International Sunfish Class Association

World Championship Guidelines

World Council
Advisory Council

October 9, 2006

Contents

1 Introduction **3**
- 1.1 Guideline Objectives . . . 3
- 1.2 Article 5 of ISCA Constitution . . . 3

2 The Application **4**
- 2.1 Commitment Letter . . . 4
- 2.2 ISCA Contact Information . . . 4
- 2.3 Worlds bid addendum . . . 5

3 Time Line **6**

4 Event Responsibilities **6**
- 4.1 A. Essential Responsibilities . . . 6
- 4.2 B. Highly Desirable Responsibilities . . . 7
- 4.3 C. Preferable Responsibilities . . . 8
- 4.4 D. Preferred Awards ceremony Sequence . . . 8

5 Local Support **9**
- 5.1 B. Highly Desireable Responsibilities . . . 9
- 5.2 C. Preferable Responsibilities . . . 9

6 Accommodations **9**

7 Marketing **9**

8 ISCA Support **10**

9 Publicity **10**

10 Notice of Regatta **11**

11 Ideal Worlds Schedule: 1-boat/participant **11**

12 Regatta Structure at Round-Robin Venues **12**
- 12.1 Boat Rotation . . . 12
- 12.2 Schedule . . . 14
- 12.3 Balancing of Pools . . . 15
  - 12.3.1 At the Beginning of the Event . . . 15
  - 12.3.2 Re-Shuffling of Pools . . . 15
- 12.4 Scoring System . . . 15

13 Sailing Instructions **16**

A International Code Flag Inventory **20**

B Handout for Skippers of Motorboats **20**

C Equipment **22**
C.1 Manufacturer Supplied Equipment 22
C.2 Competitor Supplied Equipment 22
C.3 Prohibited actions 23

D Charter Agreement **24**

E Units of Measure **25**
E.1 Conversion Table 25
E.2 Beaufort Wind Scale 25

F Pool Shuffling Scheme **26**
F.1 Pool Matrix 26
F.2 Shuffling Operations 26
F.3 Example 27

G Former Worlds Venues **28**

H Authors **28**

I Reviewers **28**

1 Introduction

1.1 Guideline Objectives

The purpose of these guidelines is to:

- Familiarize organizing authorities interested in hosting the Sunfish World Championship with the logistical aspects associated with the regatta management and the expectations of the Class leadership.
- Create a standard of practices approved by the International Sunfish Class Association's (ISCA) World Council to help plan and conduct a fair and consistent international event year after year regardless of venue.

The Sunfish has become one of the most popular single-handed OEM sailboats since its creation in 1951. The first World Championship was held in St Thomas in 1970 and the Class has enjoyed success based upon its unique strengths in design, simplicity and camaraderie. The Sunfish Class strengths are its:

1. International Class status and relationship with ISAF (International Sailing Federation).
2. Simple rigging and set up.
3. Wide range in crew weight and variety of juniors, seniors; all able to compete at the international level.
4. Popularity among resorts, accommodating vacation settings (see, e.g., Appendix G) and a fit with potential buyers of the manufacturer supplied boats.

1.2 Article 5 of ISCA Constitution

Article 5 of the ISCA Constitution is stated here so that organizing authorities may understand the class' values:

ISCA CONSTITUTION Amended: November 1, 2003

...

5. OBJECTIVES

5.1 To provide a medium of exchange of information among Sunfish sailors throughout the world and to enhance the enjoyment of these sailboats.
5.2 To promote and develop Sunfish Class racing in all countries under uniform rules.
5.3 To encourage and foster the enjoyment of the sporting and recreational aspects of sailing.
5.4 To maintain the one-design characteristics of the Sunfish sailboat worldwide.
5.5 To maintain the International Status of the Class.
5.6 To promote the formation of National Sunfish Class Associations (NSCAs).

...

2 The Application

2.1 Commitment Letter

Below is presented a form letter. Please use it to communicate your interest to host the Sunfish World Championship. If it is the first time a World Championship is to be held at your location, please accompany with the application the requested information in Section 2.3 as well.

```
Date: (today's date)
To:  ISCA President
(See  Windward Leg, inside back page for name and address)

From: Event Sponsor and Contact Person
Club or Location
Mailing Address
Phone # / Fax # / e-mail address/ web site

Subj: Request to Host a Sunfish Worlds Championship

We wish to be considered as a Host Location for the Sunfish Worlds
for the year ....

The Club / Facility has reviewed the ISCA Regatta Guidelines and
understands the responsibilities of hosting this event. We plan to adhere
to all of ISCA's guidelines. [We wish to communicate our circumstances ....
These make it difficult to adhere to Section(s) ... of the guidelines]

We propose to host the Sunfish Worlds on .... date \...., year
(Communicate with ISCA if there exist any date restrictions for your year)

Signed:  (Event Organizer
Facility Representative)

cc: ISCA Secretary & Class Office
(Listed in the Windward Leg or in the section below)
```

2.2 ISCA Contact Information

Mr. Terry Beadle
ISCA Secretary
P.O. Box 300128
Waterford, MI 48330-0128 USA

Phone: (248) - 673-2750
email: sunfishoff@aol.com

2.3 Worlds bid addendum

The information solicited in this section will help ISCA understand what is involved in hosting a World Championship at your location.

1. What is the ideal date for you to host the event?
2. What are the sailing conditions at your venue? (normal wind strength/direction/duration and sea conditions)
3. What are the normal temperatures? (air and water)
4. How do you plan to accomplish boat launching and storage? (beach? parking lot?)
5. What is the distance from launching to race course?
6. What is the competitor and guest housing availability and their cost? (see Section (6))
7. What is the method of traveling (air, auto, bus etc.) to your location?
8. What is the expected cost of travel from various countries?
9. What is your plan for shipping boats from the US to your venue?
10. What number of Sunfish will you require? (see Section (12))
11. How do you plan to dispose of the boats following the event?
12. What is the quality of race management? (see Section (13))
13. Do you have any other concerns worth mentioning?
14. Do you find it desirable to have an ISCA representative travel to your location to assess the venue?

Please be aware that the Worlds is to some degree a marketing device for the Sunfish sailboat. It is highly desirable to sell all boats in the host country subsequent to the event. To this end, Non-US venues in particular, are encouraged to line up potential buyers of boats. If a large number of boats need to be shipped back to the US subsequent to the Worlds, it is unlikely that the Worlds will be awarded to you.

3 Time Line

Advance Time	**Action** (* requires coordination with ISCA)
1.5-2 years	Review Guidelines and prepare presentation to Club/Facility for approval. Mail or e-mail request to International Sunfish Class President for acceptance and confirmation Commence Search for Sponsors
16 mo	(of prior year) Try to obtain group rates or discounts with hotels and airlines, if appropriate.
11 mo	(of prior year) Commit to sail color and logo and make first deposit to Vanguard (for overseas destinations)
10 mo	Vanguard starts building boats
9 mo*	NOR in Windward Leg
9 mo	National Advertisements/Sponsorship if appropriate.
6 mo	First registrations arrive from Class Representatives
6 mo*	Final payment due to Vanguard (for overseas destinations)
May 1	Cut off for NSCA's to join Class for the year without penalty
4 mo	Second group of registrations arrive from first round of invitations.
3 mo	Final confirmation on number of boats.
1 mo	Vanguard ships boats (for overseas destinations)
-0	Boats arrive and event commences.
+0	Unsold boats returned to factory.
+1mo	Complete and send articles to Windward Leg for publishing.

It is also noted that in Sections 11 and 12.2 there are listed event schedules. Some venues may not be serviced by air-carriers that make a convenient adherence to this schedule possible. For example, if only one (1) airline services your venue and does so on Mondays and Thursdays only, it is prudent to shift these schedules by 1 or 2 days. Competitors are also partial to traveling on Weekends or on public holidays. (i.e. in the USA, two such holidays are Memorial and Labor day. These public holidays always fall on a Monday. Contact the class office when these dates occur in the year you wish to host the event.)

4 Event Responsibilities

The host club may consider some or all of the below requirements which are within its' capabilities. They are collected in 3 groups, labeled (A,B,C) in order of importance. With A, B & C denoting 'Essential', 'Highly Desirable' and 'Preferable' respectively.

4.1 A. Essential Responsibilities

1. Host Club/Facility plans and executes the event.

2. Provide a banquet facility for the final awards.

3. Provide a meeting space for the Advisory Council (15 people) meeting late Sunday afternoon, plus provide a meeting space for the World Council meeting on Thursday evening (25 people) and arrange for dinner for purchase during/after meeting

4. Provide check- in and check- out assistance, for registration and collection of damage deposits and return of funds.

5. Be aware of the tightly packed nature of the schedule in the opening days. Avoid last minute changes or additions to the agenda.

6. Provide two or three International Judges. Please see the RRS, Appendix N, for guidelines on the makeup of an international Jury.

7. Have the Class approve the composition of the Jury. e.g. It may that the class has had (un-)favorable experiences with certain Jury members.

8. Provide beach assistance with staging of boats, daily launch and retrieval, and manpower, as necessary. Assist the factory representative in unloading and reloading boats into containers plus monitor the removal of boats from the grounds by individuals purchasing boats.

9. Provide on the water distribution of water and lunches (if needed).

10. Provide security for the protection of boats after their arrival and until their departure.

11. Provide trophies for the final awards banquet; top ten finishers.

12. Communicate with ISCA Class Measurer. Inquire if he will be participating. If not, have him assign a designate or a representative/proxy. Schedule measuring of all boats prior to racing

13. Provide all necessary race committee equipment, manpower, judges, reporting capabilities, protest team, scoring and posting.

4.2 B. Highly Desirable Responsibilities

1. Boat Site & Accommodations concurrent if possible.

2. Arrange hotel and transportation discounts as applicable.

3. Arrange local dinner/entertainment for all but one night of the event.

4. Provide awards to winners of each individual race, furthest traveled , best female sailor, best junior sailor, best master (+55) sailor

5. Provide local transportation to various entertainment activities, to and from local hotels, as appropriate.

6. Arrange transportation and pick up from airport to local hotels for competitors and families upon arrival, as appropriate.

7. Arrange transportation from local hotels back to airport for competitors and families upon departure, as appropriate.

8. Have available on-site phone and e-mail for competitors and families.

9. Club / Facility Support: Recommended Committees:

   Planning, Race Committee, Entertainment, Accommodations Committee

   Advertisement / Funds Generation Committee

   Awards/prizes

   Grounds / Beach assistance/Security

   Financial Committee

   Ceremonies Committee (Opening & Closing)

   Food Committee

   Boat Committee (RC, Marks, Rescue)

10. Preferable to have on the race-course a portable defibrillator (AED) and (someone who knows how to operate it!). It is desirable that at least one RC member present on the race course is also knowledgeable in CPR (BLS-certified).

11. Participation in the Worlds requires considerable investment in time and resources. If possible and if Vanguard agrees to it, make available charter boats to competitors who arrive early.

4.3 C. Preferable Responsibilities

1. Provide breakfast, lunch and dinner to competitors and guests from Sunday through Saturday of the week. This item depends on the package made available by the hotel.

2. Install as many flagpoles as there are NSCAs represented at the Worlds. Use these to display the National flags from the Opening Ceremony onward.

3. Implement a check-out and check-in system.

4.4 D. Preferred Awards ceremony Sequence

1. Speeches by Regatta Chair & Organizing Authority.

2. Speeches by dignitaries

3. Special Awards: Sportsmanship, Master, Female, Junior, Furthest Traveled, etc.

4. Daily First Awards

5. Top Ten (10 down through 2)

6. World Champion

7. Speech by ISCA President

Note: The last trophy that is awarded is that of 1st place, World Champion.

5 Local Support

As was the case in Section 4, these items are similarly ranked in order of importance.

5.1 B. Highly Desireable Responsibilities

1. Several fresh water hoses to rinse off boats after sailing.
2. Request support from local government dignitaries for opening of the event and the final banquet awards.
3. Work with local Chamber of Commerce for support.
4. Work with local transportation agents to provide transportation as needed.
5. Work with club members or others to provide housing for those who can't afford hotels, e.g., Junior participants.

5.2 C. Preferable Responsibilities

1. Request monetary support from local stores, shops, hotels or others who would like to advertise and support the event (coupons, discounts, prizes, etc.)
2. Get local support from water and beer distributors to provide product and additional purchased items.
3. Have local travel agencies bid on advertisement and provide discounts to local events.
4. Work with local food vendors to provide lunches and other food as needed.

6 Accommodations

When feasible, use Club Members to host competitors and families, and work with hotels to obtain group discounts. It is desirable to select a hotel that is close to the event or on site that can accommodate all competitors. If needed, provide transportation for competitors to and from the event site.

7 Marketing

The lion-share of ISCA members is comprised of members who reside in the USA. As a result, the United State Sunfish Class Association (USSCA) is proportionally awarded the most entries at a Worlds. To address these members, you should plan on advertising in the class newsletter (Windward Leg) at least three times prior to the event: 1st in the Aug-Sep publication after the US North American Championship. Again in the winter edition, after the World Championship (Nov-Jan) and once more in April after the Mid-Winter Championship.

Because the Windward Leg is published in English and is generally not available to all members of all other National Sunfish Class Associations (NSCA), you are suggested to contact all individual NSCA chairs (World Council members) directly through whatever means possible. Direct mail or telephone are preferable; Experience has shown that email is not a reliable medium for communicating on this topic as email addresses frequently change. Encourage them to contact fleet captains local to their NSCA and have them convey the location and dates of the Worlds. Make them aware of any cost-reducing incentives, such as in section 5, that you were able to arrange.

> It is very important that all NSCA chairs are aware of registration deadlines and that all qualifying sailors submit the registration forms and fees on time. See section 10.

For non-US venues, you should plan to publish in your national publication. Consider 4-6 months lead time to provide information. There is generally considerable interest when the Worlds is local to your NSCA.

8 ISCA Support

In accordance with RRS rule 88.1, the Class will assist the organizing authority in publishing a Notice of Race (NOR). Prior to its distribution, please provide the NOR to the ISCA secretary who will in turn forward it to the Advisory Council for comment.

The host club will collect the Registration Fees for the event. The Class or the previous world champion will provide the Perpetual World Championship Trophy and Vanguard will provide a new racing sail with a Gold Sunfish logo to the winner.

A Vanguard factory representative will coordinate with the host the design of boat and sail colors, and delivery and pick up of the boats after the event is over. The shipping/delivery charges are paid by the factory. The Charter Fee collected by the Class is transferred to the factory after the final shipping bill is reconciled to help defray shipping cost. For events outside the U. S., the factory works with local governments on shipping boats to and from the location.

Vanguard is expected to collect a damage deposit from each competitor to hold until after the event is over. The deposit is collected at time of registration. Those funds are returned to the competitor by the facility administrator only with the approval of the on-site factory representative after the boats are checked in. The manner in which the boat turn in process is to proceed should be outlined in the NOR.

Boat dealers or individuals purchasing a boat from the event must work with the local dealer and the on-site factory representative before a boat is released for removal from the event site.

9 Publicity

Daily race results should be posted on the Web Site after each day's event and at the end of the Regatta. Initially, daily results will be posted as "Unofficial Results" until confirmed by the race committee and judges. After the last day

of racing, the scores will be posted as "Official Results" with the confirmation of the ISCA President, Class Secretary and Race Committee.

The event chairman or designate is responsible for writing up the event and having it sent to the Windward Leg for publication along with the final results. List all Letter Scores in the final results, as such and do not replace by the point value. By documenting the letter scores, e.g. BFD, OCS, DSQ, RET, DNF, RAF or DNE, no information about the performance of the participant at the regatta is lost.

Any thank you letters to vendors and organizations will be handled by the event chairman or designate.

The ISCA Class Secretary is responsible for maintaining the results in a historical file and notifying ISAF of any changes presented at the Class Advisory Council meeting or World Council weeting.

10 Notice of Regatta

The Organizing Authority is comprised of ISCA, Vanguard and the Host. All three (3) collaborate in the writing of the Notice of Race (NOR) and must agree on the document prior to its distribution. Contact the Sunfish Class Office for Notices of Race of previous events as examples. While English is the governing language for the event, ISCA will gladly assist in translating the NOR into any other language for distribution to relevant NSCAs.

11 Ideal Worlds Schedule: 1-boat/participant

Below is shown the ideal schedule. Racing occurs over the span of 1 week which makes it convenient for competitors to travel over the weekend. There is also a scheduled afternoon off so that competitors may explore the sights in your area.

It is noted that some venues favor coming back to shore between races, whereas others dictate lunch on the water. It is also noted that some venues may by prone to light-air racing whereas other are assured of heavy-air racing. These considerations warrant some flexibility in the implementation of the schedule below, e.g., it may be possible at a light-air venue with no return to shore, to conduct 3 back-to-back races on one day. The objective is to complete at least 5 races prior to the end of Wednesday. If fewer than 5 races have been completed at the end of Wednesday, then there shall be racing on Thursday.

Friday, Oct ...	1000-1800	Registration and boat set-up. (Location)
Saturday, Oct ...	1000-1800	Registration and boat set-up.
Sunday, Oct ...	1000-1800	Registration and boat set-up
		Lunch available (not provided)
		Boat Measurement
	1300-1500	Practice Races
	1530	Advisory Council Meeting
	1800-1900	Opening Ceremonies
	1930-2100	Social Hour & Dinner
Monday, Oct ...	0900-1000	Skippers Meeting
	1200	Race 1, followed by Race 2
Tuesday, Oct ...	1000	Race 3
	1400	Race 4
	1730	Social Hour
Wednesday, Oct ...	1000	Race 5
	1400	Race 6
Thursday, Oct ...		If unfavorable weather is expected, (i.e. storms, no-wind, hurricane) commence Friday's schedule Otherwise, day off for competitors
	1930	World Council Meeting
Friday, Oct ...	1000	Race 7
	1400	Race 8
	1700-1900	Boat check in at discretion of Vanguard
	1730	Social Hour
Saturday, Oct ...	0830-1600	Boat check in
	1800-2230	Banquet, Awards & Entertainment

12 Regatta Structure at Round-Robin Venues

12.1 Boat Rotation

Usually when the Worlds is held in the U.S. it is economically feasible to provide each competitor with his/her own boat for charter. When the Worlds is held at a non-US venue, the charter fee for a Sunfish is typically double that of when the venue is local to the USA. This is due to expensive overseas shipping and import duties. In addition, boats that are not sold locally must be shipped back to the USA. There are two solutions to avoiding a situation whereby competitors need to pay an exorbitant charter fee. They are:

1. Two (2) competitors share a boat and the event is sailed as a round-robin.

2. The organizing committee:

   Procures high levels of sponsorship to bridge the charter fee gap.

   Lines up buyers so that all boats can be sold locally.

A regatta whereby everybody has their own boat for the entire event is understandably superior to an event where 2 competitors have to share a boat. Downsides to having to share a boat include:

1. Not all competitors race against each other every race. This is a problem when:

   Weather conditions are variable across the duration of the event.

   When pools are not evenly balanced.

   When some pools have a more demanding rotation than other pools.

2. There is time lost/wasted as some boats need to sail to shore for rotations.

3. No 2 competitors rig a boat identically.

   This issue alone is a source of conflict between competitors.

   There is time lost/wasted during the rotation of boats.

> The organizing committee is strongly encouraged to make every effort to realize the ideal whereby every participant can charter his/her own boat. The organizing committee is reminded that the sails used at the Worlds are embroidered with a unique logo. It is possible to design this logo so that it resembles/is the sponsor's logo or incorporates their name.

If procuring high levels of sponsorship is not possible, then the participants must be divided into four (4) balanced pools. These pools are labeled A,B,C & D. Only 2 pools race at any one time while the remaining 2 pools are on-shore. Because using pools is not an efficient means of conducting a regatta, the schedule outlined in Section 11 is not possible. Racing must start on a Sunday. The final day of racing is the following Saturday and the awards banquet is that Saturday evening. The preferred schedule is shown on the following page. It is noted that:

- No rotation system is perfect or 100% fair.
- Racing starts early in the day so as to accommodate delays due to rotating, breakdowns, repairs and general recalls.
- Starting times are target starting times.
- The late split into Gold & Silver fleets is an interpretation of Article 5.3 of the ISCA Constitution,

  i.e., it fosters the enjoyment of racing for the entire fleet of competitors for as long as possible.

12.2 Schedule

Friday, Oct ...	0900-1800	Registration and boat set-up
Saturday, Oct ...	0900-1800	Registration and boat set-up
		Boat Measurement
	1530	Advisory Council Meeting
	1800-1900	Opening Ceremonies
	1900-2000	Skippers Meeting
	2000-2100	Social Hour & Dinner
Sunday, Oct ...	0930	A vs. B
	1130	C vs. D
	1330	A vs. C
	1530	B vs. D
Monday, Oct ...	0900	A vs. D
	1100	B vs. C
		re-shuffle pools
	1400	A vs. B
	1530	C vs. D
Tuesday, Oct ...	0930	B vs. D
	1130	B vs. C
	1330	A vs. D
	1530	A vs. C
		re-shuffle pools
Wednesday, Oct ...	Lay-Day	Use to run any remaining heats of previous days
		If unfavorable weather is expected, (i.e. storms,
		no-wind, hurricane) commence Thursday's schedule
		Otherwise, day off for competitors
	1200	Race Committee and Organizing Committee meeting
Thursday, Oct ...	0930	B vs. C
	1130	A vs. D
	1330	B vs. D
	1530	A vs. C
	1930	World Council Meeting
Friday, Oct ...	0930	C vs. D
	1130	A vs. B
	1200	Commence Protest or Redress Hearings for C vs. D race
	1430	Commence Protest or Redress Hearings for A vs. B race
	1700	Post scores with throw-out; top 48 are Gold Fleet
	1800	Casual/Informal Silver Fleet Cocktail party
Saturday, Oct ...	0900	Gold Fleet: 2 races back-to-back
	1200	Lunch on the water for Gold Fleet
	1300	Gold Fleet: No Start after this time
	1415	Silver Fleet reports to "Vanguard Container site"
	1430	Gold Fleet returns; Gear Hosed off and left to dry
	1500	Boat disassembly <u>with Silver Fleet involvement</u>
		Select Check-In for those with Early Morning Flights
	1800	Boat Check-In Closes; Open at discretion of Vanguard
	1900-2230	Banquet, Awards & Entertainment
Sunday, Oct ...	0800	Resume Boat Check-In: Prioritize those who need to travel

12.3 Balancing of Pools

12.3.1 At the Beginning of the Event

When composing balanced pools at the outset of the regatta, please employ the following guidelines:

1. Work closely with the Class Office
2. Use the ranking system
3. Use results of recent major regattas and last year's Worlds
4. Be mindful that there exist specialists: i.e., light vs. heavy air;

   i.e., If the winds at your venue are typically light, rank light-air specialists appropriately high
5. NSCAs should be as evenly distributed as possible,

   i.e., if an NSCA only sends 2 delegates, ensure that they are placed in different pools.

12.3.2 Re-Shuffling of Pools

Pools are shuffled at the end of each rotation. This occurs on Monday subsequent to the B vs. C heat and at the end of Tuesday. When shuffling pools, the objective is to avoid members of previous pools comprising the same pools in the next heat.

A recommended shuffling scheme is outlined in Appendix F. Because the shuffling proceeds blindly, all competitors know at the outset in which pool they will be sailing in each heat of the event.

12.4 Scoring System

To place emphasis on the final day of racing where competitors meet consistently and are therefore able to make a focused challenge for the lead (or able to defend the lead):

The scoring system to be used after the split, is the bonus point system.

13 Sailing Instructions

Race Committees are encouraged to refer to Appendix L of the RRS of sailing.

So that competitors may become accustomed to a consistent standard at each World Championship, it is suggested that as many as possible of the following guidelines are adhered to:

1. A minimum of three (3) races is required to constitute the championship.

2. No race should be started if winds are less then 5 mph. (or are equal to or less than Beaufort Wind scale 2; See Appendix E.2 of these guidelines).

3. No race should be started if sustained winds are above 30 mph (or are equal to or greater than Beaufort Wind scale 8).

4. Thunderstorms and Lightning: Raise either AP over H or N over H when:

   A. In a Temperate Zone: Storms are anywhere within 15 miles (28km) of the course.

   B. In the Tropics: A squall line that is accompanied by lightning is seen approaching from upwind and will reasonably pass within 8 miles (15km) of the course.

5. If a Windward / Leeward courses is used, an offset mark is required, with a minimum of 140 feet (45 meters; 8-10 boatlengths) between marks.

6. It is recommended that leeward gates are used. The separation between the gate marks should equal approximately 140 feet, (45 meters; 8-10 boatlengths)

7. The windward leg should be approximately 1 mile (1.6km) long

8. The RC should use an entire windward leg and not use modified courses, ie., start & finish located half-way between the weather and leeward mark. Start below the leeward mark and finish above the weather mark.

9. In very deep waters where setting marks is a very difficult process, judiciously anchor in advance, numerous small permanent marks near expected locations of the upwind & downwind marks as well near the start and finishing lines. When setting the course, select from these permanent marks those that best align with a good course. Attach the course marks and RC boats to these permanent marks by means of a carabiner. As permitted by local environmental regulations, anchors may be economically constructed from poured concrete or spent engine blocks.

10. Boats finishing should be required to continue sailing and clear the finish area immediately. (RRS 22.1) (use the extension of the lay-line as a reference grid).

11. Boats that have finished may not sail through or drift into the course while others are still racing. (RRS 22.1) Do not serve meals too close to the course or permit sailors to sail a fast route home at the conclusion of the last race of the day.

12. Make reference to RRS 22.1 during the skipper's meeting.

13. Lunch, water or spectator boats should stand off the finish area or starboard side of any mark by at least 200 yards/meters

14. Appendix P of the RRS is applicable and enforced by on-the-water judges; Judges should have ample small boat sailing experience as well as prior experience in applying Appendix P.

15. A center line buoy may be used on the start line; however it is not a mark of the course and it should not be a reason for redress if not square to the line, nor a foul if hit.

16. The start line should be a minimum of 10 feet (3 meters) times the number of competitors or 15 feet (5 meters) times the number of competitors in winds above 15 mph (Beaufort Wind scale 4-5)

17. Both the weather and pin mark of the starting line should be comprised of Race Committee Boats.

18. While comfort of the RC is paramount, please be mindful that very large RC Boats also cast large windshadows. If at all possible, please size the RC Boats that will comprise starting and finishing marks appropriately.

19. Both boats should have a full inventory of 'size 14' international code flags see Appendix A of these guidelines.

20. The RC on both boats should sight the starting line.

21. Both boats should have an open radio channel with each other.

22. When many boats are over early (or finish in close proximity), a running tape recorder for later replay, can prove invaluable. In large fleets, the person transcribing may not be able to keep pace with the person(s) calling out sail numbers. If a large, but <u>known</u> number of boats are over early, the RC can use RRS 29.1 instead of reverting to RRS 29.2.

23. The RC on each boat should act autonomously and each boat may display code flag X (RRS 29.1).

24. The RC chairman communicates to both boats if a general recall is in effect.

25. To dissuade repeat general recalls, escalate from RRS 30.1 to RRS 30.2 to RRS 30.3.

26. It may become clear that use of RRS 30.1 at the first start attempt of each race is appropriate.

27. It is preferable to use RRS 30.2, "Z"-Flag numerous times before the final escalation to RRS 30.3.

28. Refrain if possible from the use RRS 30.3 (Black-Flag Rule; BFD).

29. Through aggressive hailing together with a whiteboard or chalkboard at the first weather mark, notify boats that are unaware that they failed to start correctly (RRS 29.1 violations) or are disqualified (RRS.30.3). This way they may stop racing and not foul/protest boats that have started correctly.

30. On the first start attempt of each race, it is preferable to issue the Warning Signal 10 minutes before the starting signal. (This changes the default 5 minutes in RRS 26) Approximately 20 seconds prior to the Warning Signal of the first start attempt, issue multiple short horn blasts.

31. Subsequent to a general recall, the subsequent Warning Signal should occur exactly 1 minute after striking the First Substitute.

32. A meeting should be scheduled with all skippers of motorboats that plan to navigate in the area of the race course. Coach and spectator craft should not stray into the course. All boats, including RC and support boats should minimize wind-shadow and wave-action. Please hand out copies of the flyer contained in the Appendix, section B (Apply RRS L.22).

33. For regattas where each competitor has his/her own boat, it is noted that while the default scoring system (RRS Rule A4) is the Low Point Scoring System, regatta organizers are free to use the Bonus Point Scoring system.

34. There shall be 1 throwout when 7 or more races have been sailed.

35. For regattas where competitors share boats, the Bonus Point system shall be used after the split into the Gold & Silver fleets. Prior to the split, either scoring system may be used.

36. Implement a check-out and subsequent check-in system. Verify that all competitors comply. This is particularly important subsequent to thunderstorms & lightning.

37. Use of Protest flags is strongly recommended (due to language difference) and if employed, must so be stated in the NOR.

38. Make penalty compliance forms available. Competitors who fulfill their obligations according to RRS 31.2 or RRS 44.1 must document this within the protest time limit.

39. Make protest forms available.

40. It is an ISAF rule that the ISCA Measurer may not also be a competitor. In the event the ISCA measurer does indeed participate, have him assign a replacement and state in the SI who the replacement is.

41. Include Appendix C of these guidelines verbatim in the SI.

42. Make competitors sign the Charter Agreement; see Appendix D.

43. Please review Appendices C and D with Vanguard and ISCA, e.g., your venue may not require dollys or there may exist measurement rule changes.

44. At events where competitors share boats, explicitly state during the skipper's meeting that all equipment must be present at the boats during the re-shuffle on Monday & Tuesday, as well as during the fleet split on Friday afternoon. In signing the Charter Agreement, competitors have agreeed to do this.

45. It is inevitable that competitors from the host NSCA may know members on the race committee. The race commitee is reminded that any extraneous communication with any competitors, including those from the host NSCA, is prohibited per the RRS. Members of the race committee may not provide information to select competitors that would provide an unfair tactical advantage. This includes specifically how close the competitor's boat was to the starting line. When communicating information to competitors, the race commitee must do so through either:

    The bulletin board (RRS.L.3)

    International Code Flags

    Skipper's Meetings

46. Assign sailnumbers randomly to participants. Do not assign consecutive sailnumbers to participants from the same NSCA.

Appendix

A International Code Flag Inventory

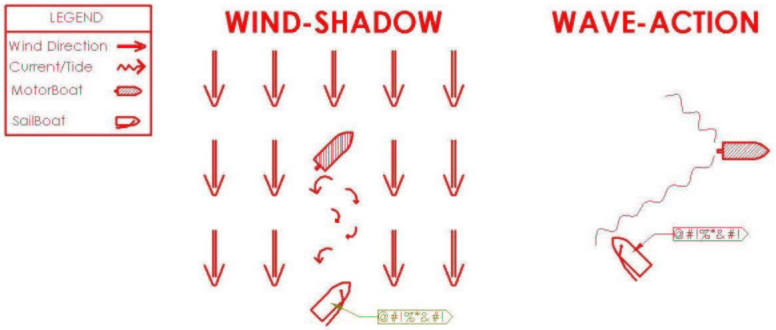
The following list comprises the required size 14 International Code Flags for the regatta.

1. AP, H, A, N (RRS 27.3 & RRS 32.1)
2. B (RRS 60.2 & 61.1.b & Section 13)
3. C (RRS 33)
4. I (RRS 30.1)
5. L (RRS L.3)
6. M (RRS 34.b)
7. P (RRS 26)
8. Q (RRS Appendix P1)
9. S (RRS 32.2)
10. X (RRS 29.1)
11. Y (RRS 27.1)
12. Z (RRS 30.2)
13. Black Flag (RRS 30.3)
14. First Substitute (RRS 29.2)
15. Blue Flags
16. Orange Flags (RRS L.13)
17. Race Committee & Jury Flags (To identify legitimate on-the-course motorboats)

B Handout for Skippers of Motorboats

Kindly generate photocopies of the following Figure and distribute them to the skippers of motorboats. e.g.

1. Spectator craft
2. Press craft
3. Coach craft
4. Race Committee
5. On-the-water judges



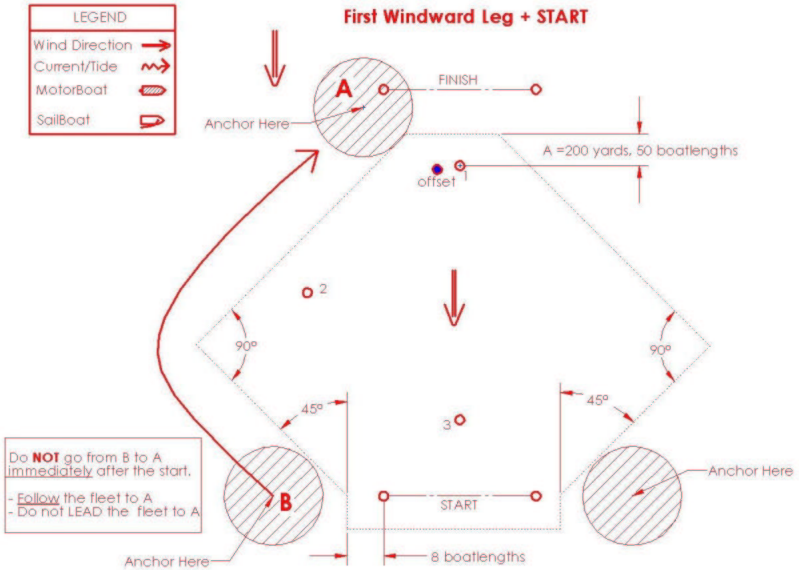
NOTES:

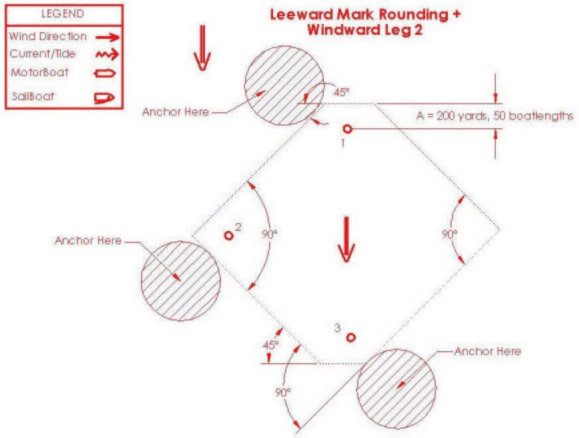
Lemma 1.1 : Sailors use Wind-Shadow and Wave-Action as a competitive strategy
Lemma 1.2 : Sailors do not like competing against MotorBoats

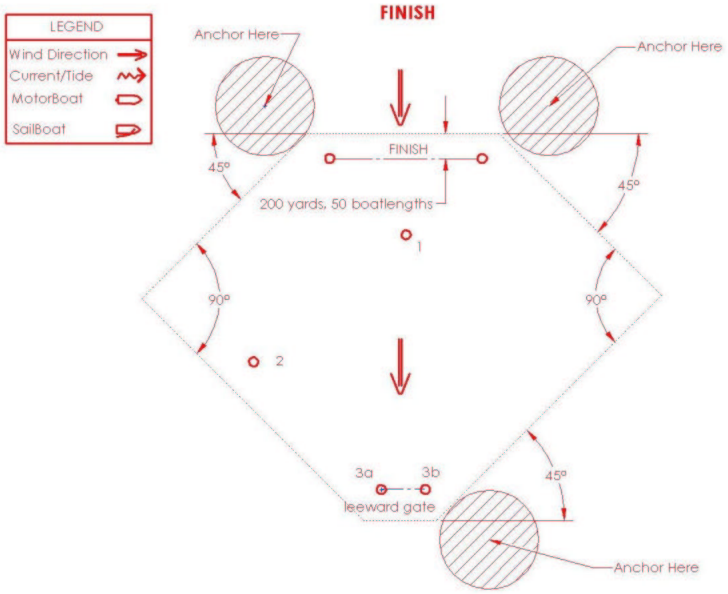
- Your windshadow extends itself surprisingly far downwind!
- Your wake, does NOT dissipate as quickly as you think and can on occasion traverse the entire course.
- A 'Short & Steep' wake is far worse than a 'Tall & Long' wake. If you must, GO VERY SLOW or VERY FAST!

Sailor's Perception of Motorboats:

- The best motorboat is one on station. i.e. On achor & next to the race course







C Equipment

Please incorporate verbatim the text in this section in the Sailing Instructions under **Equipment**. It is noted that these restrictions form a subset of the ISCA Class Measurement Rules.

C.1 Manufacturer Supplied Equipment

The manufacturer will provide the following equipment with the intent that a competitor may come to the event and be able to sail a standard race ready Sunfish.

1. Hull and sail
2. Spars and Mast
3. Gooseneck with adjuster
4. Outhaul Cleat located starboard side of lower spar at 64" (from the front of cleat to where the front end cap meets the spar.)
5. 23 feet of $\frac{7}{64}$" spectra line for the outhaul.
6. Cunningham cleat located on bottom of lower spar at 41" (from the front of the cleat to where front the end cap meets the spar.)
7. 11 feet of $\frac{7}{64}$" spectra line for the cunningham
8. 32" of $\frac{1}{4}$" Mainsheet and a 019 Harken ratchet
9. 25" of $\frac{3}{16}$" spectra core for the halyard
10. Manufacturer supplied padded hiking strap with nylon line attachment
11. 32" 11"x $\frac{1}{8}$ inch spectra sail ties and sail clips (optional use)
12. 4 sail ties 20" x $\frac{1}{8}$ spectra
13. 7" of $\frac{1}{4}$ inch shockcord for centerboard
14. Boat dolly

C.2 Competitor Supplied Equipment

Competitor may provide the following personal effects: These effects are specified so that they do not impede the use of a shared boat, i.e., they can be swapped out easily during a rotation.

1. Mainsheet
2. Jens line and / reefing line
3. Mainsheet block easily removable for boat swapping (e.g. boat ready for partner in < 10 minutes.)
4. Mainsheet cleats easily removable for boat swapping (boat ready for partner in < 10 minutes and provided no holes are made or screws are removed)

5. Tiller extension fitting a Ronstan #RF3133 connector
6. Personal line for securing and raising hiking strap
7. Mainsheet hanger or line/tape equivalent
8. Wind indicators / telltales
9. Thimbles in line purchases per class rules
10. Compass and/or stopwatch secured with tape provided in accordance with CA (Charter Agreement)
11. Taping spars or tiller for securing fittings or halyard

Competitors will be allowed to use Teflon or McLube spray only on spars, sail ties and sail controls.

C.3 Prohibited actions

These other actions are specifically prohibited:

1. No materials may be applied to the centerboard trunk or mast step; e.g., (Teflon tape, Velcro, ...)
2. Nothing, including sealants, may be applied on the hull or blades. The only exception is soap.
3. Daggerboards, Rudder Blades or the Hull may not be sanded.
4. The daggerboard, rudder, sail, hull, mast and spars shall not leave the regatta venue, e.g., they may not be brought to the hotel room.

All other actions or equipment not mentioned in these sections are also prohibited.

D Charter Agreement

...[year] ...Sunfish Worlds
CONDITIONS OF CHARTER

BOAT NO: ... NATIONALITY:...

The cost of chartered equipment determined to be damaged or missing at the time of boat return will be deducted from the damage deposit of all competitors assigned to the boat during the regatta unless otherwise caused and reported by an individual. Competitors are responsible to report any damage of chartered equipment to the Vanguard Representative at the first reasonable time upon coming ashore or when initially becoming aware of an equipment problem. A competitor transferring a boat to another, during the event, is responsible to assure no less than the supplied equipment is available in order to promptly transfer for a subsequent race (including when that race is the following day).

1. No changes, additions, or alterations to the spars, sail, hull and fittings shall be made except as follows: (except as further explained in the preceding page, Notice of Race (addendum).
2. A compass, wind indicator and sail tell tales supplied by the competitor may be used provided that they can be fitted without piercing or otherwise marking the hull, spars or sail.
3. Wet or dry sanding of the hulls or any other equipment is prohibited.
4. The use of waxes, polishing compounds or similar is prohibited. Competitors may wash their boat with detergent and water.
5. Plastic tape or similar may be used in accordance with the Class Rules.
6. No fitting (including ratchet eye strap) may be removed or temporarily unfastened, even if it is subsequently replaced, and no repairs may by undertaken without the permission of the Vanguard Representative. Note: All the fittings are sealed with silicon during manufacture.
7. The use of the charter boat may be withdrawn if, in the sole opinion of the Vanguard Representative, a competitor breaks any of the conditions of charter or treats or handles a charter boat without due care or in a manner which causes or is likely to cause damage to the boat.
8. Any competitor found towing at more than 5kts will be charged $500 and have the equipment withdrawn immediately.
9. Any competitor who does not complete check in shall be charged $100.

Name: ... Address: ...

Phone: ... e-mail: ...

I accept a charter boat in good condition and understand and agree to abide by the conditions of charter as detailed above.
Signature: ... Date: ...

E Units of Measure

The Units of Measure may depend on the Worlds venue. Commonly used measures are the 'US Customary System' and the 'International System (SI)'

E.1 Conversion Table

Quantity	U.S. Customary Unit	S.I. Equivalent
Force	lb	4.448 N
Length	ft	0.3048 m
	fathom (6ft)	182 cm
	in	25.40 mm
	mi	1.609 km
Mass	lbm	0.4536 kg
	ton	907.2 kg
Velocity	mi/hr	0.4470 m/s
	knot	0.514444 m/s
Volume	gal	3.785 L

E.2 Beaufort Wind Scale

Force	Wind (knots)	WMO Classification	Wind Effects On the Water
0	< 1	Calm	Sea surface smooth and mirror-like
1	1-3	Light Air	Scaly ripples, no foam crests
2	4-6	Light Breeze	Small wavelets, crests glassy, no breaking
3	7-10	Gentle Breeze	large wavelets, crests begin to break, scattered whitecaps
4	11-16	Moderate Breeze	Small waves 1-4 ft. becoming longer, numerous whitecaps
5	17-21	Fresh Breeze	Moderate waves 4-8 ft taking longer form, many whitecaps, some spray
6	22-27	Strong Breeze	larger waves 8-13 ft, whitecaps common, more spray; Stephen can finally hike
7	28-33	Near Gale	Sea heaps up, waves 13-20 ft, white foam streaks off breakers;
8	34-40	Gale	Moderately high (13-20 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks; Stephen rigs a jens
9	41-47	Strong Gale	High waves (20 ft), sea begins to roll dense streaks of foam, spray may reduce visibility
10	48-55	Storm	Very high waves (20-30 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility
11	56-63	Violent Storm	Exceptionally high (30-45 ft) waves, foam patches cover sea, visibility more reduced
12	64+	Hurricane	Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced

F Pool Shuffling Scheme

F.1 Pool Matrix

The initial pools are laid out as decribed in Section 12.3. A matrix, called **M1** can be comprised of entries whose columns define the pools and whose entries are the participants. An illustrative example will be worked out here where there are 4 pools and 32 participants (16 boats).

The (4x8) matrix **M1** has entries A through hh entered as:

$$\mathbf{M1} = \begin{pmatrix} A & AA & a & aa \\ B & BB & b & bb \\ C & CC & c & cc \\ D & DD & d & dd \\ E & EE & e & ee \\ F & FF & f & ff \\ G & GG & g & gg \\ H & HH & h & hh \end{pmatrix} \tag{1}$$

The components of a matrix $\mathbf{M}$ are called M_{ij} with the index i indicating the column and the index j the row entry. e.g. $M_{36} = f$

If there are 72 competitors then, then $\mathbf{M}$ can also be identified to consist of four (4x4) submatrices:

$$\mathbf{M} = \begin{pmatrix} \mathbf{W} \\ \mathbf{X} \\ \mathbf{Y} \\ \mathbf{Z} \end{pmatrix} \tag{2}$$

Where $\mathbf{X}$ and $\mathbf{Z}$ are the even submatrices and $\mathbf{W}$ and $\mathbf{Y}$ are the odd submatrices. In the illustrative example of this section, **M1** consists of only two submatrices $\mathbf{W}$ and $\mathbf{X}$.

The 4 columns in a matrix $\mathbf{M}$ correspond to the pools and can be identified:

$$\mathbf{M} = (\mathbf{C}_1, \mathbf{C}_2, \mathbf{C}_3, \mathbf{C}_4) \tag{3}$$

F.2 Shuffling Operations

Three (3) operations $S(\cdot), T(\cdot)$ and $s(\cdot)$ are identified here whereby a new pool of competitors is created.

It is possible to create a new matrix $\mathbf{N}$ by swapping columns. $S(\mathbf{M}, 2, 3)$ indicates swapping the 2nd and 3rd columns. ie.

$$\mathbf{N} = S(\mathbf{M}, 2, 3) = (\mathbf{C}_1, \mathbf{C}_3, \mathbf{C}_2, \mathbf{C}_4) \tag{4}$$

It is possible to create a new matrix $\mathbf{P}$ with the operation $T(\cdot)$ by transposing the even submatrices:

$$\mathbf{P} = T(\mathbf{M}) = \begin{pmatrix} \mathbf{W} \\ \mathbf{X}^T \\ \mathbf{Y} \\ \mathbf{Z}^T \end{pmatrix} \tag{5}$$

The components to matrix $\mathbf{Q}$ are obtained by applying the shifting operation $s(\cdot)$ to the matrix $\mathbf{M}$:

$$Q_{ij} = M_{mod(i+mod((j-1),4)-1,4)+1,j} \tag{6}$$

It is necessary to use each of these three operations consecutively to avoid stationary points. i.e. 2 competitors who are in the same pool in each of the 3 heats.

To create the pools in Heat 2 it is suggested that the shuffling proceed by:

$$\mathbf{M2} = T\left(S\left(s\left(\mathbf{M1}\right), 2, 3\right)\right) \tag{7}$$

To create the pools in Heat 3 it is suggested that the shuffling proceed by:

$$\mathbf{M3} = T\left(S\left(s\left(\mathbf{M2}\right), 1, 2\right)\right) \tag{8}$$

Please contact the Class office if you wish to obtain a Microsoft Excel spreadsheet that implements the shuffling operations.

F.3 Example

When Eq.(7) is applied to the first pool (**M1**) one arrives at:

$$\mathbf{M2} = \begin{pmatrix} A & a & AA & aa \\ bb & BB & B & b \\ c & C & cc & CC \\ DD & dd & d & D \\ E & ff & g & HH \\ e & FF & G & hh \\ EE & F & gg & h \\ ee & f & GG & H \end{pmatrix} \tag{9}$$

When Eq.(8) is applied to the second pool (**M2**) one arrives at:

$$\mathbf{M3} = \begin{pmatrix} a & A & AA & aa \\ bb & b & BB & B \\ CC & cc & c & C \\ d & dd & D & DD \\ ff & e & h & GG \\ E & hh & gg & f \\ g & FF & EE & H \\ HH & G & F & ee \end{pmatrix} \tag{10}$$

G Former Worlds Venues

H Authors

Listed here in alphabetical order are the authors of this document.

Name	Worlds Events Attended
Eduardo Cordero	199[1-7], 1999, 2000, 2001, 2002, 2004
Vic Manning	199[2-6], 1998, 1999, 200[0-4], 2006
Paul-Jon Patin	1987,1988,199[1-9],2000,2001,200[4-6]
Stephen Smeulders	198[6-8], 1991, 1996, 200[3-6]

I Reviewers

Listed here in alphabetical order are the reviewers of this document.

Name	Relationship to Class
Terry Beadle	ISCA Secretary
Chip Johns	CEO Vanguard Sailboats
Ernie Kervel	Former ISCA president; 3 time Worlds organizer
Andres Santana	ISCA President

Index

advisory council, 5, 10, 12
application letter, 4

Beaufort Wind Scale, 14, 23
bonus point, 13, 16

charter agreement, 16, 22
check-in/check-out, 7, 16
constitution, 3

damage deposit, 6, 8, 22

general recall, 15
Gold Fleet, 11, 12

housing, 7, 8

individual recall, 15
interference
    RRS 22.1, 14
International Code Flags, 15, 18
International Judge, 6
ISAF, 3
ISCA, 3

kinetics
    RRS42, 15
knot, 23

leeward gate, 14
lightning, 14
low point, 16
lunch, 14

measurer, 6
modified course, 14
motorboat, 16, 18

NOR, 9
NSCA, 3

one-design, 3

pool shuffling, 13, 24
protest, 16

ranking system, 13
round-robin, 11

safety, 7
sailing instructions, 14
Silver Fleet, 11
sponsor, 11

thunderstorms, 14
trophies, 6

USSCA, 8

Windward Leg, 8
world council, 5, 10, 12