

First Coast Sailing Association
PHRF Fleet
Chief Handicapper's Report
for the Year 2011

Prepared by:

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Chief Handicapper
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First Coast Sailing Association

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Overall Activity 2011

There was a relatively low level of activity in the year 2011 in terms of new ratings, modifications to existing ratings, and general rating questions as compared with 2010. During 2010 we gained 31% in membership through new PHRF applications from new FCSA clubs (SAYC & GISC) which helped to offset the 35% decline in local area PHRF renewals. In 2010 our PHRF roster declined only from 95 to 90 as a result. This year there was no geographic expansion of FCSA and the negative trend is more evident. Our roster now stands at 77 current members. Of the 90 PHRF rating certificates at the end of 2010 we had 32 that did not renew. Fortunately we gained 19 new certificates during 2011, bringing the current total to 77. Our challenge continues to be encouraging area sailors to join the organization while retaining the members we already have.

Following is a summary of the action items recorded by the Chief Handicapper this year. A total of 31 action items were handled, composed of the following:

	Totals
New applicants for PHRF certificates – first time rating	20
Renewals with modifications requiring Chief Handicapper review	4
Rating change/correction based on Chief Handicapper's discretion	2
Rating appeal requests	2
General questions from PHRF members requiring Chief Handicapper review	3
Total Action Items	31

The 31 Action Items are summarized in the attached table. All correspondence among the Club Handicappers and the Chief Handicapper are recorded in e-mails that are archived as electronic files. Key conversations and answers to questions from individual PHRF members and the Club Handicappers are listed as References Nos. 1 through 4 that are attached following the Action Items.

If there are any questions regarding any of these Action Items, PHRF ratings or PHRF rules in general please contact me, or your Club Handicapper.

Tom Davis
Chief Handicapper - 2011

PHRF Chief Handicapper's Action Items - 2011

REQUEST DATE	REQUESTED ITEM	BOAT NAME	BOAT MODEL	PHRF MEMBER	RESPONSE DATE	RESPONSE	COMMENTS
12/01/10	New rating	JJ	T for Two	Jeffrey Rehkopf	01/02/11	Base Rating 339 sec/NM, with no adjustments. Adjusted Base Rating 339 . Non-spinnaker rating 351 sec/NM.	
01/02/11	Appeal	Lil' Bot	Santana 2023R	Benedek Erdos	01/25/11	Chief Handicapper presented data to the Club Handicappers by e-mail. Six responded. The vote was 4-2 in favor of changing base rating from 168 to 171. Chief Handicapper agreed.	NJYC, NFCC, SAYC, FYC voted in favor. EFYC, GISC opposed. RC no vote. See Reference #1.
01/20/11	New rating	Rhombus	Catalina 30 Mk II	Fred Braman	02/02/11	Base Rating 201 sec/NM, with +6 for 110% headsail, +6 for roller furling, +6 fixed 2-B prop. Adjusted Base Rating 219 . Non-spinnaker rating 240 sec/NM.	
01/20/11	Renewal, boat mod	Scallywag	J-29	Rob Smith	02/02/11	Base Rating 123 sec/NM, with +6 for 135% headsail, +6 for roller furling. Adjusted Base Rating 135 . Non-spinnaker rating 152 sec/NM.	Installed roller furler and 135% roller furling cruising headsail
01/20/11	New rating	Patriot	Catalina 28	Steve Sutterfield	02/02/11	Base Rating 204 sec/NM, with +6 for 135% headsail, +6 for roller furling, +9 fixed 3-B prop. Adjusted Base Rating 225 . Non-spinnaker rating 246 sec/NM.	
01/20/11	Renewal	Quicksand	Santana 30	Doug Rosen	02/02/11	Base Rating 183 sec/NM, with +6 for roller furling. Adjusted Base Rating 189 . Non-spinnaker rating 212 sec/NM.	No change from earlier rating
01/24/11	New rating	Freewind	S2 9.2	Jennifer Mouhalis	02/02/11	Base Rating 180 sec/NM, with +6 for roller furling, +6 fixed 2-B prop. Adjusted Base Rating 192 . Non-spinnaker rating 213 sec/NM.	
02/22/11	New rating	Goin' South	Hunter Legend 35 WK	Ted Jones	02/22/11	Base Rating 135 sec/NM, with +6 for 135% headsail, +6 for roller furling, +9 fixed 3-B prop. Adjusted Base Rating 156 . Non-spinnaker rating 173 sec/NM.	
02/23/11	Rating question	Goin' South	Hunter Legend 35 WK	Ted Jones	02/24/11	Question: Roller furling drum is below deck by design. Does this qualify for roller furling adjustment? Response: Send photos of rig under sail.	Photos reviewed and meets definition of "cruising" rig. Headsail is high clew, not a deck sweeper. Reference #2
02/25/11	Renewal, boat mod	Blue Sky	C&C 32	Dana Hunter	02/25/11	Changed headsail from 155% to 162%, rating decreased by 3 sec/NM.	

PHRF Chief Handicapper's Action Items - 2011

REQUEST DATE	REQUESTED ITEM	BOAT NAME	BOAT MODEL	PHRF MEMBER	RESPONSE DATE	RESPONSE	COMMENTS
03/01/11	Rating correction	Scallywag	J-29	Rob Smith	03/01/11	Base rating incorrectly listed as 123, changed to 126 per rating database. Adjustments unchanged.	
03/08/11	New rating	Impulse	Bristol 29.9	Maury Keiser	03/14/11	Base Rating 183 sec/NM, with +6 for roller furling, +6 fixed 2-B prop. Adjusted Base Rating 195 . Non-spinnaker rating 216 sec/NM.	
03/14/11	Rating question	Breezin' Thru	San Juan 28	Denise Smith	03/15/11	Question from Matthew Lynch: What is basis of Breezin' Thru's rating? Response was explained and no further discussion.	See Reference #3
03/14/11	Appeal	True Luck	Newport 41	Matthew Lynch	03/17/11	Max headsail changed from 135% to 130% results in no change to headsail adjustment.	Payment of \$5.00 for the rating change was returned.
03/30/11	New rating	Freak Show	Pearson 26	Steve Pettengill	04/11/11	Base Rating 222 sec/NM, with +6 for 135% headsail, +6 for roller furling. Adjusted Base Rating 234 . Non-spinnaker rating 256 sec/NM.	
04/02/11	Request to rate GISC Fleet	21 boats in GISC fleet		David Heine	04/17/11	Sent spreadsheet to GISC for consideration. Only one boat in fleet applied for PHRF rating from FCSA as a result.	See Reference #4
04/19/11	New rating	No Name	Freedom 21	Jeffrey Rehkopf	04/19/11	Base Rating 222 sec/NM, with no adjustments. Adjusted Base Rating 222 . Non-spinnaker rating 229 sec/NM.	
04/19/11	Renewal, boat mod	Ludicrous	C&C 30	Joseph Morgan	04/19/11	Changed prop to 3-B fixed, replacing 2-B fixed, resulting in +3 sec/NM net change in rating.	
05/24/11	New rating	Kotchka	Hinckley 38	John Meehan	05/31/11	Base Rating 156 sec/NM, with +6 for 130% headsail, +6 for roller furling, +9 fixed 3-B prop. Adjusted Base Rating 177 . Non-spinnaker rating 198 sec/NM.	
05/24/11	New rating	Frank Instein	i550	Joe Markusic	05/31/11	Base Rating 150 sec/NM, with no adjustments. Adjusted Base Rating 150 . Non-spinnaker rating 169 sec/NM.	Refer to e-mail correspondence summarized in e-mail dated 4/25/2011

PHRF Chief Handicapper's Action Items - 2011

REQUEST DATE	REQUESTED ITEM	BOAT NAME	BOAT MODEL	PHRF MEMBER	RESPONSE DATE	RESPONSE	COMMENTS
07/18/11	New rating	Latitude Chaser	Freedom 21	Alexis Montanez	07/19/11	Base Rating 222 sec/NM, with no adjustments. Adjusted Base Rating 222 . Non-spinnaker rating 229 sec/NM.	
07/18/11	New rating	Just Limin	Catalina 375	Jim Hamrick	07/19/11	Base Rating 123 sec/NM, with +6 for 135% headsail, +6 for roller furling, +9 fixed 3-B prop, +6 roller main. Adjusted Base Rating 150 . Non-spinnaker rating 171 sec/NM.	
08/04/11	New rating	Anticipation	Beneteau 32.2	Daniel Harris	08/14/11	Base Rating 156 sec/NM, with +6 for 116% headsail, +6 for roller furling, +6 fixed 2-B prop. Adjusted Base Rating 174 . Non-spinnaker rating 193 sec/NM.	
08/11/11	New rating	Actaea	Concordia 41	Anthony Harwell	08/21/11	Base Rating 174 sec/NM, with +6 for 100% headsail. Adjusted Base Rating 180 . Non-spinnaker rating 196 sec/NM.	
08/16/11	New rating	Spirit	Dobrouth/Lindsey 45	Glenn Greiner	08/21/11	Base Rating 48 sec/NM, with no adjustments. Adjusted Base Rating 48 . Non-spinnaker rating 68 sec/NM.	
08/18/11	New rating	Haiku	Bliss homebuilt 19	Jay Bliss	08/21/11	This boat is single hull not self-righting and therefore cannot receive a PHRF rating.	Application check was returned.
08/19/11	New rating	Rattle & Hum	Antrim 27	Adam Norwood	08/21/11	Base Rating 87 sec/NM, with no adjustments. Adjusted Base Rating 87 . Non-spinnaker rating 101 sec/NM.	
09/16/11	New rating	Masuco	Irwin 30	Mark Helman	09/22/11	Base Rating 180 sec/NM, with +6 for 135% headsail, +6 for roller furling, +9 fixed 3-B prop. Adjusted Base Rating 201 . Non-spinnaker rating 224 sec/NM.	
09/26/11	New rating	Invictus	Hunter 30-2	Tom Jones	09/28/11	Base Rating 186 sec/NM, with +6 for roller furling, +6 fixed 2-B prop. Adjusted Base Rating 198 . Non-spinnaker rating 213 sec/NM.	
11/14/11	New rating	My S2	S2 6.9	Michael Dolan	11/19/11	Base Rating 210 sec/NM, with no adjustments. Adjusted Base Rating 210 . Non-spinnaker rating 227 sec/NM.	

PHRF Chief Handicapper's Action Items - 2011

REQUEST DATE	REQUESTED ITEM	BOAT NAME	BOAT MODEL	PHRF MEMBER	RESPONSE DATE	RESPONSE	COMMENTS
12/23/11	Rating correction	Freak Show	Pearson 26 - Modified	Steve Pettengill	12/31/11	From conversation between Chief Handicapper and Owner it was determined that mast was replaced and dimensions stated on PHRF application were actual mods	Mainsail is 21% more sail area than standard. Rating adjusted -6 sec/NM

REFERENCE NO. 1 – APPEAL OF SANTANA 2023R

QUESTION (from Benedek Erdos)

You mentioned earlier (last year) that I could request a review of my rating. How does it work? What should I do? Do you still think it would make sense to change my rating to 171 from 168?

PHRF CHIEF HANDICAPPER RESPONSE

To all Club Handicappers,

I received a request from Benedek Erdos, skipper a Lil' Bot, which is a Santana 2023R. He is requesting a change in his Base Rating from 168 to 171.

Two e-mails are attached. The first is the e-mail I sent to Benedek last year, explaining my basis for his assigned (current) rating. The second e-mail is his request to have his Base Rating changed from 168 to 171.

I think we should approve the rating change. This boat is well sailed and has participated in every race this year in the spinnaker class under a wide variety of conditions. The rig dimensions and displacement tend to indicate this is a very fast boat but it is water ballasted. This makes it hard to compare with similar keel boats. Looking at the results I think the boat could be sailed better, particularly if they would put more beef on the rail when it blows. But in light air I still don't think the boat sails to a 168 rating. So I would support a rating of 171.

We do not have a YRALIS rating for this boat. As a sanity check I looked up the Portsmouth Rating (DPN) for the Santana 2023R which is in the database. It has a DPN of 83.9 which converts to a PHRF Rating of 173.4. This also supports a rating of 171.

Please return e-mail your comments on this.

Tom Davis
Chief Handicapper

Benedek,

I assembled the data associated with your boat and presented the data to the Club Handicappers by e-mail. There are seven handicappers, each representing one of the seven clubs in FCSA. Of the seven handicappers that I contacted, six responded. The vote was 4-2 in favor of changing your rating from 168 to 171. I am also in favor of the change as well. I will be handling several ratings by end of this week and I will send a note to Vicki Cross to issue a new revised rating certificate (171) for your boat. We look forward to seeing you out on the Race Course this spring.

Tom Davis
Chief Handicapper, FCSA

REFERENCE NO. 2 – ROLLER FURLING ADJUSTMENT, GOIN’ SOUTH

QUESTION (from Ted Jones)

Tom, on the bottom of the (PHRF) application, it stated that my furling drum has to be above the deck to get the 6 seconds (adjustment). Your call. Thanks, Ted

QUESTION (from Chief Handicapper)

Ted, I would imagine your roller furling is a standard roller furler like Schaefer. Is the headsail a high clew Dacron sail with sun shield? (Not a deck sweeper?) I imagine it is cut like a roller furling headsail. The stipulation about above deck needs to consider this. Do you have any photos with headsail unfurled?

PHRF CHIEF HANDICAPPER RESPONSE

Ted, Looks like a cruising setup to me. Let’s stay with what we have and we will review in a year. If you get a high-tech deck sweeper we would have to rethink your rating.

Refer to photo submitted by Ted Jones below:



REFERENCE NO. 3 – RATING QUESTION REGARDING BREEZIN' THRU

INQUIRY FROM MATTHEW LYNCH, TRUE LUCK

Tom,

Per our conversation, I am wondering why Breezin' Thru has a 221 non-spin PHRF and a 219 spin PHRF. I have also noticed that the PHRF for Breezin' Thru changes.

2010 races:

Spring Series - 221 non-spin

Moonlight and Fall Series - non-spin 218

2011 Spring Series -221 non-spin

Thank you for your assistance.

Matt Lynch

CHIEF HANDICAPPER RESPONSE

Matt,

Breezin' Thru has a PHRF Certificate with a Base Rating of 189. This boat is rated with a folding prop and a 150% roller furling headsail which gives a correction of +6 sec/nm. This gives an Adjusted Base Rating of $189 + 6 = 195$ sec/nm. If Breezin' Thru raced in Spinnaker Class this boat would sail with a 195 Rating.

Breezin' Thru is a Non-Spinnaker boat. The non-spinnaker correction is based on the ratio of mainsail area to foretriangle area = $(P \times E) / (I_{sp} \times J) = 0.692$ for this boat. This gives a Non-Spinnaker adjustment of +23 sec/nm. If you want to see the process by which this is calculated you can go to the following link:

<http://www.sailjax.com/FCSA-PHRF-Rules.pdf>

The +23 sec/nm adjustment gives $195 + 23 = 218$ sec/nm Non-Spinnaker Rating. The correct rating for Breezin' Thru as a Non-Spinnaker boat is 218 sec/nm. This is what the records show. I do remember some discussion at the Spring River Race about whether Breezin' Thru has a fixed or a folding prop. Currently, the records show a folding prop with no correction. If that is incorrect then Breezin' Thru would need to modify their certificate accordingly.

I hope this clarifies the issue.

REFERENCE NO. 4 – RATING OF GISC FLEET

FROM BRETT GROVER, GISC

Hi Tom,

I need your help! I have been trying to get the race chair for our club to switch over to the FCSA ratings. I have gotten support from the majority of the more serious racers. We have all been exchanging e-mails trying to make it happen. Our race chair (who has been the race chair for 13 years) came back with the following response in regards to how YRALIS arrives at ratings as well as how we have been doing it. Could you read his response and give me an idea of how you arrive at a rating other than just relying on the YRALIS data base? Give some needed ammo to present to make the case for changing.

Thanks

Brett

CHIEF HANDICAPPER RESPONSE

Brett,

To fully understand our situation and how we adopted the system we have, I will present a brief background and history.

Background & History

About four years ago First Coast Sailing Association decided to “overhaul” the local base ratings because it had gotten so inconsistent over the years. In the past, boats were adjusted individually by the various Handicap Committees as they came and went, on the “squeaky wheel” basis (as skippers appealed their ratings), based on the judgment of the handicappers at various points in time. Problem is that over time, the whole system gets out of whack. Back then, we felt like you do now, that perhaps the reason people were dropping out or not getting in was the system. A lot of people thought the system was tilted and only certain boats could win, discouraging new boats to get into racing. So, at the suggestion of Dick Allsopp and under the guidance of Chief Handicapper Bubba Futch the FCSA Board decided to pick a large PHRF fleet with wind conditions similar to ours as our “model”. In this way we “cleaned the slate”, in other words no one from our area could say there was any lobbying going on, no politics, and hopefully with a much larger fleet there would be benefit of more accurate ratings based on a much larger statistical base. That is why YRALIS (Yacht Racing Association of Long Island Sound) was chosen. We have been using YRALIS base ratings since then.

In general, what I see is that YRALIS ratings pretty much across the board are slightly higher than national average, maybe 3 to 6 seconds. You will see that often the “high” number of the PHRF “High/Low/Average” list is a YRALIS rating. This is not a problem as long as the numbers are consistent with each other. Bubba Futch did adjust some of the Hunters (the new modern slow ones) somewhat but other than that you can go to the YRALIS website and find the same base ratings we use.

The non-spinnaker adjustment is a local thing that Adam Norwood developed that compares the ratio of headsail area to mainsail area to arrive at a non-spinnaker adjustment. Reason we did this is that assigning a constant number like 15 sec/mile for non-spinnaker would benefit some boats more than others. Remember, base ratings assume you are putting up a spinnaker if your stock boat can have one.

A non-spinnaker boat with small foretriangle will suffer downwind more than a non-spinnaker boat with large foretriangle. For a single masted non-spin boat Adam's formula uses $(P \times E)/(Isp \times J)$ to calculate the ratio of mainsail area to foretriangle area. You then go to a table to find the adjustment. This is all on sailjax.com.

You well know it is almost impossible to assign a single number to a boat that is valid for all wind conditions, sea conditions and course configurations. In our area we are trying to put one number on each boat that is supposedly valid for offshore or river, winter cold front or summer doldrums. With the small fleets we have here it is difficult to evaluate individual boat models based on statistical results. Somehow we need to get the system so that people at least feel we have done the best we can do, given the limitations of an empirical-based single number rating system. I thought I would first try to explain what has been done in the last few years to try to improve the system. I hope this helps you understand the history a little better.

What Do We Do When YRALIS Does Not Have a Base Rating? What Do We Do When We Don't Believe the YRALIS Rating?

This has and will continue to happen. When given one of these situations I try to "triangulate" on a Base Rating using three methods:

- 1) I look at similar boats within the YRALIS database.
- 2) I take a look at the Base Ratings of the boat in question over some other large databases such as Chesapeake, Florida Suncoast, and South Florida. I then look at ratings of the similar boats I looked at in the YRALIS database and compare with Base Ratings in these other databases. From this I look for trends, like all boats of model xxxx are rated 6 seconds faster in Chesapeake and 3 seconds faster in South Florida. From this I try to pin a number on the boat, adjusted to YRALIS norms.
- 3) I then see if the boat in question has a Portsmouth number. Usually they do. Then you can easily convert from Portsmouth base rating by the formula $PHRF \text{ rating} = (DPN - 55) \times 6$.
- 4) Another approach I have started to look at is using a direct calculation of PHRF number using a Schell Regression Analysis.

R' is the PHRF rating as predicted by the formula:

$$R' = 610 - 8.36 * (SA / \text{Disp}^{.333}) + 0.0000511 * (SA^2) - 55 * (P / (J + E)) - 30.8 * (LWL^{.5}) - 602 * (DR^2 / SA)$$

$$\text{where } SA = .5 * (I * J) + .5 * (P * E)$$

For some displacement boats like Ghost for example it gives a rating of within 1 sec/nm of our current rating. For a light boat capable of planing, it gives a J-24 a rating of over 200! We all know that is not realistic. So I am just starting to see if I can apply or modify this predictive formula to reproduce our database.

To make a long story minimally longer, I lay out the two or three approaches outlined above and try to rationalize a Base Rating from that. It is not that scientific and admittedly flawed. And so we assign ratings with the idea that we need to look for trends, yet be careful that we are rating boats, not skippers and crews. There is also a blank space on your PHRF certificate called Handicapper's discretion. If a boat consistently shows better or worse than its assigned rating and the Handicappers feel this is a

real inequity based on the boat's performance we can make adjustment up or down somewhat. Last year we bumped Liberty Call up by three seconds. Two years before I asked Bubba Futch to lower Ghost's rating by three seconds even though YRALIS had a rating of 174 for Ghost.

Proposal

I have a suggestion for you. What if you send me your roster of boats in your fleet, and provide all the data I would need like exact boat model and year, measurements, if modified, type of propeller, max headsail size, other adjustments such as roller furling, etc. I would then independently rate each boat as we would normally assign a FCSA rating and then you check our predicted ratings against what you currently have? Maybe we are not that far off? Your skippers are looking at our listed Base Ratings but are they considering the adjustments we would typically give?

All I can tell you is PHRF Handicapping is not all that easy, scientific, or personally rewarding. But it is something we must take serious because it is the crux of our system. If people start to believe they can't win because their rating is unfair they may give up. However, it is hard to come to realization when it is skipper and crew, or possibly bad sails, rough bottom, etc. that is causing the perceived deficiency. You know Ghost as a well-prepared boat with racing bottom, relatively new sails, and an experienced crew. We have won our fair share of races. It was not always that way. When I started racing Ghost in 1990 she had a mediocre bottom, old sails, new crew, and learning skipper. We were happy if we could beat anybody. I can tell you it was not our PHRF rating that changed this.

Anyway, my offer stands if you want to see how we would compare on ratings.

FROM DAVE HEINE, GISC

Hi Tom,

Thanks so much for your offer to handicap our fleet. Attached is the list of Golden Isles Sailing Club boats that race with applicable rating data. Sorry it took me so long to get it to you. If there is any other info you need, please let me know.

Dave Heine

FROM CHIEF HANDICAPPER

Dave,

Attached is a spreadsheet that shows rating data for all the boats that have a FCSA rating. I added the GISC fleet so you could see how that would work. Keep in mind the ratings I assigned are preliminary estimates and based on many assumptions on my part. I would need to know more information about some of these boats before I could consider the figures final. FCSA would also need to have a meeting of the club handicappers to agree on these ratings. In the far right column you will see my notes. You can see trying to assign some of these ratings is a challenge. Also, I understand your point about not being able to use YRALIS database for many boats in your fleet.

Please look this over and feel free to send back any comments. There is a good chance I may have misinterpreted some data or got the exact boat model, features, etc. incorrectly. Also, if you think any

particular rating is out in left field please let me know. I tried to use what sanity checks I have but PHRF ratings are tough to assign with some boats.

I hope you find this useful and it encourages more GISC fleet members to obtain a rating with FCSA and join the FCSA fleet.

FROM DAVE HEINE, GISC

Thanks for all your work. I know it's not at all easy to do. I'll distribute to the fleet and see what discussion ensues.

Dave