmetric sail, the structural integrity of such a configuration is the sole responsibility of the owner.
- 20.7 If an asymmetrical spinnaker with sprit credit is flown using a spinnaker pole, the spinnaker pole shall be touching the headstay and the deck at all times while the asymmetrical spinnaker is being set, flown and doused. The pole must be fixed such that it cannot articulate.
- 20.8 A sprit pole mounted on deck may be extendable. If a deck mounted spinnaker pole is used, it must clearly be marked as to the maximum intended extension by a contrasting color tape no less than one inch in width. Any rating credit which may be given depends on the length of extension which under no circumstances may exceed 135% of J if using the asymmetric credit. If extended beyond 135%, the boat will receive a spinnaker pole penalty as stated in Section 11.0 in lieu of an asymmetric sprit credit.

- 20.9 An asymmetric sail **may never be flown from a standard spinnaker pole mounted in its normal position** as would be used to fly a symmetric sail.
- 20.10 The asymmetric spinnaker rule as stated for traditional boats is unique to PHRFSS and may not be accepted by other PHRF regions.

21.0 HANDICAP CHANGES

- 21.1 Handicaps may be adjusted no less than annually based upon observed performance and/or analysis of available performance data by the HRB. In all cases, a simple majority of the HRB is required to approve any change.
- 21.2 If a change is made to a standard boat, then all registered boats of the same base configuration shall be adjusted. Under no circumstance will a rating change be applied to a single standard boat unless she is a custom or a one-off configuration. PHRF-SS will not, to the best of its ability, adjust any handicap based on skipper, crew, sails or lack of proper boat preparation.
- 21.3 The base boat rating will not be changed or reviewed unless a rating appeal is submitted. Handicaps are not adjusted without actual results and the preference is for the results of as many standard boats as possible.

22.0 RATINGS APPEAL

- 22.1 The appeal process is initiated by proper completion of the Appeals Form which can be downloaded from the PHRF-SS web site. Members may appeal the rating of their own boat or the boat of a competitor. If an appeal is granted to a standard boat, all like standard boats shall be assigned the new rating. PHRF-SS attempts to objectively assess each rating change request and tries its best to avoid any circumstances where the result is handicapping the skipper or crew.
- 22.2 An appeal will not be accepted until results are available for at least the (10) Invitational Races or fifteen (15) club races in the year during which the appeal is made. No more than one appeal will be accepted per racing season.
- 22.3 The Bylaws of the PHRF Committee of the United States Sailing Association (US Sailing) permit appeals of ratings issued by a local HRB to the US Sailing PHRF Committee. Such appeals may only be filed with the permission of the PHRF-SS HRB.

23.0 CLASS SPLIT GUIDANCE

- 23.1 At any event designated PHRF-SS, all registered boats should first be placed in the order of their performance predication factors (PPF) first and then separated in classes by the organizing authority. Because of the variance in design and performance characteristics, boats should never be divided into classes based solely on the handicap. PPF is offered as a tool and not a requirement. The Organizing Authority is ultimately responsible for the final class splits.

24.0 ABBREVIATIONS

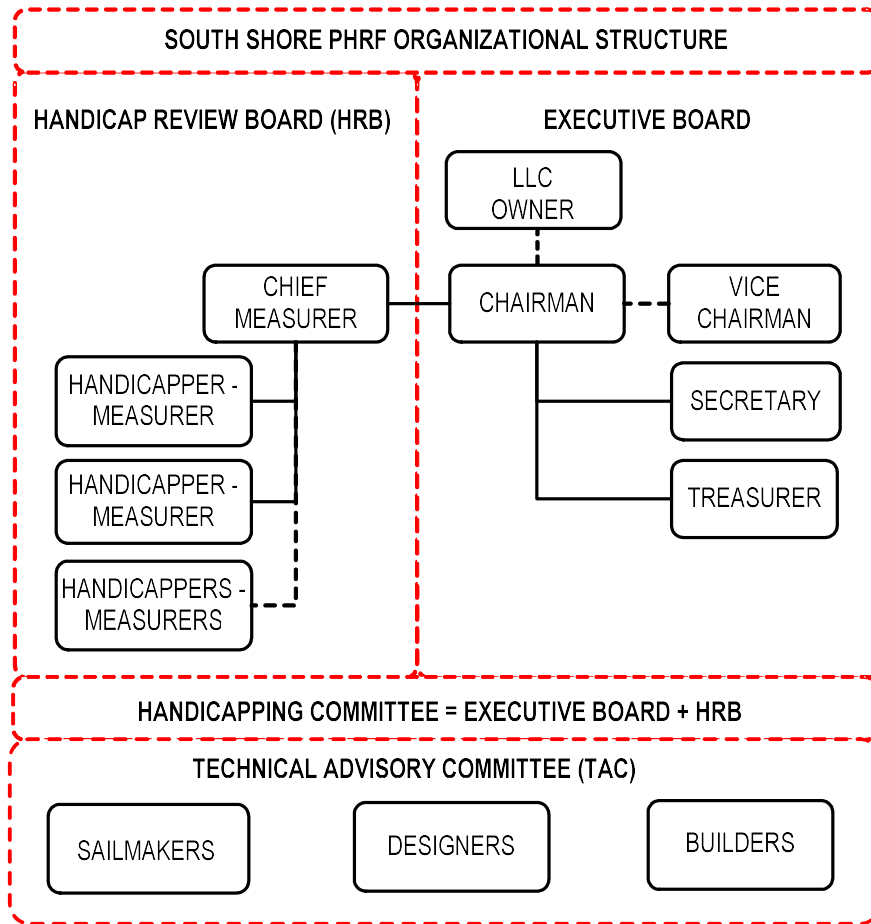
ASM – Asymmetric
ASL – Average spinnaker luff
CLUB – Club level only certificate
DLR – Displacement to length ratio
FXD – Fixed
HCP – Handicap
HPRF – High Performance Classification
JAM – Jib and main
OB - Outboard

PPFU – Performance prediction upwind
PPFD – Performance prediction downwind
PRLM - Preliminary
SHCP – Schell handicap
SADW – Sail area to displacement upwind
SADD – Sail area to displacement downwind
SPL – Spinnaker pole length
STND – Standard certificate
TEMP – Temporary certificate
TPS – Tack point of spinnaker

25.0 BY-LAWS

- 25.1 The South Shore Performance Handicap Racing Fleet (PHRF-SS) is an organization established to promote competition and fair sailing between dissimilar boats by serving as a handicapping authority. It shall further be an objective of this organization to maintain an association with the United States Performance Handicap Racing Fleet (US-PHRF), as well as other individual performance handicapping groups, by actively supporting our mutual interest.
- 25.2 PHRF-SS was chartered by Interlake Yachting Association (I-LYA) on June 28, 2017. PHRF-SS does not act as, nor represent, any Organizing Authority (OA) for any event designated PHRF-SS and does not dictate which boats may or may not participate in any given event, nor does it dictate which safety features a boat must meet. A vessels safety preparedness must conform to federal, regional, and local laws, rules, and regulations for the body of water on which it operates and the rules under which it is sailing.
- 25.3 PHRF-SS is established as a Limited Liability Company (LLC) chartered by the Inter-Lake Yachting Association (I-LYA) to act as a regional handicapping authority and to develop rules and by-laws.
- 25.4 The organization shall consist of an Executive Committee (EXC), a Handicap Review Board (HRB) and a Technical Advisory Committee (TAC). and as such, it's owner shall be a permanent member of the Executive and Handicapping Review Boards.
 - 25.4.1 The **Executive Committee (EXC)** shall consist of the Chairman, Vice-Chairman, Secretary, and Treasurer. The Secretary and Treasurer positions may be combined and represented by a single individual.
 - 25.4.2 The **Handicap Review Board (HRB)** shall be established under the oversight of the Chief Measurer and consist of a minimum of three selected active racing sailors at large with sufficient experience to be conversant in boat design and performance characteristics. The Executive Board shall be defacto voting members of the Handicap Committee.
 - 25.4.3 The **Technical Advisory Committee (TAC)** shall be formed to assist the HRB as required to evaluate measurement methods, techniques and to ensure alignment with industry standards. The TAC is a permanent non-voting member of the HRB.
- 25.5 PHRF-SS shall be administered by a Chairman. The Vice-Chairman shall serve in the Chairman's absence in that capacity.
- 25.6 The Chairman will also serve as the Chief Measurer. The LLC owner is a permanent member of the EXC and serves no term limits.
- 25.7 The members-at-large of the Handicap Committee shall be elected/appointed from each member club if possible. Election or appointment is subject to the acceptance by the EXC.
- 25.8 A simple majority at any scheduled meeting is required to establish a quorum. Meetings are held monthly except June through August but may be more often as necessary.
- 25.9 One or more sail makers and/or industry experts may be included on the HRB to ensure consistency and accuracy in the measurement of sails and interpretation of design characteristics. PHRF-SS is committed to transparency for all boats.

26.0 EXECUTIVE BOARD DUTIES, RESPONSIBILITIES



26.1 CHAIRMAN

- 26.1.1 The Chairman, typically the Chief Measurer, shall be the chief executive officer of PHRF-SS and shall preside at all meetings of the Executive Board and serve as Chairman of the HRB, represent PHRF-SS to other yachting organizations, and promote the best interests of the organization.
- 26.1.2 The Chairman shall vote in the instance of a tie or the absence of an Executive or HRB member to achieve a quorum.
- 26.1.3 May appoint additional members of the HRB who have a technical interest. No member of the HRB may take part in discussions about the handicap of a boat that he/she has an interest in, either financially or by sailing on it.
- 26.1.4 May direct and prepare information for distribution to the membership at large and/or other related PHRF-SS Committees, Fleet Handicappers and resource persons.
- 26.1.5 May initiate discussions beneficial to PHRF-SS for the Executive Board to consider. Regarding these discussions, if a consensus is not reached, the Chairman may have the option to present directly to the membership at large for further review and discussion.

26.2 VICE-CHAIRMAN

- 26.2.1 The Vice Chairman shall assist the Chairman in the discharge of his duties. In addition, the Vice-Chairman will in the Chairman's absence, act in his stead.
- 26.2.2 Act as a voting member of the Executive Board and HRB.
- 26.2.3 Promote growth of the membership

26.3 SECRETARY

- 26.3.1 The Secretary shall act as the recording member of the Executive Board and PHRF-SS.
- 26.3.2 The Secretary shall also have the following duties:
 - Maintain membership and fleet rosters.
- 26.3.3 Act as a voting member of the Executive Board and the HRB.
- 26.3.4 Record certificates processed for year, keep historical record
- 26.3.5 Manage and support email communications generated by fleets,
- 26.3.6 Generate monthly invoices, collect/record payments sent to treasurer.
- 26.3.7 Coordinate and schedule the Fall and Spring meeting at the request of the Chairman.
- 26.3.8 Act as the official contact for Member Fleets.
- 26.3.9 Collect images/messages from fleets to be posted on website and distributed via email.

26.4 TREASURER

- 26.4.1 The Treasurer shall be responsible for the funds of PHRF-SS and act as a voting member of the Executive Board and the HRB. These responsibilities include:
- 26.4.2 Maintain a checking account for PHRF-SS expenses
- 26.4.3 Deposit monies into this account sent to PHRF-SS from the Secretary who collects the membership fees.
- 26.4.4 Pay any bills as authorized by the PHRF-SS Chairman.
- 26.4.5 Provide accounting at the Fall Meeting for income and expenses.
- 26.4.6 Recommend any changes need in dues to offset increased expenses.

26.5 CHIEF HANDICAPPER

- 26.5.1 The Chief Handicapper shall:
- 26.5.2 Maintain the performance handicapping records.
- 26.5.3 Recommend, to the HRB, handicaps for newly-registered yachts and handicap changes for yachts whose race results indicate a need for adjustment.
- 26.5.4 Conduct independent investigations of alleged measurement irregularities.
- 26.5.5 Act as a voting member of the Executive Board and the HRB.
- 26.5.6 In the event of a vacancy in this position, duties will be assumed by the HRB.

26.6 FLEET HANDICAPPER

26.6.1 The Fleet Handicapper shall:

26.6.2 Appoint Fleet Measurers that are experienced racers and can interpret design characteristics of boats. There are no term limits to the appointment.

26.6.3 Screen all Renewal Certificate Applications for changes from the last issued certificate

26.6.4 Assist boat owners in preparing New Certificate Applications for ratings and review by the HRB by verifying the data provided by owner using internet resources (Sailboatdata.com, US Sailing, manufacturer's website, previous certificates, other sources).

26.6.5 Consult with the boat owner to resolve any discrepancies before submitting to the HRB for review and handicap designation.

26.6.6 Provide liaison between HRB and owner during review process.

27.0 ELECTIONS AND MEETINGS

27.1 PHRF-SS will hold an annual meeting open to all members. Reports by the Chairman (State of the Fleet), Treasurer (Balance Sheet), Secretary (Proposed Bylaw Changes) Chief Handicapper (Certificate and Ratings Report).

27.2 An open forum discussion will be held to solicit input from the membership to aid in the development and improvement of competition and/or rating adjustments.

27.3 Election of Officers will be held in executive session before the annual meeting. Voting members are limited to the HRB.

28.0 REVISION HISTORY

Rev 1.15

a) General update and rewrite of revision 1.14. Consolidation of redundant and/or repetitive sections.

b) Change spinnaker pole penalty from 5% to 10% increments.

c) Add section to allow the use of spinnaker poles as a sprit.

d) Add High-performance classification with definition

e) Remove requirement to lock lifting keels

f) Update non-spinnaker calculation

Rev 1.16

a) Change increase in mainsail area increment from 5% to 10%.

b) Add handicap adjustment criteria for square top main.

c) Update asymmetric pole conversion credits.

Rev 1.16.1

a) General review and update by HRB Committee (1/17/24)