

## **INITIAL RATING PROCESS:**

Each class of boat is assigned a **Base Boat Rating** expressed in seconds/mile. Base Boat Ratings reflect a standard configuration as specified by the manufacturer. US Sailing maintains a database of Base Boat Ratings & Critical Dimensions that is used in conjunction with the ECSA Database to verify boat specifications. PHRF ratings in other regions are also studied while assigning a Base Boat Rating, however these can have large variations from the US Sailing & ECSA databases. Variations can be caused by a number of variables such as (but not limited to): sail sizes, modifications, race conditions in a given region and the application of regional PHRF rules.

**ODR or One Design Ratings** assume the class configuration without adjustment or modification. In short a configuration that would be “Class Legal” at a One Design event. In many cases OD sail sizes are non-standard to PHRF and need to be crosschecked to OD rules as well as to ECSA PHRF rules. Modifications such as non-standard rudders, keels, masts, rigging etc. are evaluated on a case-by-case basis guided by ECSA PHRF regulations and are to be consistent with past practice. These alterations are then applied to the established Base Boat Rating.

**Custom or new designs** not represented in available PHRF databases may require additional information such as rating certificates from other rules: ORC, ORR, IRC etc. In addition to looking at the boat being rated, a “neighborhood” of comparable boats is created to study in the assignment of the Base Rating. A data table of the boats is then created looking at design ratios such as: SA/D, D/L, Displacement, LWL etc. Final ratings are then converted to Time on Time using a TCF correction factor. Lastly as part of the Base Rating process, a boat’s “Classification” will be assigned using its AV Index. The AV Index is a value created by looking at SA/D upwind & down as well as the D/L ratio.

## **RATING APPEAL PROCEDURE:**

The criteria for determining and appealing a PHRF rating is outlined in Article V of the PHRF of Eastern Connecticut bylaws:

PHRF ratings are based on a boat’s speed potential, determined from the demonstrated speed of “standard” boats which are expertly sailed and well equipped and conditioned. The rating does not reflect the skill of the crew, past race results or sub-optimal equipment. As such race results are only one factor considered in a rating appeal.

## **THE RATING APPEAL PROCESS:**

An ECSA member can appeal their own boat’s rating or that of a competitor’s boat, this is to be done in writing through the available forms on the ECSA website. A list of boats selected for review is posted on the ECSA website.

The evaluation of an appeal begins with a comparison of boats in the same neighborhood as the boat under review, similar to the Base Boat Process. These “neighborhood” boats are those with similar design characteristics that are also close in rating. The committee compares values such as: SA/D, D/L, Displacement & LWL to see if these predictors of performance are consistent with the current rating. The committee also looks at velocity predictions available for the selected designs. Measurement rules offer a scientific component to use when making comparisons that is helpful in determining actual speed potential vs. perceived.

When using a measurement rule like ORC for comparison the starting point is GPH or “General Purpose Handicap” this is similar to a single number PHRF scenario. While GPH is used as a

starting point, in extreme cases either due to wind speed or course sensitivity of a design, specific ranges may be considered in conjunction with GPH.

**ORC Trial Certificates** are also used to help validate the impact of changes/modifications such as (but not limited to): Displacement, Righting Moment, Non-standard sail sizes & Foil changes etc.

The committee will also survey how other PHRF regions treat the design, however this may require further analysis due to variations as listed above in the Base Boat section.

New unrated production boats and custom designs require the most stringent evaluation as building a “neighborhood” data table is often more difficult. A boat’s Classification is also looked at when being reviewed and will be assigned as outlined above using its AV Index.

The **Rating Review Form** asks the applicant to supply information about the boat, the experience of the crew and the number of races sailed. An “Owners Advocate” will be assigned to aid in the process. The advocate will work with the owner to help gather info & may also request to see the boat and primary competitors to verify measurements and assess its comparative racing condition. ECSA PHRF board members with industry positions will not be assigned as advocates.

The demonstrated proficiency of the skipper and crew, and the level of preparation of the boat help the committee weigh claims made in the appeal. Specific observations are helpful in verifying the predictions made by the velocity prediction programs and comparison of measurements. Documented comparisons such as minutes ahead or behind on a specific leg of a course or common point of sail with known wind speed and other variables can help be in understanding the performance attributes in specified conditions.

When the above facts are gathered, the committee will meet and discuss the appeal. Owners and other interested parties are welcome to attend this meeting. A consensus is reached and the proposed adjustment, if any is subject to a vote.

Members of the handicap committee often include skippers who race against the boat under appeal. Their observations are considered, but any skipper who is in a class with the boat under appeal in more than 50% of their races is disqualified from voting on the final decision. Those in the marine industry affiliated with a given boat under review are also disqualified from the voting process.