Just Ask Greg…
All About Handicapping at SISC

by Fleet Captain Racing Greg Taylor
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People have been asking for a simple explanation of how our handicapping system works. We are currently auditing every race and I have learned enough to hopefully communicate the methodology simply.

For a detailed explanation, look below. But I thought it might first be more useful to address some of the questions I have been asked. This approach might better add to everyone's understanding.

Where does my original rating come from?

It comes from the Royal Yacht Association's 'National Handicap for Cruisers' (*https://www.rya.org.uk/SiteCollectionDocuments/technical/Web%20Documents/NHC/NHCBaseList.xlsx*). If your boat is not listed here, (mine isn't) Douglas has the tools and knowledge to generate one for you. Questions about your initial rating to start the season should be directed to Douglas. But as we shall see, your original rating is just your jumping off point.

What if my initial rating doesn't look correct? It appears too high or low relative to others.

Contact Douglas at dpwool@gmail.com. He is the Club's Handicapper

What do NHC3 and BCR in the results stand for?

NHC3 is your rating for the current race. It is used similar to a PHRF rating to generate your corrected time on the results sheet. The BCR is the rating that would be required to place you first in corrected time.

To produce your NHC3 for your *next* race, SailWave sums either 70% or 85% of your NHC3 for the current race and 30% or 15% of your BCR for this race. See below for why. But in thinking about it for a minute, you can see why changes are modest, especially for boats that are consistently on, or near, the podium.

An interesting feature of this is if you divide your BCR by your NHC3 you will see your performance relative to your rating, in percentage terms. You can track this over time.

Looking below, NHC3 is in the third column, meaning Skeena Cloud's rating for the race was .799. My BCR, or the rating I would have needed for me to finish first was .534. My performance in this race was 67% of my rating compared to Imp's 97%: not very impressive.

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Start: Start 1, Finishes: Place

Rank	Boat	SailNo	NHC3	Start	Finish	Elapsed	Corrected	BCR	Points
1	Radiant Heat	67901	0.909	17:00	18:37:28	01:37:28	01:28:36	0.909	100
2	IMP	2107	0.996	17:00	18:31:50	01:31:50	01:31:28	0.965	88
3	CALIENTE	CAN45	1.047	17:00	18:29:10	01:29:10	01:33:21	0.994	75
4	Shingebiss	49077	1.03	17:00	18:30:41	01:30:41	01:33:24	0.977	63
5	Sorcery X	CAN32	1.058	17:00	18:31:38	01:31:38	01:36:57	0.967	50
6	Kay D		0.854	17:00	19:19:50	02:19:50	01:59:25	0.634	38
7	Skeena Cloud	121	0.799	17:00	19:45:53	02:45:53	02:12:32	0.534	25
8	Battle Axe		0.817	17:00	19:53:49	02:53:49	02:22:00	0.51	13

Why do I get penalized if I do well?

You don't. If you don't win the race, your rating cannot do anything other than improve for the next race. But it can't ever get better than the rating you had going into a race. If you win the race, your rating stays the same.

Why is it I lose a race and my rating is not impacted much?

Correct. If you really 'crash and burn' in a race, you are treated as a 'extreme performer' and your rating changes minimally for the next race. If you lose badly, but are not a extreme performer, your rating changes by under 5% for the next race. If you just miss winning the race, your rating changes hardly at all.

There doesn't appear to be much change in overall results, the boats that used to win, still win.

Correct. If you tend to be one of the top finishers in any race, any change in your rating will be modest. You don't get 'knocked' for being first. And you get a very modest benefit in terms of the rating for your next race if you finished below what your rating said you should. The best, most consistent, sailors prevail.

What about the boats that regularly don't do well; don't they have an unfair advantage?

Their rating will, slowly, adjust to where they can become more competitive. But any advantage they have when producing poor results (relative to the other racers) is removed once they get closer to sailing to their rating. The objective is to find them a rating that reflects their boat, skill, number of crew, equipment, etc. Once they begin to approach their rating, it's the same as it is for PHRF. The objective is to sail to one's rating. If they do, they'll likely podium. If they don't, they won't.

I can't see my rating ahead of the next race. I can't see where I am relative to my competitors going into a race.

Correct. This is a problem that needs to be addressed. Other clubs around the world have identified the same issue and resolved it. I will be asking Douglas to investigate this further and look for a solution.

Is the new Handicapping system working the way the Race Committee hoped?

We had three objectives. The first was to find a fairer handicapping system for our club racing. PHRF works well for reasonably well-crewed, well-equipped boats with experienced skippers. It does not work well for those boats that do not have these attributes. We hopefully met this objective for the majority of the participants in our program.

The second objective was to provide, at the least the possibility, of boats, other than the usual suspects, to being able to podium, if they sailed well. We met this objective.

The third objective was to attract new racers. We failed in this.

The Race Committee will take these, among other considerations, into account in planning the 2020 season later this fall.

Detailed description of RYA handicapping system in use:

Step 1: Douglas awards every boat an initial NHC3 (handicap) from RYA (Royal Yacht Association. NHC stands for National Handicap for Cruisers. Let's pick on Tony. Radiant Heat's initial handicap for his first race was .915

Step 2: SailWave (the model developed by the RYA) calculates everyone's corrected time based on their initial rating. It mirrors the way it would be done if we were using a PHRF rating.

Step 3: SailWave produces your BCR (look at the last column in the results). What this BCR does is describe what rating you would require to place first in that race. The BCR column is therefore simply the rating everyone in the race would need to place first. Obviously, the person's rating who came in first does not change. Let's pick on Tony again. In his first race his BCR was, of course .915. (He finished first).

Step 4: SailWave identifies any outliers. It calculates the difference between each boat's handicap for that race and it's BCR looking for any large discrepancies. (It looks to see if anyone is outside of one standard deviation of the mean for all participating boats). The reason, as we shall see, is to ensure this boat does not unduly benefit (or be penalized) by their one-off performance.

Step 5: SailWave calculates the boat's handicap for the next race. It determines if a boat's performance is better or less than the mean of the other participating boats. If better, a boat's new handicap is 70% of the handicap used in the race and 30% of the BCR. If less, it is 85% and 15%.

Step 6: SailWave recalculates participating boat's rating against their original rating. This ensures any new entrants are not advantaged or disadvantaged.