

Hoofer Sailing Club Scow Racing Manual



Photo by Dierk Polzin, 2012

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Racing Scows

A. Racing Scows:

1. Setting the starting line – The formula I have used in one-designs is to take the number of boats times the boat length to arrive at the nose to tail length of the line. Then I use 50% of that number as the general length of my starting line.

a. As an example, if you have 10 C-Scows there is 200 feet of boat length involved. Taking 50% of that would call for An 100 foot starting line.

b. Having too long a starting line takes out the competitiveness of the starting sequence. As well, if the line is too long there is a chance that one boat could gain a favourable position and win the race right at the start.

c. The line should be set as near directly into the wind as is possible. The best tool for this is a long stick with a piece of yarn on it. The boat should be fully stopped when performing this check. The committee boat should check the wind at their anticipated starting line. They should then go into the middle of the course in order to check the wind bearing there. Finally, this process should be completed at the top end of the course.

d. The weather mark is the most critical of these measurements. The committee boat should sit at full stop for a few minutes and get a bearing on the wind

direction. This will be used to set the starting line as close to head to wind as possible.

e. The committee boat should return to the starting area and drop the mark on the PORT side of the committee boat. The committee boat should then move off to the mark at the predetermined distance and once again check the wind. In most cases the boat will have to be moved forward or back in order to present the competitors a starting line that is as square as possible.

f. In club racing, neither mark will generally be changed unless there is a gross and constant change in the wind, 25 degrees or more.

g. The starting sequence is generally begun with a six minute prep signal using an air horn. This warns the competitors that the five minute starting sequence is about to begin. The horn should then be sounded at four minutes (for those who missed the five minute set on their clock) and a one minute prior to start. Finally the horn will be sounded at the start.

h. Someone on the committee boat should be assigned to watch the line from the bow of the committee boat and the port starting mark.

i. Any boat over prior to the starting horn should be hailed and told that they were over. The proper procedure is that the boat that is over has to completely round the mark or the committee boat again. No longer can they just duck back behind the line and re-start.

B. Types of courses:

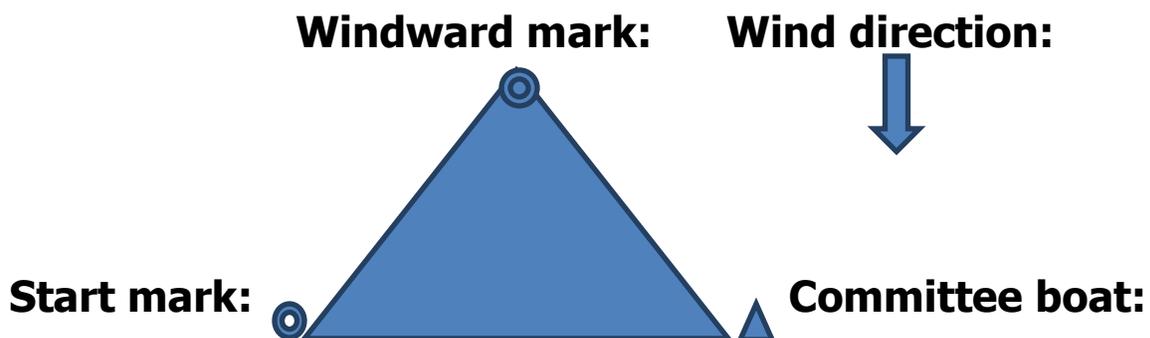
1. **Windward/Leeward** - This is a course that generally has between half and one-mile legs. Marks are **ALWAYS** taken to port. If there is no committee boat present, the starting line buoys will be considered a gate in which the boats can round either mark on their downwind legs. If there **IS** a committee boat present the starting buoy will be the downwind mark.

2. The **W/L** course can include any number of legs. A **W-2** would mean that the boats would go twice round the course and finish on the downwind leg where the committee boat would be positioned with the buoy to port as the finish line.

3. There is also a **W** course with a half, i.e. **W 2-1/2**. In this configuration the boats would finish on the upwind leg, especially exciting in a scow.

4. There is also the option of an **Olympic** course, which is a triangle and allows for two reach legs on the first round. If we have a committee boat those would be fun to do as well.

Below is an illustration of a **W/L** course: 🏁



C: Starting:

1. Get out to the lake early! This allows you to feel the breeze for shifts or streaks. If you have time, go all the way up the course in order to see what the wind is doing at the weather mark. Take note of which side of the course has more wind. Also be aware of the weather that you have, i.e. high or low. At times this will give you an indication of where the wind is likely to come from as the front moves through and the race progresses. Practice some tacks and gybes as you are looking over the course to make certain you and your crew are both working together smoothly.

2. Establish a line sight by sailing up the outside of the line, generally on starboard tack. Go head to wind in the middle of the line and sight the committee boat and pin. Then look at where your boom is on your boat. This will tell you if the course is port or starboard biased. As well, pick out something on shore along that extended line so that you can have your boat at the line on time. If your view of the pin is blocked, use object you sighted on shore to know where your boat is in relation to the start line.

3. In larger fleets you will encounter "line-sag" which is nothing more than the outlook of each skipper on how to start. Most will want to lay back from the line, others will

want to be moving back and forth behind the line. If they leave you enough room, run down the line in front of all of them just before the gun powering up as you go. This will produce a truly good start.

4. After the five minute starting sequence the boats shall maneuver in order to start in clear air. Generally, the most prized place is directly next to the committee boat on a straight or starboard biased line, however, barging is NOT allowed.

5. If you are early to the mark, there are a couple of ways to slow the boat down. The first of these is letting out the sail as far as possible while still keeping enough control to keep the boat pointed at the line. As well, both boards can be dropped fully down in order to create more drag.

6. The best starting tack will be that which points your boat closest to the windward mark. Having already checked for course bias, if the line is straight start on starboard to keep your rights UNLESS you are intend to port-start the fleet and come up behind nearest the committee boat.

7. Always stay on the tack that is taking your boat closest to the mark. Visualize the angles of your boat, your tacking angle (course you want for your next tack). Pointing is critical in a race as it relates to VMG. In general, racing is a tradeoff between pointing and speed. To point higher pull in your mainsheet just as you would to power up the boat at in a start. Ease out the main from time to time to keep the boat powering toward the mark. Find the balance between close hauled and a close

reach that will allow you to keep up with the other boats in your fleet.

8. If you feel your boat falling off, this is a knock. It is generally best to tack in a knock (unless you see a close wind line), again for the purpose of keeping your boat pointed at the mark and going fast. As well, look at your mast twist and depending on the wind, adjust your blocks accordingly. Get this all sorted out as you do your run up the course before the start of the race.

9. Choosing the side of the course you want to sail is critical. This will be the side of the course on which there is more wind. Stand up about every 30 seconds before the start as the wind may have shifted after you sighted the line. This is also another reason to get out on the course early. After you start, get to the favoured side of the course as quickly as you can.

10. If you are set up nicely at the line, try to keep some distance to leeward in order to head down and gain speed. If you are the second row, find a hole in the line of boats and come up into it. Remember, the leeward boat has the right of way and is allowed to sail above her proper course to shut out any boat heading into the start before the gun. So use this in order to make some room for your boat to fall off and gain speed just before the start. After the start, you (the leeward boat) must return to your proper course.

11. Keeping in mind that you cannot live in dirty air, there are a few other things you can do in order not to sit

stalled at the starting line. You can follow very closely behind the boat that HAS claimed the spot next to the committee boat and then peel off after a few boat lengths. You can also move down the line and start at the pin end away from the other boats, however, keep in mind that you are now farther from the weather mark than your competitors on a course that is straight to wind. Get a feel for "wind-shadow" from boats round you as it has an impact on your speed if you are leeward or downwind of a boat that is close to you.

12. Lastly, you can elect to port-start. Since the starboard boats have rights, you must stay clear behind them. You can then come up just behind the boats closer to the committee boat and start on port, tacking over to starboard within a couple of boat lengths. Your boat will have a lot of speed and can catch up rather easily. This is something that takes a bit of practice to pull off well, however, if you cannot force your way into the line it is a very good plan C.

13. ALWAYS make certain that your boat is pointed at the committee boat when the one-minute horn goes off. Use your main and boards to control your speed to the line in order to arrive at just the right time to find a hole or other favourable place on the line to start.

D. Racing:

- 1. Once started, the entire object of the race revolves round VMG (velocity made good). This means that your boat needs to travel the least distance between the starting line and the windward mark. NEVER get into a position where you find yourself pointed away from the mark. VMG is very similar to speed over the ground in an airplane, i.e. traveling the least distance over the ground between two points. Only in this case the ground is covered by water.**
- 2. Considering the triangle of a W/L course, be observant of where the lay line is on the course as sailing beyond the lay line reduces your VMG and causes your boat to fall behind.**
- 3. Crew positioning is everything in racing. Keeping your angle of heel at 30 degrees is critical. This keeps as much of the boat out of the water as possible as it reduces drag. There are times where you and/or your crew will need to sit on the leeward side of the boat in order to accomplish this. In most cases, your crew should sit at the widest part of the boat and should move first when changing angle of heel, tacking, or gybing.**
- 4. As stated earlier, all marks will be taken to port.**

5. Pointing is a HUGE factor to consider in racing after your start. Due to the rotating mast, the C-Scow will point higher than most other boats you are used to. In recalling your first lesson, you will remember that being close-hauled is like the first gear in a car, used in order to accelerate. Letting out the mainsail (increasing camber) is second gear allowing more sustainable power.

Racing well is finding that sweet spot between being too close hauled as opposed to being on a bit more of a reach. If the wind is good you might find that you can point high and maintain speed, however, be careful not to “pinch”, i.e. point so high that you are more head to wind and lose much of your speed. If your boat is on a lift, always feather up toward the mark, never forgetting VMG.

Watch the boats round you that are on the same or even different tacks. On boats sailing your tack, what are they doing? Where is the boom positioned on the back of their boat and how close hauled are they? Are you gaining or losing ground to them? Make adjustments accordingly.

Gauge is also something of which you and your crew should be aware. If you are sailing parallel to another boat, is the distance between your boat and theirs closing (making gauge) or is there a larger gap developing between you and the other boat (losing gauge).

The crew should be calling out that you are making or losing gauge as well as that you are faster or slower than the other boat near you on the same tack. Looking at what boats on other tacks are doing is a good practice. This provides good information about the wind on the other tack. Are they getting knocked or getting a lift?

6. Penalty turns:

- a. Over the line - come back and re-round the mark.**
 - B. Hitting a mark - do a 360 degree turn, starting with a tack and circling the boat round.**
 - c. Fouling another boat – you must do a 720 degree turn, again starting with a tack.**
- 6. In light air, if a boat does not reach the first mark (regattas generally use 45 minutes) in the time agreed upon, the race shall be abandoned.**

E: Rules of racing:

- 1. While the size of the rulebook can be a bit intimidating, there are only a few rules that will apply to the sort of racing we shall be doing.**
- 2. Rule 1.1 – Helping those in danger: ALWAYS come to the aid of another boat that is in danger. This does not mean that you have to help a capsized boat unless it is clear that someone is injured. It DOES mean that if a boat is breaking up or someone is injured that the nearest boat is required to come to their aid. The race would likely be abandoned at that point.**
- 3. Rule 10 – Opposite tacks: When boats are on opposite tacks the port tack boat shall keep clear.**
- 4. Rule 11 – Same tack but overlapped: When boats on the same tack are overlapped, the windward boat shall keep clear of the leeward boat. Lee-bowing another boat is a good racing tactic. This is where you come up to another boat and tack just ahead and to leeward of that boat. In essence, you put them in dirty air and they will be forced to tack away. This takes some practice, for if you are not just ahead of the other boats boat it is YOUR boat that will be in dirty air.**
- 5. Rule 12 – Same tack but NOT overlapped: When boats are on the same tack but are not overlapped, the boat clear astern shall keep clear of the boat clear ahead.**

6. Rule 13 – While tacking: After a boat passes head to wind, she shall keep clear of other boats until she is on a close-hauled course. During that time rules 10, 11, and 12 do NOT apply. If TWO boats are subject to this same rule at the same time the one to the others PORT side or clear astern shall keep clear.

7. Rule 14 – Avoiding contact: A boat shall avoid contact with another boat if reasonably possible. The right of way boat need not act until it is clear that the burdened boat is not going to keep clear or give mark room.

8. Rule 15 – Acquiring right of way: When a boat acquires right of way she shall initially give the other boat room to KEEP clear unless she acquires the right of way by the other boats actions.

9. Rule 16.1 – Changing course: When a right of way boat changes course she shall give the other boat room to keep clear.

10. Rule 16.2 – Changing course: When AFTER the starting signal a port-tack boat is keeping clear by sailing to pass astern of a starboard-tack boat, the starboard tack boat shall not change course if as a result the port-tack boat would immediately need to change course in order to keep clear.

11. Rule 17 – Same tack – Proper course: If a boat in the zone (two boat length circle round a mark) clear astern becomes overlapped to leeward of a boat on the same tack, she shall not sail above her proper course while both boats remain overlapped on the same tack.

The definition of overlapped for our racing will be that ANY part of the boat is alongside the other boat.

12. Rule 18.1 – Mark Room: This rule applies between boats when they are required to leave a mark on the same side and at least one of them is in the zone. The zone is considered to be within a two boat-length circle of the mark that is being rounded.

a. Rule 18.1 does not apply between boats on opposite tacks on a beat to windward.

b. Does not apply between boats on opposite tacks when the proper course at the mark for one but not both of them is to tack.

c. Between a boat approaching a mark and one having rounded the mark. In this case, standard right-of-way rules apply.

13. Rule 18.2 – Giving mark room: When boats are overlapped the outside boat shall give the inside boat mark room unless;

a. If the boats are overlapped when the first of them reaches the zone, the outside boat at that moment shall thereafter give the inside boat mark room. If a boat is clear ahead when she reaches the zone, the boat clear astern at that moment shall thereafter give the boat clear ahead mark room.

b. When a boat is required to give mark room she shall continue to do so even if later an overlap is broken and/or a NEW overlap begins within the zone.

- c. If she becomes overlapped inside the boat entitled to mark room, she shall also give that boat room to sail her proper course while they are overlapped.**
- d. If the boat entitled to mark room passes head to wind or leaves the zone rule 18.2 ceases to apply.**
- e. If there is reasonable doubt that a boat obtained or broke an overlap in the zone it shall be presumed that she did not.**
- f. If a boat obtained an inside overlap from clear astern or by tacking to windward of the other boat, and the outside boat is unable to give mark room due to another boat on her other side she is not required to give mark room. The "trapped" boat will hail the leeward boat that they are unable to give mark room.**

14. Rule 18.3 – Tacking in the zone: If a boat in the zone passes head to wind and is then on the same tack as a boat that is fetching the mark, rule 18.2 does not apply between them. The boat that tacked shall not cause the other boat to sail above close hauled in order to avoid contact or prevent the other boat from passing the mark on the required side. The boat that passes head to wind while in the zone shall give mark room if the other boat becomes overlapped inside her.

15. Rule 18.4 – Gybing: When an inside overlapped right-of-way boat must gybe at the mark to sail her proper course, until she gybes she shall sail no farther from the mark than needed to sail that course. This rule does not apply at a gate mark.