

Corpus Christ Bay Performance Handicap Racing Fleet

Rules and Regulations

January 2010

The Corpus Christi Bay Performance Handicap Racing Fleet (CCB-PHRF) is a committee of Bay Yacht Club (BYC) Corpus Christi, Texas. These rules and regulations are intended to guide the assignment of handicaps to monohull and multihull sailboats for intraclub and interclub racing. It is the intention of the CCB-PHRF Handicap Committee to handicap sailboats fairly. The CCB-PHRF handicap rating form and instructions for completing the form are attached at the end of this document. All BYC boats competing in BYC races must complete and submit a handicap rating form to the CCB –PHRF committee for assignment of a handicap. For brevity the CCB- PHRF committee will be referred to as the Handicap Committee (HC) for the rest of this document.

A base handicap (BHCP) in seconds-per-nautical-mile (sec/nm) is assigned to each boat by the HC after observation and analysis of hull parameters, rig and sail dimensions, the most recent US-PHRF publication on handicap data, race experience, race results, and any other relevant studies of performance data. The base handicap assumes:

- a. Standard hull and interior, keel, rudder, and rig, as originally designed and built.
- b. Jib overlap (LP) no greater than 155% of J.
- c. Spinnaker pole length (SPL) no longer than J.
- d. Spinnaker mid-width (SMW) no greater than 180% of SPL.
- e. Spinnaker maximum length is no greater than 95% of length of jibstay
- f. A folding prop, a retracted outboard, or a two-blade solid prop in an aperture.

The HC will use the median base handicap of active boats published in the US Sailing if it exists.

3.0 Temporary or Provisional Base Handicaps

Temporary or Provisional Base Handicaps may be assigned for one-of-a-kind, custom designs or innovative designs, and new production boats until sufficient information is obtained to result in a more stable base handicap. When warranted temporary or provisional base handicaps can be changed at any meeting of the HC.

4.0 Handicap or Final Sailing number

A final sailing number or handicap is derived by adding adjustments (credits or penalties) to the base handicap. Please see section 11.0 on adjustments for types and associated values reported in sec./nm.

5.0 Recreational Boat Fleet The majority of the BYC fleet are recreational boats and will have their ratings derived as described in section 11. Recreational boats are best described as follows:

- A. Will not have/use spinnakers bloopers, gennakers, cruising spinnakers, or such sails by any name.
- B. Will only have/use a single headsail except for boats designed and rated to carry a staysail (e.g. a cutter rig boat)
- C. If staysail is used it is subject to the following restrictions.
 - 1. Staysail overlap when hoisted cannot exceed the overlap of the largest headsail.
 - 2. When used, a staysail must be tacked to the deck or bowsprit or be tacked to the deck or as designed as a self tacking rig.
 - 3. The staysail cannot be tacked further forward of the mast than the J measurement.
- D. If whisker/spinnaker pole is present it will only be used to push out the clew of the headsail. When used the outboard end of the pole must be attached at or near the clew of the headsail and the inboard end must be attached to the mast. The maximum overall length is 100% of J.

6.0 Measurements and Verification

Measurements required for handicapping are not used to calculate a base handicap using an exact mathematical specification or formula; rather, they provide necessary comparison values to enable the HC to establish with reasonable confidence which sailboats are "standard" and which are different or have been modified. To accomplish this and to assure the uniform assignment of handicaps, it is necessary that HC obtain measurement parameters of hull and interior and critical rig and sail dimensions. (Note: Some classes are using metric units for class standards. The metric measurements are permitted to verify compliance with class standards where appropriate.) Greater accuracy is fine, but not really necessary. Any change to a sailboat must be reported to the HC. If hull, interior, rig, or sails are protested through normal procedures, the HC reserves the right to require verification by actual observation and measurement by a HC handicapper.

6.1 Verifying Hull Parameters

The length, beam, draft, etc., of the hull called for on the CCB-PHRF application or renewal form do not need to be precisely measured, except in the rare case of a modified hull. However, these dimensions must be reported. Standard measurements for many sailboats are readily available from USSA. The type of keel, rudder, prop installation and type must be reported. The sailboat must be raced with its designed and manufactured interior unless a boat sailing with a one-design handicap is specifically allowed removal or alteration by the class rules. Modification to an interior must be reported even though it may not cause an adjustment to the sailboat's base handicap.

6.2 Verifying Sail and Rig Dimensions

Sails that require measurement reporting are the largest headsail and spinnaker. The sail manufacturer's measurements are acceptable but are subject to verification by the HC.

Sails are measured with sufficient tension to remove cross wrinkles but with not so much tension as to cause wrinkles in the direction of measurement. The measuring tape should conform to the shape of the sail so that measurement represents the cloth length. The measurement point for edges or corners in all cases is to be the extent of the sail itself, and not to be a projected point or to include shackles or wrinkles.

The following sail dimensions are measured:

LP : Shortest distance from forward edge of luff tape to aft most portion of the sail at the clew. The value entered is the largest value from jibs and bloopers.

SL : Maximum length of spinnaker luffs.

SMW : Maximum horizontal width of spinnaker, usually measured by doubling the half width. For cruising spinnaker measure perpendicular to the luff.

Rig dimensions defined below are explicit for banded spars. Unbanded spars will be reported with spar dimensions equal to the maximum dimensions to which sails could extend with the installed halyard and outhaul. Please note that this may imply a penalty! Measurements are made in feet and inches.

J : Horizontal distance from forestay attachment point to front surface of mast.

SPL : Length of a spinnaker pole from centerline of the mast to outer end of the pole measured athwart-ships.

I : Height of the foretriangle, measured from the highest point of the sail attachment to the sheer line at the point abeam the mast. The point of sheer line is the intersection of the hull and deck.

P : Maximum hoist of mainsail, measured from lower edge of the upper mast band to the upper edge of the lower mast or upper surface of fixed boom.

PY : Maximum hoist of mizzen, measured from lower edge of the upper mizzen mast band to the upper edge of the lower mizzen mast band or upper surface of the fixed boom.

E : Maximum foot length of the mainsail, measured from the after edge of the mast to the inner edge of the band on the boom.

EY : Maximum foot length of mizzen sail, measured from after edge of mizzen mast to the inner edge of the band on the boom.

Owners of conventional sailboats are expected to follow general requirements set for racing sailboats by IMS, MORC and USSA. Thus, IMS, MORC and USSA limitations and restrictions generally apply regarding hull, interior, rig and sails, methods of trimming, and so forth. However, it is not the intention of the HC to prohibit new or unconventional hull designs. Handicaps will be generated for unconventional monohull sailboats. It is understood that such handicaps will reflect the unconventional design, method of trim, etc.

7.0 Mainsails

Mainsails built to IOR, IMS, MORC or other generally accepted rating rule are allowed. Sailboats will be expected to comply with the standard (IOR, IMS, etc.) mainsail specification or one design standard as applicable. Sailboats with mainsails that do not comply should expect an appropriate penalty. An effort will be made to accurately reflect

the additional speed potential of mainsails that are larger than the norms stated above. Full battened mainsails are allowed. Mid girth measurements should comply with standard (IOR, IMS, etc.) specifications. There is no restriction on the material of the battens. Battens must be evenly spaced along the leech, unless otherwise specified by class rules, but do not have to be parallel to the boom.

8.0 Headsails

Headsail maximum size generally conforms to the IOR specifications or one-design specifications. Sailboats with larger genoas or oversize spinnakers or poles or both are penalized in order to effect equitable racing between sailboats of the same basic design as well as the other designs of the fleet. Bloopers may be flown but must meet IOR specification.

9.0 Asymmetrical Spinnakers

Asymmetrical spinnakers prohibited under MORC, IMS and IOR are allowed subject to the following definitions and rules established to ensure that these sails are not used as oversized jibs.

- 1.) $1.7 \text{ SPL} \geq \text{SMW} \leq 1.8 \times \text{SPL}$
- 2.) $\text{SL luff} + \text{SL leach} = \text{SL}$
- 3.) $\text{SL luff}^2 / \text{SL leach} \geq 1.2$
- 4.) Area of asymmetrical spinnaker must not be greater than IMS/IOR spinnaker for that boat. (Exception: Established one-design boats may comply with other appropriate class rules where a larger spinnaker is specified.)
- 5.) For boats with permanently mounted spinnaker poles, outriggers, bowsprits, etc., $\text{SPL} = \text{J}$ for the purposes of spinnaker size calculations when comparing with IOR/IMS Standards.
- 6.) Spinnaker widths other than SF must not be greater than SMW.
- 7.) All measurements of asymmetrical spinnakers must be approved by the HC
- 8.) An asymmetrical spinnaker may be flown with or without a pole.

10.0 Special or Innovative Rigs

Special or innovative rigs are appearing on sailboats produced by some manufacturers. The HC will deal with the standard rig for any monohull. Special or innovative rigs may not have to satisfy mid girth measurements or anything else other than the original manufacturers specifications. Owners of sailboats with such rigs should be prepared to supply the HC with relevant information to verify any unique claims made under this provision.

11.0 Credits and Penalties

Credits and penalties, in seconds-per-nautical mile, are added or subtracted to base handicaps for variations or modifications to standard hull, interior, keel, rudder, rig or sail plan. All modifications are handled on a case-by-case basis. Owners must report all

modifications when they apply for or renew a handicap certificate. Handicap ratings may be changed at any time deemed appropriate by HC.

Schedule of adjustments:

The following adjustments will be applied as part of the handicapping process.

1.) LP Adjustment: 150- 155% of J, 0 sec./nm.; 155.1% to 165% of J, -3 sec./nm.; greater than 165% of J: -6 sec./nm. 135% of J, +3 sec/nm, 100-110 +6 sec/nm

2.) SPL Adjustment: Less than J, 0 sec./nm. Each 5% (or fraction thereof) greater than J, -3 sec./nm.

3.) SMW Adjustment: Less than 180% of SPL, 0 sec./nm. Each 5% (or fraction thereof) greater than 180%, -3 sec./nm.

4.) SL Adjustment: $.95 + \text{SQRT}(I^2 + J^2)$. Each 5% (or fraction thereof) greater than SL, -3 sec./nm.

5.) I Adjustment: Standard I, 0 sec./nm. Each 2.5% of fraction greater than I, -3 sec./nm.

6.) Propeller adjustments:

- a. folding prop, retractable outboard, or a two-blade solid prop in an aperture, 0 sec/nm
- b. two-blade solid prop on exposed shaft or on a non-retracting outboard, +6 sec./nm.
- c. three-blade solid prop, either inboard or on a non-retracting outboard, +9 sec./nm.

7.) Mainsail Adjustments:

- a. Change P or PY. Each 5% increase or fraction thereof, -3 sec./nm.
 - b. Change E or EY. Each 5% increase or fraction thereof, -3 sec./nm.
 - c. Full-length battens will not be penalized.
 - d. Roller furling mainsail with no battens or positive roach +6 sec/nm
 - e. Roller furling mainsail with battens and or positive roach +3 sec/nm
- 8.) Shoal or wing keel unless described in base handicap +3 sec/nm
- 9.) No whisker or spinnaker pole +3 sec/nm.
- 10.) Above deck roller furling headsail(not designed for racing) +6

The above adjustments are guidelines and may be modified at the discretion of the HC.

12.0 Centerboards, Lifting Keels, Water Ballast, etc.

A. Movable appendages which are equal or less than 10% of a boat's displacement may be moved while racing. Such appendages exceeding 10% of displacement are prohibited

from movement while racing.

B. If water is an integral part of a boat's stability package, full water tanks must be maintained at all times while racing.

13.0 Dynamic Performance Adjusted Handicap

Given that the purpose of a handicap system is to create an equal chance for any participant to win, the HC will manage a dynamic performance adjustment process conceptually similar to a golf handicap process. This Dynamic Performance Adjusted Handicap (DPAH) will only be used for BYC races. The HC will make performance adjustments based on actual sailing performance. Performance adjustments will begin after the 1st race. The adjustment will be based on the corrected time difference between the 3rd place boat and each other boat using the formula below. The performance adjustment (PA) may be positive or negative and will be added to the handicap used in that race (CCB base or DPAH) to create the current DPAH. The maximum performance adjustment for each race will be 30 seconds per NM. No performance adjustment is computed for the 3rd place boat. If there is something abnormal about any boat's performance or more than a 60 seconds per NM difference between 2 races for any one boat the HC committee will review the circumstances and adjust the DPAH accordingly.

13.1 Formula

PA + beginning race handicap = DPAH

PA(per race) = sec/nm (Time difference between 3rd place boat divided by length of race)
If the results are greater than 30 sec/nm then 30 will be used for that PA.

Example: The 6th place boat (base handicap 150) finished 8 minutes behind the third place boat in a 10 NM race therefore: 8 minutes X 60 = 480 seconds divided by 10 NM = 48 sec per NM which is then recorded as 30 which is the maximum adjustment for any one race **performance adjustment = 30**. The Committee would award the 6th place boat a DPAH of 180 (150 + 30) for the next race. If this boat finished 2nd in the next race with a PA of -10 sec/nm then the new DPAH would be 180 + -10 = 170. If this boat finish 5th in the next race with a PA of +5 the new DPAH would be 170 + 5 = 175. If in the fourth race it finished 2nd with a PA of -3 sec/nm. The new DPAH would be 175 + -3 = 172.

14.0 Rules Violations

The expectation is all participants will be cooperative, demonstrate good sportsmanship and follow the rules.

The idea of handicapping is to create a level playing field for all participants. In order for this to work, it is necessary that boats be raced as similar as possible. Thus the rule requires the sailboat to be raced in "show boat" trim. That is all hatches, lockers, bunks, doors, tables, bulkheads, etc. that would be on the boat in order to sell it should be on the boat when it is raced. If, for some reason, you do not wish to race this way, you must

inform the handicapper's council of your "modification". It is the responsibility of the HC to adjust your rating if the modification seems to justify it. It is not the sailboat owner's job to assess what is significant or not. In general, you may do what you wish but you must keep the HC apprised of what you are doing to your sailboat or you will be held in violation of the rules and the HC must react. The HC can disqualify you from previous races and suspend further participation if warranted in the opinion of the HC. Report any and all changes you make to your sailboat.

Examples of reportable changes include but are not limited to:

- 1.) Any modification(s) of the interior of the boat that would reduce weight > 150 lbs.
- 2.) Replacement of the prop with one of another type.
- 4.) Removal of fuel or water tanks.
- 5.) Adding a new headsail to the inventory.

15.) Rating Appeals

The boat must possess a valid certificate from CCB-PHRF before an appeal can be accepted.

1. Appeal to HC:

Appeals must be written. This correspondence should identify the owner making the appeal, as well as the boat whose rating is being appealed. In addition, the reason(s) for the appeal should be outlined and, if the appeal is accepted, this reasoning should parallel the presentation given to the rating committee if the appeal goes to a hearing. The HC will review and respond within 30 days of receipt of the appeal. If the HC agrees with the written appeal the change will be made immediately. If the HC disagrees with the appeal the owner will be given the opportunity for a hearing.

If necessary, an appeals committee consisting of at least 1 HC member and 2 other qualified individuals shall be assigned to hear the appeal.

A meeting will be held in which all interested parties shall present their case for or against the rating change. The boat owner or his representative making the appeal is required to attend to present the case for the appeal to be heard. The appeals committee ruling will take effect immediately.

2. Appeal to the National Authority: Should the appellant not be satisfied with the outcome of the appeal an appeal may be made to the national PHRF governing body. The request shall be accompanied with a processing fee of fifty dollars. The HC will process the appeal to the national PHRF governing body. The rating issued by the national PHRF governing body shall be final.