



# PERFORMANCE HANDICAP RACING FLEET RULES OF FCSA

## INTRODUCTION

First Coast Sailing Association (FCSA) promotes both one-design and Performance Handicap Racing Fleet (PHRF) racing in the Northeast Florida area. These rules apply only to PHRF racing of boats that are not racing in a one-design class. One-design class boats racing in a PHRF fleet shall adhere to one-design class rules and will be rated in accordance with local PHRF rating procedures, unless prescribed otherwise in the Notice of Race and Sailing Instructions for a particular race. The PHRF rating for one-design classes will account for differences between the one-design class rules and standard PHRF rating rules.

FCSA provides rules and guidelines for participation in FCSA PHRF races in the Northeast Florida area. At the Annual Meeting, Series Trophies are awarded for PHRF classes consisting of Spinnaker, Non-Spinnaker, and Cruiser Class boats. Additional trophies may be awarded to other PHRF classes, including the Women's Racing Series, as participation allows.

For FCSA PHRF Races and Regattas, where points are accumulated for Annual Series Trophies, the individual clubs must include in their Notice of Race (NOR) and Sailing Instructions (SI's) as a minimum the following classes: Performance Classes consisting of Spinnaker and Non-Spinnaker Class boats and a Cruiser Class that may contain both spinnaker and non-spinnaker cruising boats.

PHRF is not a measurement system, but relies on the honesty and sportsmanship of its membership to ensure that accurate information on a boat's configuration is made available to the Rating Committee for review. PHRF is a low-cost system that facilitates the enjoyment of racing for anyone who owns a cruising sailboat.

Ratings are established for boat models, not individual vessels or their crews. Base ratings are established for each production model of boats in our area. For each PHRF member, information is declared on a PHRF Rating Application Form. This information is used to modify the rating based on specific guidelines as well as allowances by the Rating Committee. These ratings are reviewed periodically, no less than annually, for consistency and accuracy by all members of the Rating Committee, composed of volunteers from area clubs and the Chief Rater. The area clubs that participate and govern FCSA are:

Epping Forest Yacht Club	North Florida Cruising Club	St. Augustine Yacht Club
Florida Yacht Club	Rudder Club of Jacksonville	Queen's Harbour Yacht Club
Halifax River Yacht Club	Smyrna Yacht Club	

Because these clubs support First Coast Sailing Association, any member of a participating club is eligible to obtain a PHRF rating upon application. In 2014, First Coast Sailing Association revised its ByLaws to include a membership classification "Associate Member" to allow members of the participating clubs who are not boat owners to participate and contribute to FCSA. FCSA policy was later expanded to include interested sailors and organizations that support sailing to participate and contribute to First Coast Sailing. These Associate Members may participate and contribute to FCSA events but may not vote in Annual Meetings and Special Meetings of FCSA. This ensures the governance of FCSA remains under the input and direction of its member clubs.



PHRF ratings are expressed in terms of seconds per nautical mile, usually in 3-second/nautical mile increments. Commonly, the race courses are measured in nautical miles and each boat's elapsed time is corrected using a Time on Distance calculation, by which each boat's elapsed time is corrected by the course length in nautical miles multiplied by its assigned PHRF handicap rating in seconds per mile. Course lengths are based on the shortest rhumb line course length. In the case of longer offshore courses the course length should be based on the great-circle distances. Other methods of handicapping races using PHRF values are allowed, Time on Time is the next most common. Sponsoring organizations that conduct races are not limited to any one applied methodology of the PHRF handicap values defined by these rules.

## PERFORMANCE HANDICAPPING

PHRF is an acronym meaning "Performance Handicap Racing Fleet", a rating system organized under U.S. Sailing Association guidelines, using compiled data of sailboats of varying performance characteristics that are handicapped for racing on the basis of observed performance, rather than the measured dimensions. It is the purpose of the PHRF system to handicap yachts of various classes or types on the basis of the potential speed of a well-sailed, well-maintained, and well-equipped specimen of each type. It is not the purpose of the PHRF system to handicap skippers and crews. Lack of sailing skill, poor sail inventory, fouled or poorly prepared bottom, and excess equipment are not accounted for in the Base Ratings. None of these factors should be basis of a higher adjusted rating. Conversely, the well-prepared, well-sailed boat with new sail inventory should not be penalized. The Base Ratings are conditioned on the assumption that each boat is well-prepared; with clean, well-prepared bottom and foils, new sails, and sailed with a high level of skill.

PHRF certification is open to single-hulled, self-righting boats and multi-hulled boats that conform to the requirements as described in the FCSA Bylaws, Sections 3.2.1 and 3.2.2, current revision approved in a Special General Meeting of FCSA in March 2010. These sections are reiterated below:

**Section 3.2.1 Offshore Rating:** Boat shall be a minimum of 20 feet in hull-length, and fit for sea, with a minimum of two berths below, and self-bailing cockpit. Boat shall have auxiliary power on board capable of powering the boat to 75% of its theoretical hull speed in flat water and shall conform to minimum U.S. Coast Guard requirements for safety and equipment applicable to the boat's size. Boat shall be single-hulled, self-righting, which shall include lifelines, or multi-hull, all crew working areas shall be protected by lifelines or jackstays and safety harness attachment points. Lifelines or jackstays with or without safety harness attachment points may be substituted for pulpits.

**Section 3.2.2 Inshore Rating:** Boat shall be single-hulled and self-righting or multi-hull. Boat shall have auxiliary power on board capable of powering the boat to 50% of its theoretical hull speed in flat water, and shall conform to minimum U.S. Coast Guard requirements for safety and equipment as applicable.

Boats not meeting the minimum requirements of Section 3.2.2 Inshore Rating shall not be issued a PHRF Rating Certificate. Boats not meeting Section 3.2.1 Offshore Rating requirements shall not be eligible to register in offshore races. The Notice of Race and Sailing Instructions for a given Race or Regatta may contain additional or more restrictive minimum requirements such as minimum overall length and equipment requirements based on offshore category.



The goal of PHRF is to provide fair and equitable racing for as many boats as possible. PHRF handicaps are assigned by the Rating Committee, a subcommittee of the FCSA Board, selected by and representing each of the member clubs of FCSA.

## RATING CERTIFICATE

Rating certificates are issued annually by the Chief Rater with a renewal fee of \$30.00, due February 1st each year. This fee is subject to change by the FCSA Board of Directors at the beginning of each year. Rating certificates are valid for 12 months, from February 1 of the current year through January 31 of the following year. New PHRF applicants and current PHRF certificate holders who change boats or declare modifications during the year will be charged an additional \$5.00 administration fee for each revised or new certificate. Certificate holders who renew after February 1 (late renewals) will be subject to a \$5.00 late fee. A boat may have only one valid rating certificate at any given time.

Visiting boats that are not FCSA PHRF Certificate Holders, but are current members of other PHRF organizations with valid rating certificates, may obtain a temporary PHRF rating certificate subject to local FCSA rules and base ratings for an administrative fee of \$5.00. The temporary rating certificate shall be valid only for the duration of the individual Race or Regatta for which the temporary rating was obtained. Visiting boats that have obtained temporary PHRF rating certificates shall not be eligible for the annual FCSA Series Trophies.

Any current PHRF Rating Certificate Holder may request that another PHRF Certificate Holder's boat be inspected to verify conformance to its certificate. Any such request shall be in writing, addressed to the FCSA Chief Rater, stating the basis for the request. The Rating Committee will evaluate the request and shall determine if the request is reasonable with respect to these Rules. If the request for inspection is approved by the Rating Committee and subject to permission from the boat's owner, a member of the Rating Committee will perform the inspection in the presence of the boat's owner. If the inspected boat's configuration is found to be substantially different than stated on the Rating Certificate, or if the boat's owner refuses to permit an inspection, the Rating Certificate may be invalidated at the discretion of the Rating Committee.

A boat shall not be eligible for a FCSA Annual Trophy unless the boat has a valid Rating Certificate for the races that it has scored in that series. The FCSA Annual Trophies will be awarded to the boat and Certificate Holder named on the boat's Rating Certificate unless the Certificate Holder designates otherwise. Each Race in a Regatta shall be scored in accordance with the rating that was currently in effect and used on the day of that Race. If a boat's Rating Certificate is changed during a Regatta only the subsequent races will be scored using the new certificate.

It is current practice among some FCSA member clubs to issue a "one-time" temporary PHRF rating at no charge to a boat new to the area or to a novice racer considering PHRF racing for the first time. FCSA supports this concept and encourages growth of participation in NE Florida sailboat racing. To encourage new racers and at the same time prevent abuse of the "one-time" temporary ratings the FCSA policy on "one-time" temporary PHRF ratings is as follows:



1. Whether a “one time” temporary rating is assigned by a FCSA member club is solely at the discretion of that club. The use of the “one-time” temporary rating is not intended as a means for boats visiting from other areas to waive the requirement to obtain a temporary PHRF rating.
2. Consistent with the sportsmanlike behavior that supports PHRF racing, anyone requesting a “one-time” temporary rating shall not make a request for such a rating again regardless of membership status change or boat change.
3. A boat may race and be scored in a FCSA series Race or Regatta for FCSA Annual Series Trophies using the “one-time” temporary rating. However, the results of that Race or Regatta will not be scored in the FCSA Annual Series unless that boat obtains a valid PHRF certificate before registering for the next Race or Regatta in that series.
4. The “one-time” temporary rating may be assigned by the club responsible for the particular series Race or Regatta. If the PHRF certificate assigned rating as issued by FCSA is different from the “one-time” temporary rating, the FCSA Annual Series results will be adjusted to the assigned rating of the PHRF certificate.
5. Finally, FCSA advises each member club to check registrants for each race using the FCSA published roster available at [www.sailjax.com](http://www.sailjax.com) to verify the PHRF certificates are valid for each registrant. An abuse is possible where a boat obtains a PHRF rating for one year and continues to use its assigned rating in following years based on an invalid certificate. Such practice is not fair to the valid FCSA PHRF Certificate Holders who are competing for club trophies. A member club may at its discretion allow a boat without a valid PHRF Certificate (not in the published FCSA Ratings List) to race in a Race or a Regatta with the understanding the boat will not be scored. Scores submitted by clubs for boats with invalid certificates will be dropped from the calculations for the Annual FCSA Series Trophies.

## RATING APPEALS

Ratings may be appealed to the Rating Committee. The Certificate Holder must submit his/her appeal in writing and submit evidence to substantiate the appeal. A Certificate Holder having an appeal lodged against his/her boat either by another skipper or by a club handicapper shall have the right to defend his/her case in person or in writing at the appeal hearing. The Chief Rater shall make notification. The decision of the Board shall be final and binding.

## PHRF PROCEDURES

PHRF ratings are available to members of FCSA upon submittal of a Rating Application Form to the Rating Committee. The form will be used by the Rating Committee for assignment of a rating. If the boat is one of a standard class or type, to which a "base rating" has already been assigned, the Chief Rater will assign that rating, adjusted where necessary for differences in sail area, propeller type, spinnaker pole length, crew weight declaration, etc., provided that such differences are within the range of the "standard modifications" listed herein. A Rating Certificate will then be validated and forwarded to the applicant. If the boat is one of a standard class or type to which no base rating has yet been assigned, or if the differences from the standard version are beyond the scope of the standard modifications, or if the boat is the only one of its kind, the Rating



Committee will review the application and assign the rating. In cases where a rating must be assigned by the Rating Committee and where an imminent regatta requires the applicant to have a rating before the Rating Committee can meet, any club handicapper is empowered to issue a provisional rating, valid until the next meeting of the Rating Committee. At that meeting, the provisional rating will be reviewed and either accepted or altered as the Rating Committee may decide.

Established base ratings can only be changed by a majority vote of the handicappers at a Rating Committee meeting. Quorum for the Rating Committee is a simple majority of the club handicappers with a minimum of five, including the Chief Rater. In recent years this has been successfully handled using e-mail exchange.

It must be recognized that no system of handicapping will adequately rate all types of boats on all points of sail and in all wind and sea conditions. It is the aim of this committee to assign ratings for conditions prevailing in NE Florida considering a mix of racing in protected waters and offshore coastal racing.

## RATING REVIEW

There is no such thing as a "final" PHRF rating. Any rating may be reviewed and challenged at any meeting of the Rating Committee without notice to the Certificate Holder. Whenever the Rating Committee is satisfied from observed performance that the rating of a particular boat or type of boat does not fairly reflect the speed potential of that boat or type, it will make changes in the rating it finds to be justified. Changes to ratings that have been long established are seldom made. In the case of more recently rated boats, particularly where little data was available when the rating was first assigned, changes are more likely as experience accumulates.

Any PHRF Certificate Holder can obtain a review of any yacht's rating by writing to any member of the Rating Committee. The letter will be more likely to be considered if it sets forth details of the boat's performance relative to other boats on various points of sail and in various wind speeds. Information of this kind is more useful than race results, because race results are influenced by many factors in addition to potential boat speed. The Rating Committee will consider every such application at its next meeting. In addition, the Rating Committee may initiate a review of a rating whenever it considers such action warranted.

A Certificate Holder who considers that he/she has not been fairly and reasonably treated by the Rating Committee may bring his/her complaint before the Board of the FCSA. While the FCSA Board will not undertake to assign or change PHRF ratings, it will investigate actions of the Rating Committee with respect to the complainant's case and take steps necessary to ensure a fair and reasonable disposition.

The effective date of a rating change is the weekend following the change. If this results in a yacht's rating being changed during a Regatta, the rating used for that Regatta will be at the discretion of the Race Committee of the sponsoring organization. Rating changes will generally be issued by e-mail following approval by the Chief Rater.



## THE RATING COMMITTEE

The Rating Committee is made up of one member from each FCSA member club and a Chief Rater. The names, addresses, and telephone numbers of all the members of the current PHRF Committee are available upon request from FCSA. E-mail addresses are listed on the FCSA website ([www.sailjax.com](http://www.sailjax.com)). These committee members are working hard to make this program a success. Feel free to call on any of them for advice or help when you need it.

## PHRF RULES

### A. PHRF CERTIFICATE RATINGS

#### **Base Rating:**

The "base rating" is the rating assigned to a "standard" boat of a class or type. It assumes the standard rig dimensions for the class and a folding propeller if exposed or a two-bladed fixed one if in an Aperture. (See Definitions: Aperture) If propulsion is by an outboard engine, it assumes the engine remains on board the boat while it is racing and it is tilted or raised so that the propeller is not in the water. An outboard engine may be dismantled and stowed in an optimum location aboard when racing with no penalty. It assumes that the boat is equipped with a symmetric spinnaker, and that the spinnaker pole length (SPL) is equal to the width of the base of the foretriangle (J), and that the maximum girth (SMW) of the spinnaker at any point is in the range of 168.1% to 183% of J. It assumes that the boat will be sailed with no more than the Base Crew Weight aboard. Finally, it assumes that the boat is in all other respects similar to the standard boat of its type as originally supplied by its manufacturer.

#### **Each PHRF certificate contains two assigned ratings:**

1. **Rating:** The assigned rating (adjusted base rating) shown on the PHRF certificate in bold font is the sum of the base rating and any adjustments as outlined in Handicap Adjustments, sections A through E based on information provided by the Certificate Holder on the PHRF Rating Application Form. This is the rating to be used for boats registered in the Spinnaker Class and may be applied to boats flying a spinnaker in a mixed spinnaker / non-spinnaker Cruiser Class.
2. **Non-Spinnaker Rating:** In addition to the assigned rating on the PHRF certificate there is also included a rating denoted as the "Non-Spinnaker rating". The Non-Spinnaker rating is the adjusted base rating with non-spinnaker adjustment as defined in Handicap Adjustments, section F based on the boat's rig dimensions.

#### **How the Non-Spinnaker Ratings are used:**

1. **Non-Spinnaker Classes:** Primary purpose of the Non-Spinnaker rating is to allow non-spinnaker boats to compete fairly in non-spinnaker or cruiser classes in which spinnakers are not flown and headsails are used for off-wind sailing. Using the non-spinnaker adjustments as defined in Handicap Adjustments section F, boats with smaller ratio of mainsail area to headsail area receive a larger adjustment than boats with larger ratio of mainsail area to headsail area.



2. **Cruiser Classes:** Secondary purpose of the Non-Spinnaker Rating is to allow non-spinnaker boats to compete fairly with spinnaker boats in a mixed spinnaker / non-spinnaker Cruiser Class. In a mixed spinnaker / non-spinnaker Cruiser Class the spinnaker boats will use their PHRF Certificate Rating and the non-spinnaker boats will use their Non-Spinnaker Rating shown on the PHRF Certificate.

## B. NON-SPINNAKER CLASS RACING

Non-Spinnaker racing is defined for this purpose as prohibiting the use of any headsail whose mid girth (mid-luff to mid-leech) measurement is more than 50% of its foot measurement. Participating yachts may not fly more than one headsail at a time except when changing headsails. (Yachts that are permanently cutter rigged may fly their staysails.)

## C. CRUISER CLASS DEFINITION AND RULES

Yacht clubs and race organizers have attempted to provide a venue for production cruising boats to compete with similar boats at less expense. The “Spirit of Cruising” shall prevail in the Cruiser Class. The Cruiser Class is not intended for performance racers seeking a less competitive class. The Cruising Class designation applies to the sailing characteristics of the boat. It in no way implies less knowledge or experience on the part of the skipper and crew. The purpose of this section is to provide uniform guidelines for FCSA member clubs and race organizers to include a Cruiser Class in their racing events.

For purposes of competitive racing under the rules of FCSA the PHRF Fleet will be treated as two Fleets, the Performance Fleet and the Cruiser Fleet. The Performance Fleet will consist of classes of Spinnaker and Non-Spinnaker boats. The Performance Fleet will generally consist of boats that are well prepared and competitively raced, taking all the advantages available under the local PHRF rules. It is recommended the individual Races and Regattas of the FCSA Annual Series should be managed by each member club such that the Performance Fleet (Spinnaker and Non-Spinnaker classes) is given starts (or a combined start in the case of smaller fleets) separate from the Cruiser Class boats. The Spinnaker and Non-Spinnaker classes may sail different courses depending upon wind conditions or may sail together such as in a point-to-point offshore Race. The significant difference in the race management of Performance Fleet and Cruiser Fleet boats is the Performance Fleet boats will be given separate start(s) from the Cruiser Fleet boats.

The definition of a “Cruiser Class Boat” shall generally fall within the following requirements:

1. The term “Cruiser Class Boat” refers to sailing yachts that are not outfitted for performance class racing and offer sufficient comfort and space to live on the boat for several days at a time or permanently. Typically these boats carry ground tackle in excess of what would be found in a stock production boat, and may but not necessarily include: generators, cooling systems, spare equipment, dinghy davits and other on-board gear; all of these adding weight and windage to what would otherwise be a stock production boat. A cruiser class boat need not have all of the aforementioned items to qualify but a boat falling within this general description would be termed a “Cruiser Class” boat.
2. Cruiser Class boats must have a “full cruising interior” as designed and manufactured. This shall include at a minimum:

- a. Bunks for sleeping
  - b. A permanently installed icebox (or refrigerator)
  - c. Functional galley with stove
  - d. Water and fuel tanks of appropriate capacity and sufficient working inventory for cruising
  - e. Internal electrical system with lights and VHF radio
  - f. A legal and properly installed marine head
3. It shall be the judgment of the PHRF Certificate Holder and the Race Committee whether a boat should be registered as a Cruiser Class boat in a race or regatta. FCSA recommends the definitions and guidelines outlined in these PHRF Rules be followed in making this determination. Any unresolved issues or disputes concerning the classification of a boat as a Cruising Class boat should be brought to the Rating Committee for review. It shall be the determination by the Rating Committee whether a boat registered as a Cruiser Class boat will be scored as a Cruiser Class boat for the FCSA Annual Trophies.

Specific rules pertinent for the Cruiser Class are as follows:

1. Headsail systems must be of cruising design, with hanked-on or roller furling headsails. Foils except when part of an operable furling system are not permitted.
2. Base ratings shall be based on cross-cut woven polyester headsails and mainsails (such as Dacron and other woven polyester trade names) that are in new condition. Any performance sails not meeting this description such as laminated sails, molded sails, woven/laminated cruising Mylar sails, and radial-cut racing woven polyester sails, etc. shall be adjusted -6 seconds per nautical mile for any headsail and -6 seconds per mile for any mainsail.
3. Free-flying headsails (sails not attached to a stay) including cruising spinnakers are permitted in the Cruising Class provided the boat is registered as a Spinnaker Cruising Class boat for that Race or Regatta. It is encouraged that the Cruising Fleet should be split into a Spinnaker Cruising Class and a separate Non-Spinnaker Cruising Class when possible. In a mixed class of Spinnaker and Non-Spinnaker Cruising Class boats, each boat will use either its assigned Rating or Non-Spinnaker Rating as shown on each boat's Rating Certificate as appropriate. A boat flying a spinnaker in the Cruising Class for a particular Race or Regatta shall not use its Non-Spinnaker Rating in that Race or Regatta. It will be important that Race Committees correctly record the configuration claimed by each boat and ensure the correct rating is used. A Cruising Class boat may chose whether or not to fly a spinnaker in any Race or Regatta provided the conditions of Item 4 below are met and the boat is registered correctly in accordance with the Notice of Race. The choice of flying a spinnaker in one FCSA Series Race or Regatta is not binding on subsequent Races or Regattas.
4. ***Please refer to the definitions of "Race" and "Regatta" as contained in the Definitions Section of these Rules.*** If a Cruising Class boat registers in a Regatta composed of several Races conducted over one or more days of duration for which an overall Regatta Cruising Class trophy is awarded (such as the First Coast Offshore Challenge or Lipton Cup for example), the boat must be registered as either Cruising-Spinnaker or Cruising Non-Spinnaker for all the Races of that Regatta regardless of changing weather conditions or the number of Races scored for the FCSA Annual Series Trophy from that Regatta.





5. Autopilots and wind vane steering may be used.
6. It is recognized that canvas for cruising is often installed such as a bimini-type top or comparable sunshade. No adjustments shall be made for folded, retracted or fully deployed sunshades.
7. At least one anchor, with chain and rode, all of a size and weight appropriate for the boat
8. The use of electric and/or hydraulic winches is allowed.
9. In the event there is insufficient number of entries at any given Race or Regatta to form both a Cruiser Class and a Non-Spinnaker Performance Class, the Cruiser Class boats will race with the Non-Spinnaker Performance Class boats in a mixed class to compete for the Race or Regatta class trophy. For FCSA Annual Series Races and Regattas boats in such a mixed class will accrue points towards the FCSA Annual Trophies for both classes based on the calculated class standings and according to which class each boat is registered in that Race or Regatta.

The following general guidelines are suggested for consistency among member clubs organizing Races and Regattas with Cruiser Classes in addition to Performance Fleet classes. It is recognized that the type of Race, fleet size and other factors may influence the decisions by individual club Race Committees.

1. Provided there is sufficient number of entries Cruiser Class boats should be given a separate start from the Performance Fleet classes.
2. Cruiser Class courses should be distinct from the other classes and should be of a distance to allow racing to be completed within the Race time limits.
3. For "closed course" races, equal emphasis should be placed on all points of sail. Windward-Leeward Races should be avoided if possible for the Cruiser Class.
4. For FCSA Series Races and Regattas the Notice of Race must include a provision that a Cruiser Class is being offered.

#### D. RULES PERTAINING TO ALL CLASSES

The following rules apply to all classes, both Performance Fleet and Cruiser Fleet in all PHRF Races and Regattas except as modified by the Notice of Race and Sailing Instructions for a particular race:

1. Whisker poles may not be longer than "LP" without penalty. Extendable poles must be banded to indicate their maximum permitted length.
2. Staysails are permitted on designated cutter rigs. Fore staysails and mizzen staysails are permitted on ketches and yawls. Mizzen staysails must be three-cornered (head, tack, and clew). The tack or tack pennant must be secured abaft the point of intersection of the aft face of the main mast with the deck, and also must be secured no higher than the rail cap, deck, or cabin top. Sheet leads may be to the hull or to the rail and to the mizzen boom, but not to any other spar or outrigger.
3. Multi-hull boats shall not race in a mixed class with single-hull boats. Multi-hull boats with PHRF certificates may race in a separate multi-hull class if provided for in the Notice of Race and Sailing Instructions for a particular Race or Regatta.



## E. SPORT BOAT CLASS

The Rating Committee reserves the right to identify any boat that it feels is or is not a sport boat, regardless of whether it meets any of the listed criteria.

1. Displacement/Length Ratio less than 100
2. Upwind Sail Area/Displacement Ratio greater than 30
3. Downwind Sail Area/Displacement Ratio greater than 75
4. A sprit length greater than 50 percent of J

It is recognized there are inherent differences between boats classified as a Sport Boat and traditional displacement hull designs of racer/cruisers and cruisers. FCSA encourages fair sailing and supports the development of a Sport Boat Class in the FCSA Series Races. Member clubs are encouraged to offer a Sport Boat Class in the Notice of Race and to allow the boats identified as Sport Boats to race in a separate class. If there is sufficient participation FCSA will offer annual trophies in the Annual Series for the Sport Boat Class.

## F. ANNUAL DECLARATION OF LP

The LP dimension (largest headsail) declared for a yacht at the time her certificate was issued or renewed must remain in effect for the duration of the year for which the certificate was issued. Rating changes resulting from changes in the LP dimension can, therefore, be made only once a year, except upon written application to the Rating Committee, stating the reasons for the change. Such applications will not be approved if the Rating Committee finds that the proposed change is an attempt to fine tune the yacht for anticipated weather conditions in any specific race, series, or time of year.

## G. PROPER RACING TRIM

Yachts shall race as rated with at least all the equipment and furnishings supplied as standard by the manufacturer. A yacht that has altered or has removed bulkheads, permanently attached furniture, or structural interior components shall be considered a custom yacht. Drawers, integral structural headliners, cabinet and locker doors, steps, ladders, and engine enclosures shall remain in place as supplied as standard equipment. If they do not so remain, then the yacht shall be considered a custom yacht and rated accordingly. Passageway doors, cushions, dining tables, and carpets are specifically exempted, and are alterable or removable provided all safety standards are met.

Lifting keels (not designed to be adjusted while racing) must be fixed and locked in the lowered position while racing.

## H. SAIL MEASUREMENT LIMITATIONS

The ratings assigned by the Rating Committee assume that sail dimensions not specifically stated on the certificate conform either to the yacht's class or to limitations that have long been standard in all measurement rules. Any departure from these limitations amounts to a change from the standard or norm. Therefore, notice of the departure must be given to the Rating Committee.



In the case of yachts not belonging to a one-design class, attention is specifically directed to the following:

1. Mainsail headboards may not exceed in width the greater of 6 inches or 4% of E.
2. Any Mainsail or Mizzen where the Mainsail Girth Upper measurement (MGU) is greater than 38% of E or the Mainsail Girth Middle measurement (MGM) is greater than 65% of E shall be declared. The increase in sail area above the mainsail girth maximums shall be stated as a percentage of increase. This data can be obtained from the sail maker. The measurement points for MGU and MGM are found by the following procedure:
  - a. Find the mid-point of the leech by folding the head to the clew. Mark mid-point with pencil.
  - b. Find the  $\frac{3}{4}$  point of the leech by folding the head to the mid-point of the leech. Mark  $\frac{3}{4}$  point leech with a pencil.
  - c. For MGU measure from  $\frac{3}{4}$  of the leech to closest point on luff.
  - d. For MGM measure from mid-point of the leech to closest point on luff.
3. Mainsails with full battens are allowed without penalty if the roach of the mainsail has not been increased from the above maximum girth limits.
4. For symmetric spinnakers, the SL may not exceed 95% of the square root of the sum of I squared plus JC squared.
5. A sail may not be measured or used as a jib unless its mid girth does not exceed 50% of its foot length, and the length of any intermediate girth does not exceed a value similarly proportionate to its distance from the head of the sail.

## I. CERTIFICATE HOLDER'S OBLIGATION TO DISCLOSE ALTERATIONS

PHRF ratings are based on information supplied to the PHRF Committee by the applicant. The success of the program is entirely dependent upon the integrity of the participants. In signing an application for a rating, or for the renewal of a rating, the applicant attests to the accuracy of the information supplied. Any subsequent changes in the boat or alterations in that information must be reported to the Rating Committee. If the Rating Committee is notified or discovers that a Certificate Holder is not in compliance with the above, the Rating Committee may file a protest with the FCSA Board. This protest will be heard by a properly constituted panel of three Judges. The panel of Judges may recommend to the Rating Committee the revocation of the certificate in question. The revocation may be made retroactively. The panel may also suspend the Certificate Holder's privilege to participate in any FCSA event for a prescribed period of time.

## DEFINITIONS

**NOTE:** All linear dimensions entered in the Rating Application Form shall be stated in feet to three decimal places.

**A-Area** - Area of asymmetric spinnaker as calculated by the IACC formula in  $\text{ft}^2$  - Consult your sail maker

**Aperture** - Any hull cavity, opening or hull configuration that shields a fixed propeller from the flowing water, thus limiting its drag

**BAL** - Ballast of the boat in pounds-mass (international avoirdupois pound)



**BEAM** - Maximum beam of the vessel, feet

**Certificate Holder** - The person whose name appears on the PHRF Rating Certificate

**CREW** - "STD" if to use base boat maximum weight - Otherwise, declare maximum weight desired

**DISPL** - Displacement of the yacht in pounds-mass (international avoirdupois pound), without crew, water, fuel, or stores aboard

**DRAFT** - Draft of the hull and keel in feet - Also include draft with the board down if a centerboard yacht

**E** - Foot length of the mainsail in feet, measured from mast to clew in its most outboard position

**I** - Height of foretriangle, measured in feet from deck sheer-line abeam the mast to the highest point of sail attachment

**J** - Distance perpendicular from foreside of the mast line to point of intersection of the forestay with the deck in feet

**JC** - The greater of J or SPL or SMW / 1.8 in feet

**LOA** - Length overall of the hull in feet - Note bowsprit and/or boomkin separately

**LP** - Distance perpendicular from the luff to the clew of the largest jib in feet

**LWL** - Load waterline length in feet

**MAT** - Material of hull, keel, rudder, and mast (e.g., fiberglass, lead, iron, aluminum, carbon fiber, etc.)

**MGM** - Mainsail Girth Middle measurement in feet

**MGU** - Mainsail Girth Upper measurement in feet

**P** - Luff length of the mainsail measured from boom to headboard in its highest position in feet

**Race** - A single event during which a class or multiple classes of boats are registered for the event in accordance with a Notice of Race and based on a single Start and a single Finish for the event

**Regatta** - A single event during which a class or multiple classes of boats are registered for the event in accordance with a Notice of Race and the event consisting of several Races in a series in which the scores for the individual Races under that event determine the overall scores and overall winners of each class of boats registered in that event. For purposes of this definition, a Regatta may be comprised of individual Races that are also scored individually as part of the FCSA Annual Series Trophies (such as the case with the First Coast Offshore Challenge) or the overall Regatta winners may be scored as a single FCSA Series Race (such as the case with the Rudder Club River City Regatta).

**S-Area** - Symmetric spinnaker area in ft<sup>2</sup> - Consult your sail maker



**SF** - Asymmetric foot length in feet

**SL** - Spinnaker luff length in feet - For symmetrical spinnakers,  $SL = 0.95 (\text{sq.rt.}l^2 + JC^2)$ . For asymmetrical spinnakers, see below

**SLE** - Asymmetric leech length in feet

**SLU** - Asymmetric luff length in feet

**SMG** - For asymmetrical spinnakers only, the mid-girth, found by measuring between the mid-points of the luff and leech in feet

**SMW** - For symmetrical spinnakers only, maximum girth leech to leech in feet (Fold on centerline, measure max. width, and multiply by two)

**SPL** - Spinnaker pole length measured with the pole in its fitting and set in a horizontal position athwartship in feet

**TPS** - Tack point of assymetric spinnaker on sprit pole end to front of mast, measured parallel to the water surface in feet (horizontal)

## HANDICAP ADJUSTMENTS

### A. JIB & MAIN

Adjustment is based on the largest headsail and is determined by the LP/J ratio stated as a percentage.

Headsail LP/J expressed as percentage	Adjustment
over 195%	-15 seconds/nm
over 185% but not exceeding 195%	-12 seconds/nm
over 175% but not exceeding 185%	-9 seconds/nm
over 165% but not exceeding 175%	-6 seconds/nm
over 155% but not exceeding 165%	-3 seconds/nm
over 145% but not exceeding 155%	-0 seconds/nm
over 135% but not exceeding 145%	+3 seconds/nm
up to but not exceeding 135%	+6 seconds/nm

NOTE: No headsails may be set to extend aft of the LP line used to establish the handicap.

Production boats that are supplied with roller furling as standard equipment have a base rating that reflects this factor, and as such no credit will be given for production boats with standard roller furling gear; however, the certificate holder must declare a modification if the roller furling gear is removed.

Production boats that are not base rated with roller furling gear shall receive credit of +6 sec/nm. To receive credit, the roller furling gear must typically have an above-deck drum with Dacron cruising sail and UV cover. Cruising designs with a below-deck drum will be accepted provided the headsail has a high clew and meets all other aspects of this requirement.

Mainsail Adjustments - Oversized mainsails must be declared and adjustment will be subject to review by the Rating Committee. No penalty shall be given for full-batten mainsails. No credit will be given for undersized mainsails. Roller stowing mainsails shall be given a +6 sec/nm credit.

## B. SPINNAKER

A Symmetric spinnaker is defined as having luff and leech within 2% of each other and being symmetric about the centerline in shape and material. An asymmetric spinnaker shall have over 5% difference in luff and leech lengths.

Adjustment is normally based on the largest spinnaker and for symmetric spinnakers is determined by the SMW/J ratio stated as a percentage.

Spinnaker Maximum Width / J ratio (SMW/J) expressed as a percentage	Adjustment
over 228%	-12 seconds/nm
over 213% but not exceeding 228%	-9 seconds/nm
over 198% but not exceeding 213%	-6 seconds/nm
over 183% but not exceeding 198%	-3 seconds/nm
over 168% but not exceeding 183%	-0 seconds/nm

NOTE: For symmetric spinnakers, if the spinnaker pole (SPL) is greater than J, then the spinnaker percentage is equal to SMW / J or 1.8 x SPL / J, whichever is greater.

The following shall be reported for asymmetrical spinnakers if requested by the Rating Committee:

1. How the sail will be attached to the boat (i.e., centerline tacked on bow, on fixed sprit, on articulating sprit, pole, etc.) If a boat has multiple asymmetric spinnakers that are attached in different manners, the largest of each must be reported separately.
2. The luff, leech, and foot dimensions
3. The area of the sail as measured using the IACC formula:

$$A\text{-Area} = ((SLU + SLE) * (0.25 * SF)) + ((SMG - 0.5 * SF) * ((SLU + SLE)/3))$$

One design boats with their standard asymmetric spinnakers will have such reflected in their base rating. The Rating Committee will consider the need for a penalty adjustment for all other boats on a case by case basis. In evaluating adjustments, the goal of the Rating Committee will be to presume that in order for identical hulls, each with different asymmetric spinnaker configurations (fixed sprit, articulating sprit, centerline, pole), to all go the same speed (averaged across a variety of wind strengths and angles), the sail area of the more efficient configurations will have to be reduced compared to that of the standard symmetric spinnaker.

Asymmetric spinnakers that meet the following conditions will be considered as standard and not subject to penalty:

1. When tacked to standard spinnaker pole (SPL):
  - a. The average of the lengths of the luff and leech do not exceed the luff length permitted for a standard spinnaker.  $(0.95 * \sqrt{I^2 + JC^2})$
  - b. SMG does not exceed  $1.75 * JC$ .
  - c. The foot (SF) does not exceed  $1.8 * JC$ .
  - d. The point at which the sail is tacked is not at a greater distance from the mast than the value reported for SPL on the certificate.
2. When tacked to sprit or centerline (TPS):
  - a. The average of the lengths of the luff and leech do not exceed  $1.15 * \sqrt{I^2 + TPS^2}$ .
  - b. SMG does not exceed  $1.8 * TPS$ .
  - c. The foot (SF) does not exceed  $1.75 * TPS$ .
  - d. TPS does not exceed  $1.15 * J$ , otherwise apply an adjustment as follows.
    - TPS >  $1.15 * J$ : -3 sec/NM
    - TPS >  $1.23 * J$ : -6 sec/NM
    - TPS >  $1.31 * J$ : -9 sec/NM
    - TPS >  $1.39 * J$ : -12 sec/NM

### C. MAST AND RIG

The effect on performance of changes from standard rig dimensions varies from boat to boat to so great an extent that no rational table of rating changes based on rig size can be formulated. Accordingly, these changes are treated on a case by case basis. If your boat is one of a class and your rig differs from the standard for that class, you must notify the Rating Committee of that fact. If you have a custom boat and your rig is changed from that described on your rating application, you must notify the Rating Committee of the changes. A "change" refers not only to length, but also to material, weight, number of spreaders, mast diameter, etc.

### D. PROPULSION

Adjustment is based on propeller type and its installation.

Prop Installation	Adjustment
Folding/Feathering Out of Aperture	+0 seconds/nm
Fixed 2-Blade in Aperture	+0 seconds/nm
Outboard Retracted When Racing	+0 seconds/nm
Fixed 2-Blade Out of Aperture	+6 seconds/nm
Fixed 3-Blade in Aperture	+6 seconds/nm
Fixed 3-Blade Out of Aperture	+9 seconds/nm
Non-Standard	TBD

NOTE: If the propeller or installation type is not included in the adjustment table, then the Rating Committee will assign the adjustment based on the assumed relation to the table and indicate the action in its notes.



## E. CREW WEIGHT

Yachts racing in the Performance Fleet (Spinnaker and Non-Spinnaker Classes) shall be rated following these Base Crew Weight Limitations:

Up to LOA (ft)	Base Weight Limit (lbs)
24	900
27	1080
30	1260
33	1440
35	1620
38	1800
40	1980
43	2160
45	2340
50+	Add 180 lbs for each 5 feet of LOA over 45 ft.

LOA shall be mathematically rounded to the nearest whole number. Examples: a 24.49 foot boat is rounded to 24 feet LOA and is allowed a base crew weight of 900 lbs; a 24.50 foot boat is allowed a base crew weight of 1080 lbs.

The base weight limit is for everyone aboard, including the skipper.

The base weight limit will be printed on the PHRF Certificate. Once per calendar year, the crew weight may be declared to be more or less than the base crew weight, with an adjustment in the rating. If certificate holder decides that he wishes to be rated with a crew weight less than the base crew weight, this request must be brought before the Rating Committee for their review. If a certificate holder wishes to sail with a crew weight greater than the base crew weight, the Chief Rater will adjust the boat's rating as found in the following table.

Adjustment	Notes
-6 seconds/nm	Base crew weight plus more than 180 lbs or more than 10% of base crew weight, whichever is greater (The "2 and up more crew" adjustment)
-3 seconds/nm	Base crew weight plus up to 180 lbs, or up to 10% of the base crew weight, whichever is greater (The "1 more crew" adjustment)
-0 seconds/nm	Base crew weight down to base crew weight minus 179 lbs, or 9.9% of base weight, whichever is greater



## F. NON-SPINNAKER ADJUSTMENT

Non-Spinnaker adjustments are based on the ratio of mainsail triangle size (including mizzen sails, if applicable), to foretriangle size based on the equation as follows:

$$\text{Mainsail/Foretriangle Ratio} = (P \times E + [PY \times EY] + [0.6LLY \times LPY]) / (ISP \times J)$$

Where the following measurements are all expressed in linear feet to three decimal places:

P = fully stretched or banded luff limit of mainsail

E = fully stretched or banded foot limit of mainsail

ISP = the distance from the deck height to the highest headsail halyard (even if above the intersection of the headstay and the mast)

J = horizontal distance from the foreside of the mast to the point of intersection of the forestay and deck (use the design "J" dimension for unmodified series production boats)

PY = fully stretched or banded luff limit of mizzen sail

EY = fully stretched or banded foot limit of mizzen sail

LLY = luff length of the largest mizzen staysail (mule, etc.)

LPY = distance perpendicular from the luff to the clew of the largest mizzen staysail

Non-Spinnaker adjustments are contained in the following table:

Mainsail/Foretriangle Ratio	Non-Spinnaker Rating Adjustment
Greater than 0.3 but less than 0.4	+26 seconds/nm
Greater than 0.4 but less than 0.5	+25 seconds/nm
Greater than 0.5 but less than 0.6	+24 seconds/nm
Greater than 0.6 but less than 0.7	+23 seconds/nm
Greater than 0.7 but less than 0.8	+22 seconds/nm
Greater than 0.8 but less than 0.9	+21 seconds/nm
Greater than 0.9 but less than 1.0	+20 seconds/nm
Greater than 1.0 but less than 1.1	+19 seconds/nm
Greater than 1.1 but less than 1.2	+18 seconds/nm
Greater than 1.2 but less than 1.3	+17 seconds/nm
Greater than 1.3 but less than 1.4	+16 seconds/nm
Greater than 1.4 but less than 1.5	+15 seconds/nm
Greater than 1.5 but less than 1.6	+14 seconds/nm
Greater than 1.6 but less than 1.7	+13 seconds/nm
Greater than 1.7 but less than 1.8	+12 seconds/nm
Greater than 1.8 but less than 1.9	+11 seconds/nm
Greater than 1.9 but less than 2.0	+10 seconds/nm

<b>Mainsail/Foretriangle Ratio</b>	<b>Non-Spinnaker Rating Adjustment</b>
Greater than 2.0 but less than 2.2	+ 9 seconds/nm
Greater than 2.2 but less than 2.4	+ 8 seconds/nm
Greater than 2.4 but less than 2.6	+ 7 seconds/nm
Greater than 2.6 but less than 3.0	+ 6 seconds/nm
Greater than 3.0 but less than 3.4	+ 5 seconds/nm
Greater than 3.4 but less than 4.0	+ 4 seconds/nm
Greater than 4.0 but less than 5.0	+ 3 seconds/nm
Greater than 5.0 but less than 6.0	+ 2 seconds/nm
Greater than 6.0 but less than 7.0	+ 1 seconds/nm
Greater than 7.0	+ 0 seconds/nm