

Secondary Schools' Team Sailing Nationals 2019

Changes to 2019 Sailing Instructions and Topics for Discussion at Managers' Meeting

Introduction

This year, I agreed to do a bit of work tidying up the SSTS NOR and Sailing Instructions. I did not want to “change the game”, but, as I worked through them and discussed them with others, I kept asking myself “why do we do this?” and “is there, at this time, a better way?” My main focus in considering more contentious changes, discussed later in this document, was to increase the sailing time for competitors. Now that up to 36 schools attend the Nationals, sailing time for individual teams is reduced. Are there ways in which this trend can be reversed?

This document records the major changes to the SIs for 2019. It goes on to discuss possible changes too radical to incorporate without discussion at a Managers' Meeting and at NZTSA executive level, such as crew weights, format and scoring.

Changes to 2019 Sailing Instructions

Many minor changes putting rule references into World Sailing's now standard wording. e.g. “rule 33” to “RRS 33” and “Appendix D 4.2” to “RRS D4.2”.

Removed list of rules in 1.1 because they are all in the definition of rules.

Removed reference to class rules because the SIs cannot change the class rules and we have to change them in many ways. So I now refer to “420 type boats”.

Deleted old 1.9 about unnecessary delays. It was put in for one school at one regatta and not used subsequently. I think we have enough “teeth” to deal with any situation. See 6.8, 8.2 and 23.

6.1 changed. Mast chocks (medium set) now always in. If mast chocks fall out, the crew must replace them. (From incident at Interdoms)

6.4. Protest and breakdown flags now provided. This is a trial for 2019.

Old 6.6 was omitted. The penalty will now be disqualification as it is for almost all rules. (RRS 64.1)

6.7. Watches are now in with a limitation on their use.

I have rewritten 13.1.

Old 13.3 has been deleted.

I took out bits of 16.2 because they were covered in 4.2.

Old 17.3 was omitted because I did not think we needed to change RRS D.5.2

I have added some words to 18.2.

Old 18.4 has become 18.3 and an entirely new 18.4 replaces old 18.3. The new 18.4 references the relevant rules. This is overkill because you are expected to know the rules. However, they are relatively new.

Old 19.1 has disappeared and has been replaced by instructions on using the supplied protest flags.

Clause 20, Format and Scoring has been revised in accordance with the decision of the NZTSA Annual Meeting.

20.7 and 20.8 have been moved to Prizes and Trophies.

There has been much discussion regarding scoring for “top of fleet” trophies.. See sentence added to 21.1. (And discussion later in this document.)

21.3 may change if we get YNZ Representative status for the three teams.

23.4 is new.

I omitted old 24, “Advertising” because it conflicts with World Sailing’s Regulations and cannot be enforced.

Added and omitted words here and there.

There were consequent changes to Attachment A.

Crew Weights

Now that we can have up to 36 schools attending the Nationals, individual teams are having less sailing time. If we can decrease the stoppage time we could increase each school’s time in the boats. One reason for stoppages is we have some light crews competing and these light crews are generally the less experienced. They are more likely to capsize, break gear and delay the racing. Or we see some crews struggling and we stop to reef, or worse, stop sailing for one or more fleets. I believe that some crews are either too light, or do not have sufficient experience and skill, to sail in the upper wind range they may encounter at the Nationals.

There are problems in assessing seamanship and boat handling ability. We say in Appendix X, attached to the NOR, that crews must be able to handle the boats to NZTSA requirements. The SIs state we may team race in up to 20 knots. If wish to apply the requirements of Appendix X, when do we tell a team that they do not meet the NZTSA standard? When crews are formed? At the Regionals, after they have already booked travel and accommodation to the Nationals? At the event? And who makes this very subjective call? NZTSA is unlikely to see crews sailing in all conditions. Only team managers and coaches can make the judgement.

If crew ability is too difficult to assess and enforce can we improve matters by raising the effective minimum crew weight because, I believe, 100kg. is too light for the experience of some crews attending the Nationals. We need a minimum weight to avoid a very light crew getting up on the plane in light conditions and sailing away from others. That is not team racing. We presently accomplish that by making light crews carry weights. Also, when wind strength increases some crews just concentrate on sailing the boat and team race tactics go out of the window. What is the minimum live crew weight required to sail a 420 competitively, in our event, without a trapeze? We imply it is 110 kg but allow crews as light

as 100kg to enter. What is the proportion of underweight crews attending the Nationals and what would be the effect of reducing the weight that can be carried, or eliminating make-up weights altogether and requiring crews to weigh a minimum of 110 kg.?

I obtained the crew weights for 2016, 2017 and 2018. Eight sailors on the lists did not have a weight recorded. However, with weights for 706 sailors and an aggregate crew weight of over 43 tonnes, I do not think the absence of those eight sailors have skewed the results. For some of the eight I had weights from the previous or following years and they were about average.

In the table below I show the range of weights of the sailors in 2016, 2017 and 2018. I have not combined the years or the fleets but shown them separately. The table shows there is little difference between the fleets.

There is a very large range of weights of individual sailors. The heaviest, at 129kg. is almost four times the weight of the lightest at 34kg.

Sailor Weights

Year	Fleet	Average Weight	Distribution									
			30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-110	110-120	
2016	Gold	61.9	1	6	26	25	17	1				
	Silver	62.4	3	6	25	20	11	3	1	1	1	
	Bronze	60.4	2	11	26	18	11	2	2			
2017	Gold	62.5	1	11	24	27	16	4				
	Silver	61.7	3	8	24	26	7	3	1			1
	Bronze	62.4	1	7	37	37	13	6	1			
2018	Gold	62.9	1	8	20	29	15	4	1			
	Silver	57.6	2	15	28	25	9	1				
	Bronze	61	1	5	29	23	8	4				

While there is a wide variation in individual sailor weights the average for each fleet is reasonably similar. Remarkably similar if the 57.6 kg. for Silver Fleet in 2018 is omitted. Two thirds of sailors are between 50 and 69kg. 15% between 70 and 79 and 5% above 90kg. To complete the picture, 2% are between 30 and 39kg. and 11% between 40 and 49kg.

However, individual sailor weights are relatively unimportant. What is important is the combination of sailor weights in each crew/team. The table below shows the average sailor weight in each individual team. The figures in bold are those teams that registered make-up weights for one or more crew combinations. In brackets is the maximum make-up weight registered for that team.

Average Weight of Sailors in Each Team

Year	Fleet	Average Weight	Average Sailor Weights for Each Individual Team
2016	Gold	61.9	56.9, 57.3, 59.5, 60.8, 60.9 (1kg.) , 62.3, 62.8, 63.4, 64.6, 68.6
	Silver	62.4	55.0 (10kg.) , 57.6 (5kg.) , 59.3, 60.3 (3kg.) , 61.8, 62.1, 62.3, 66.0, 67.6, 73.0
	Bronze	60.4	50.3 (10kg.) , 52.5(10kg.) , 53.9, 56.8, 58.3, 62.3, 64.0, 64.0, 64.1, 64.7, 73.0
2017	Gold	62.5	57.5, 58.9 (3kg.) , 59.9, 60.0, 60.3, 61.4, 62.3, 62.5, 67.8, 68.1, 68.3
	Silver	61.7	55.2 (9kg.) , 57.1 (10kg.) , 57.9 (2kg.) , 59.9, 60.4, 62.3, 64.6, 64.7, 66.3, 69.6
	Bronze	62.4	55.3 (4kg.) , 57.9, 59.5, 59.6, 60.3, 60.6, 61.3, 61.7, 62.6, 62.7, 63.9, 63.9 67.2 68.1, 70.3
2018	Gold	62.9	57.8, 59.4, 60.0, 60.7, 62.0, 65.1, 65.5, 65.6, 66.0, 67.0, 70.0
	Silver	57.6	53.4 (7kg.) , 55.2 (1kg.) , 55.5 (2kg.) , 55.6, 55.7, 56.3 (8kg.) , 59.1, 59.6, 60.1, 60.3, 63.2
	Bronze	61	54.4 (8kg.) , 57.1, 57.2, 58.7, 61.3, 62.7, 63.1, 63.5, 64.0, 68.5

Again, considering the variance in sailor weights the averages for each team are very similar. Of the 99 teams considered only eight had an average sailor weight outside the range of 55kg. to 70kg.

I examined the sailor weights of the sixteen teams that registered make-up weights, five girls-only teams, three boys-only teams and eight mixed teams. In the (good?) old days, team lists printed in the programme were in the order- first boat, skipper crew, second boat, skipper crew, third boat, skipper crew then reserves. I do not think this convention is always followed now but I have assumed it applies unless it is obvious that it doesn't.

In some cases weights were only registered to increase flexibility. For example, to enable a very light reserve to sail with different skippers or a very light skipper to have different crews. I put eight teams into this category. Then there are the teams that have a well-balanced team of sailors of similar weights but introduce a very light reserve. Perhaps three teams did this. There was a mixed composite team at the event for the first time and the average sailor weight was only 50.3kg. I do not think this meets our requirements. Little better was a team with an average sailor weight of 52.5kg, and only six sailors weighed. All crews were below 110kg.

I have never had to juggle crews and consider weight, compatibility, skills etc. with a limited talent pool. But I think that if make-weights were not permitted, over half of the teams registering weights in the last three years could meet the requirements.

I do have concerns for three girls-only teams that seem to consistently require weights. I would not want to promote change if it meant that three schools, that have been very supportive of team sailing and attended many nationals, were significantly disadvantaged. After this is circulated I intend to contact those schools that have registered weights in the last three years and seek their response.

The average sailor weight of the top three teams in Gold Fleet in the past three years is 61.9kg. In one year the team with the heaviest average sailor weight in Gold Fleet won the championship. This may indicate that the optimum total crew weight for Secondary School Team Sailing Nationals is as high as 120kg.

Regardless of the optimum, I believe that with the ability of some of our less experienced sailors, we need a crew weight of at least 110kg. If that is going to impact too severely on a

small number of our teams there may be ways to encourage more schools to select heavier crews.

- The halfway position. 110kg. with maximum 5kg. make-weights.
- Require teams to have three crews over 110kg. Additional sailors can be lighter and carry up to 10kg. in weights.
- Do as I believe the Australians do. If you capsize you are out of the race. This would solve the problem of RRS 41 which we largely ignore.
- Two capsizes and you sit out the event until conditions improve. And, if you want to be tough, another crew cannot be substituted. The whole team sits out.
- Consider what really matters and change the documentation to emphasise the importance of seamanship and somehow enforce a minimum standard.

I do not think it relevant, but the NZ Open Team Sailing Nationals require a crew weight of 130kg, but crews between 130 and 120 can make up their weight with up to 10kg. of weights.

Regatta Format

When the number of teams attending the Nationals increased, a round robin of all teams was too unwieldy. We went to a number of seeded fleets and round robins in those individual fleets. Teams were suspicious of the seeding process so repechages were introduced so if teams were incorrectly seeded they could move between fleets. Last year, after the first round robin in each fleet, there were repechages between the bottom three teams of one fleet and the top three teams of the fleet below. Following subsequent round robins there were one race repechages between the bottom and top teams of each fleet. This year the first repechages will be between four boats and subsequent repechages will remain between two boats. Repechages really disrupt the racing programme. Other teams have to sit out while these are organised and sailed. Worse, with two courses, progress on the two courses has to be in sync because the repechages draw boats from both courses. Thus, a delay on one course delays the other course. I know we can proceed with some races but departing from the draw is confusing and wastes time.

The seeding has been shown to be particularly good. It does not have to be perfect. Assume we have three fleets of ten teams each and seven teams are correctly seeded in Gold and Bronze and no team in Gold should be in Bronze and no team in Bronze should be in Gold. A six team repechage between fleets will have them in their correct fleets if they sail to their potential in the repechage. They will not necessarily be in their correct position in the fleet, but they have the opportunity to achieve their correct position after the second round robin. So I suggest we have six team, three from each fleet, repechages after the first round robin and no further repechages. That would really streamline the event for all participants.

I think the fact that, in the past, teams have changed fleets in the subsequent repechages is irrelevant. Team performance will always fluctuate with varying conditions and varying performance of team members. That is the essence of sport. If everyone always sailed to their potential we would know the result of the races before they were sailed. If teams are incorrectly seeded they will have an opportunity to correct it. It is up to the teams to take that opportunity.

Scoring

The above change in format would eliminate unfairness in the scoring for the “top of fleet” trophies. When we went to teams changing fleets we had to discard scoring by race wins and adopt Regatta Points. Obviously, a team winning all its races in Silver Fleet and then moving to Gold, could not transfer those race wins to Gold.

However, Regatta Points also throws up some anomalies if they are transferred between fleets, particularly for fleet trophies. A composite team, not permitted in Gold Fleet, could win all its races in Silver Fleet. But a team moving down from gold, and beaten by the composite team, could win the Silver Fleet trophy because of the Regatta Points awarded to them in Gold Fleet. This can happen with a number of quite plausible scenarios.

To avoid this problem a number of suggestions were made.

- Fleet trophies decided on last round robin only. That does not seem fair and sailing races that do not count is a waste of time.
- Teams moving down between fleets not eligible for fleet trophies. I think every team should be eligible for a fleet trophy.
- In the end I added the last sentence to 21.1. I think that covers it and in the worst case the team sailing and winning all its races in the lower fleet wins the fleet trophy on a count-back.

If that is not the case please advise me as soon as possible. It is a matter of finding the least unfair solution.

Another “unfairness” with regatta points is that a team that would win the Championship on race wins, the prescribed system in the rules for team racing, can lose it on regatta points. If there are 10 teams in Gold and in the first and second round robins team A has 9 race wins and team B eight. In the third round robin team B has 9 race wins and team A is second with six. Team A wins the Championship with 4 regatta points to team Bs 5 but team B would have won on race wins.

If there is only one set of repechages after the first round robin the problem with race regatta points is resolved because we can discard return to race wins. Just as regatta points were allocated after the first repechage so would race wins for any team changing fleets. Thus, there would be no changes of fleet after that time and scoring could be in accordance with RRS D4.3.

However, my preferred format is six boat repechages after the first round robin only, counting races sailed in the round robins as we do now. Scoring in accordance with RRS D except, to recognise that a team changing fleets after the repechages is not necessarily in their correct position in the fleet, score half race wins for the first round robin.

At the present time there is considerable discussion on a Swiss League. If this is adopted all the above discussion on format and scoring will become redundant. As long as you all get more sailing I do not mind.

Jim Park

25th March, 2019.