To: Handicappers Council

From: A. J. Schneider, Chief Handicapper

Subject: Handciappers Meeting: Rochester NY Mar 20,82

The attached list of boats gives the SP's adopted at the meeting after four hours of discussion and argument. All other boats will retain their previously assigned SP's. Please note the following new policy regarding assignment of an SP to a new boat which has no current SP:

> The local handicapper shall assign a provisional SP after consultation with and agreement of two other local handicappers of his choice. No application will be processed until this has been done.

A complete listing of all boats will be issued shortly.

A word of explanation is needed for a few boats: There are now four classes of Sabre 28's as follows:

> Sabre 28 Hull nos. 1-38: prop shaft centerline.
> Sabre 28-1 Nos. 39-199:201:202:204:205:211: prop shaft off center.
> Sabre 28-1 SD Same as above but shoal draft.
> Sabre 28-2 Nos. 200 + except as above: prop shaft off center.

The Soveral 30 listed as Soveral 30 7/8 is really a Soveral 30 3/4 in contrast to a Soveral 30 MH. There will be a distinction between a standard C&C 33 and a custom 3/4 ton version of this boat which will be called C&C 3/4T.

If you have any of these boats in your fleet, please send me directly change forms indicating explicitly which boat is which, and I will issue new certificates.

After further discussion the following position was taken with respect to the new breeds of cat boats, which differ greatly in design concept from traditional keel boats commonly raced: The Board of Delegates will be asked to rule on whether PHRF-LO should try to rate such boats or other new concept boats as they may appear. The Handicappers Council agreed that we should try to do so if it is at all possible, with the understanding that considerable deviation from the accepted methods may be required. It is also possible that no equitable solution to the problem may ultimately be found. The immediate solution will be that those handicappers affected by the presence of such boats will seek the cooperation of their owners and those of standard boats of roughly comparable speed to test their speeds prior to attempting to assign an "SP". Any such "SP" will be valid only at the local club until 1) the Board of Delegates has ruled on the issue, and 2) concurrence of at least 2 other handicappers has been achieved. Only after all these conditions have been met will an official PHRF-LO

certificate be issued. This action will apply retroactively to the only catboat currently rated - the NONSUCH 30.

Charles Kramer has developed a formula for predicting SP for new boats (standard sloops) which appears to be better thatn the one listed in the Handicappers Manual. The weak parts relate to the displacement (weight of the boat) and the necesssity for knowing the aspect ratio of the keel. Following is the essence of it for fin keel boats. If you encounter centerboard or keel-centerboard boats, I suggest you contact Charlie directly. With regard to the displacement, the value (in pounds) should, if possible, represent the unladen weight not including the crew. The measurements needed are: I,J,P,E,displacement (D),LOA,LWL, and two keel measurements. The latter are KD=depth of keel below hull and KW=width of keel at 1/2 the depth. These can be scaled off lateral views of the boat. The the aspect ratio AK=KD/KW. Then calculate as follows:

1) H=.6xI + .4xP + 4.6
2) LL= .3xLOA +.7xLWL
3) RSA= .55xExP - .4xExE + .808xIxJ - .25xJxJ
4) DSP= D + 1.342xLWLx IxJ

Then MPR= estimated SP:

MPR= 844.7-74.5x LL-4.75xRSA/(DSPx.016)
-45xAK-1.85(ln(304xH))

where ln(304xH) is the natural logarithm (base e) of 304H. The average absolute difference between the calculated MPR and the SP of 172 boats was 7.4 sec/mi, with a correlation coefficient of .975. If any of you have an HP 67 programmable calculator and want a program for working this out, let me know and I'll send you a copy of the program.

This last meeting represented the fourth time we have tried to set fair SP's for the fleet. All of us in attendence are getting battle weary over the endless impressions that this boat is 3 sec/mi faster or slower than that. It is perfectly evident that 3 sec/mi will make very little difference in a season's outcome. It is predictable that such a difference would give the "faster" boat only a 54% chance of beating a "slower" boat with a 3 sec/mi edge, compared to a 50-50 chance if they were rated the same. Since a given skipper's corrected time varies by plus or minus about 30 sec/mi from race to race, such a small edge will hardly be noticed unless one skipper is substantially better than the other. We were therefore in unanimous agreement that we desperately need a method for "objectively" separating out performance at the skipper/boat condition level (Q) from speed potential of the boat itself.

I presented to the group a questionnaire relating to 1) the condition of the boat, sails, fittings etc. and 2) the tactical skills of the skipper and crew. This can be filled

out by each skipper and a score can be derived therefrom which relates to the Q factor. It was proposed that - after review and editing by myself, Rick Hibbs and Bob Wallace- this questionnaire be given to all PHRF-LO certificate holders. The score on the questionnaire can then be related throughout the season to the average performance of each skipper. If all the scores matched the performance with a perfect correlation then by implication all SP's would be exactly right. Obviously this will not be the case. When a particular class of boat shows up with large discrepancies between scores and performances, there will be objective evidence for altering the SP of that class. The council accepted this approach as worthwhile and recommended that we proceed along these lines.

The questionnaire is attached. Part one will generate numerical values from 0 to 99. Part two consists of 100 yes/no answers. The total score will be that from part I plus 2/3 the number of no's on part II. It will be evident that the lower the score, the better the skipper is likely to perform. Since it will be the skipper's judgement, the handicapper is not making a value judgement, and hence is off the hook so to speak.

I have programmed the computer to accept input data for each race. A sample of required input is enclosed. From the information the difference in corrected time (sec/mi) between the average for the race and each individual can be calculated and stored. At any time the average for each skipper can be extracted and compared with his score on the questionnaire. Periodically I will run an analysis of such data for all skippers and boats for which you provide me data. It is obvious that the skipper must be sailing his own boat, and that the boat must be racing with the assigned ASP residing in the data files.

As a preliminary trial of this approach, those of you who wish may send in last year's results along with the new questionnaire scores. As soon as possible I will process the data and communicate the results of the analyses.

Happy racing.....