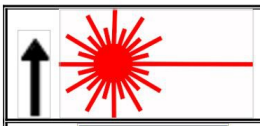
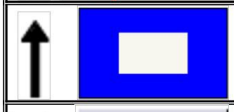
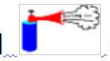
Race Officer Manual

One Page Summary

- The Race Officer is the lead Safety Officer on the day.
- Check the current weather situation and the forecast to determine if racing should proceed, be canceled or postponed.
- Hoist the club flags, the NZ flag on the clubhouse flagstaff.
- Place with pens the Race Entry sheets and the Sign on/Sign off forms on the shelf adjacent to the clubhouse entry door.
- Choose a suitable course for the prevailing wind conditions and clamp the course sheet onto the clubhouse race-briefing wall.
- Hold a race briefing 40 minutes before racing (if required).
- Make sure you have on board Peikatini a spare VHF, Cell Phone, First Aid Kit, Race Result Sheets (x4), pens, race timer, the required flags and a working hooter.
- Ensure Peikatini's bungs are installed and secure.
- Launch Peikatini at least 30 min before race start. (see operating instructions on shed wall).
- **Laying the anchor** – drive Peikatini slowly **directly into the wind** past the right-hand start-line marker buoy and stop approximately 40m past the buoy. Place the anchor over the bow roller and allow Peikatini to drift backwards with the motor is in neutral – paying out the anchor rope until the start line is almost square to the wind. Temporarily secure the anchor rope to the T cleat.
- **Setting a proper start-line**. Once Peikatini's has settle on the anchor, adjust the length of the anchor rope to ensure the start-line is square to the wind. When you are satisfied with the start-line, clip the anchor buddy weight to the anchor rope, lower and push the clip as far forward of the bow as possible with a boat hook.
- Readjust the start-line between races (if necessary) by letting out or taking in anchor rope.
- **Starting a race.** Approximately 15 to 20 seconds before the 3-minute preparatory signal give three (3) short toots on the horn.

	**3 minute Preparatory**	**1 sound**  **Class flag Raised**
	**2 minute Warning**	**1 sound**  **Code flag P Raised**
	**1 minute Warning**	**1 long sound**  **Code flag P Lowered**
	**Start**	**1 sound**  **Class flag Lowered**

- At completion of racing return to the pontoon via the channel (to avoid hitting submerged sand banks).
- At clubhouse check all sailors have signed the sign-off sheet.

Race Officer (RO) Manual

Safety requirements. This includes:

- **The RO is the lead safety officer** on the day. Be aware that Peikatini's skipper is directly responsible for the welfare of the crew on Peikatini. This is true for all crewed boats.
- **Arrive at MPYC at least 1 hour before race start.**
- **This is important.** You have several tasks to carry out in preparation for the day's activities before the programmed race start time. The race start time has been carefully determined to give the longest race period the available tide will allow. Please don't shorten this by not being ready on the start line on time.

Understand the weather and tide of the day.

- There are quite a number of weather forecasting sites, and most people have their favorites. There is weather information on the homepage of the club's website. The most important facts the RO must know are the forecast wind strength and direction and any forecast change that may occur during the period of club activities.
- Determine whether it is safe to run a club event. Assess if a change in the weather is forecast. When is it likely to happen and what effect will it have on the safety of the people involved, on the water and when launching and retrieving of boats.
- The predominant weather at MPYC is a north easterly wind generated by the sea breeze effect. This typically starts on a clear sunny day with little or no wind at 0900 in the morning gradually rising to around 15 knots by mid-afternoon then decreasing in speed as the evening approaches and dropping to almost zero as dusk arrives. If the day is overcast the sea breeze effect will be reduced and the wind will be delayed, and the maximum speed will be less. The sea breeze effect can be enhanced by overlaying weather systems which generally lead to increased wind speed and wave height. In this scenario the increase in wind speed may become a safety issue in itself.
- The two weather events that can create the main safety issues at MPYC are the north westerly and the south westerly. Both are generated by moving weather systems and can arrive at any time of the day or night.

The Norwest Arch

- The north westerly is a warm system classically generated by a fohn wind flowing over the southern alps. Its arrival is often preceded by a

period of calm as it pushes against the north easterly. It will then arrive as random gusts up to around 20 knots before establishing as a warm wind typically gusting between 10 and 25 knots. A phenomenon that often occurs at MPYC is when the north westerly establishes over the top and a north easterly continues to blow on the surface. This can continue all day and makes for lovely sailing conditions but there is always the risk that the north westerly system will slightly change direction or wind strength and reach the surface. The most obvious sign that a north westerly system is around is the Canterbury's famous nor west arch, however, it can be generated by winds coming from anywhere between southwest and due north so estimating its effect at MPYC can very difficult to determine.

A Southerly Front Approaching

- The other wind we have to deal with is what we call the south westerly although it is more often than not generated by a southerly that is modified by the Port Hills. This is the most dangerous wind that affect us, not least because the bulk of the Port Hills prevents us from seeing it coming, until it is almost upon us. It can arrive with little warning sometimes with gusts as high as 30 knots and major swings in direction. If the forecast warns of a southerly change the RO must keep a constant vigilance to the south and be prepared to order all boats to leave the water as soon as possible if you consider there is a danger of a sudden change of weather coming.

Managing a southerly

- In a worst-case southerly scenario, you could end up with a number of sailors in the water unable to right their boats. In this situation sailors will get tired very quickly and hypothermia is a very real risk. Best practice, proven in the past is for as many RIBs as possible to be deployed to recover sailors and abandon their boats. Ideally Peikatini functions as the mother ship at anchor and directs the rescue operation and the ribs bring the rescued sailors to Peikatini. This expedites getting the sailors out of the water as quickly as possible as the RIBs don't have to ferry all the way back to the club house in rough water conditions. Be aware that Peikatini is very stable, but is very difficult to manage in a strong wind hence if practical it is best to remain at anchor and manage

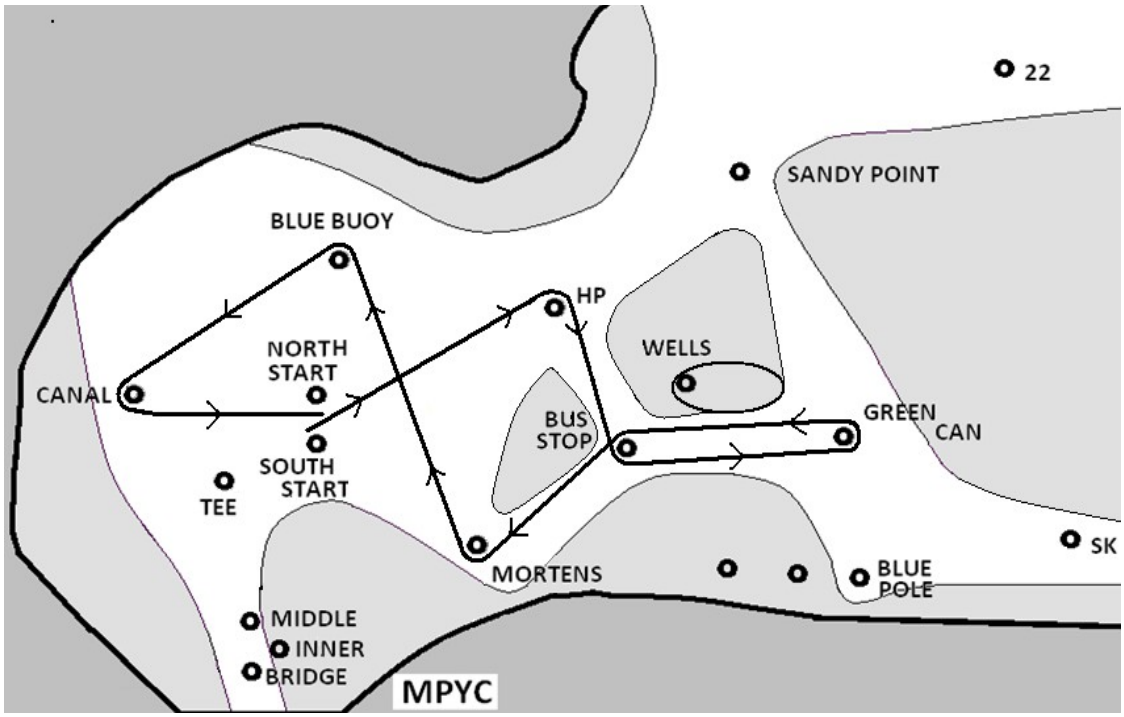
the situation by radio until things are under control. It is also difficult to hear the radio if the engine is running.

- Our time available for racing is governed by the tide. The height of the tide is governed by the phases of the moon and further influenced by the atmospheric pressure of the day. High atmospheric pressure means less water enters the estuary and therefore the tide will be lower than forecast and the available time for racing will be less.
- **Ensure Peikatini's crew and the RIB crews** have adequate warm clothing and footwear and if necessary wet weather gear.
- They must stay warm for the whole period they are on the water. Remember if a situation develops you may be required to remain on the water for longer than you anticipated.
- **The RIB crew must not** leave the water until authorized by the RO and must not leave the water until all sail boats are off the water and accounted for.
- **Liaise with other officers** of the day and with the rescue boat crews. Asses the number of racing boats there will be and determine how many rescue boats are appropriate with regard to the number of racing sailors and the anticipated weather. Yachting NZ's recommendation is to have one patrol boat to every ten race boats. Check that there is enough coverage. Peikatini is counted as one patrol boat
- Liaise with the people running both the Junior and Adult learn to sail to gain an appreciation of how many other MPYC boats will be on the water and what they are likely to be doing.

Pre-Launch Admin:

- Hoisting the club flags and NZ flag on the club house flag staff.
- Setting out the entry list and sign on / sign off forms adjacent to the entry door to the club house. Place a least two race result record forms on a clipboard for use on Peikatini. Forms are in the plastic drawers upstairs. Additional forms can be printed from a file on the computer's desktop. Filename:-

Choosing a suitable course



Example of one of the more popular courses

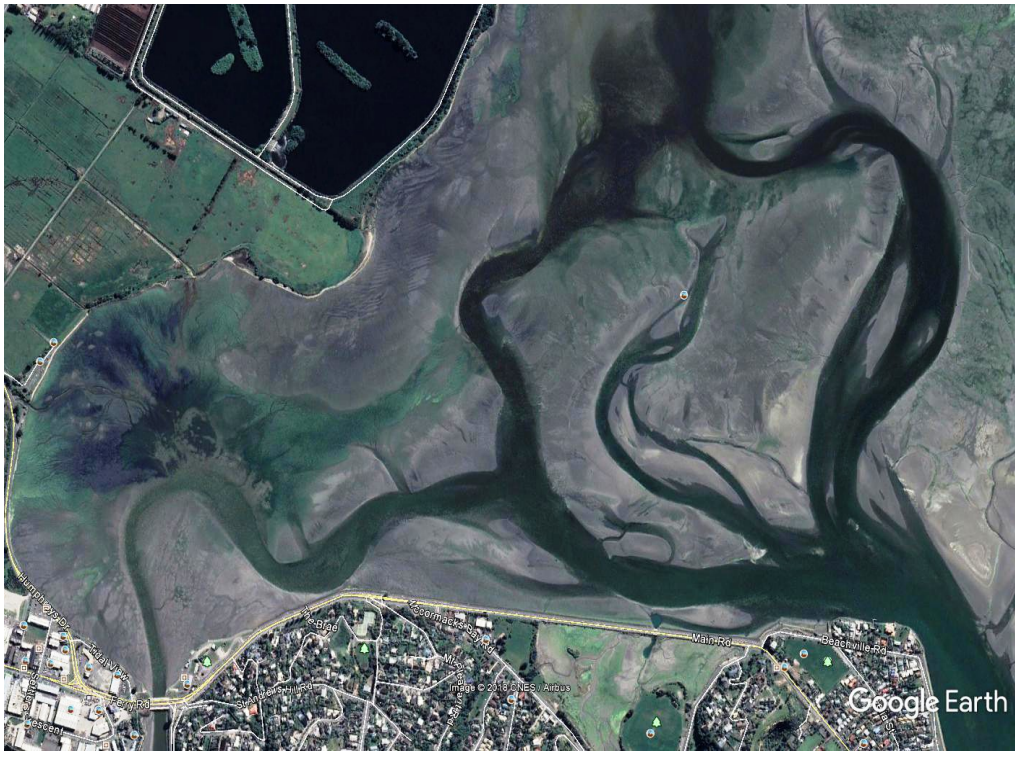
- The course chosen for the day needs to consider the weather, tide, sailor ability and the number of sailors. We usually intend to get at least four races in each day. Sprint racing and short course racing days can do up to eight races in a day. If the wind is light the course chosen will need to be shorter than if the day has a stronger wind. The course book contains about 80 courses mostly set around fixed marks. some courses are designed for a specific wind direction while others will work for various wind directions. If you are at all unsure it is preferable to liaise with senior sailors when choosing a course as they are best judges of what they will enjoy the most on any given day. The reason for relying heavily on fixed mark courses, is it takes a considerable time to lay course marks, and you need an accurate knowledge of the sand banks so boats don't get damaged by hitting the bottom. Some days in the program use the same course every year eg the Sprint Races, the "Volvo Round the Estuary" and The "Buxton cup". The "Short Course" days use Laid Marks. To be able to get the optimum number of races run on any given day, start line delays must be kept to a minimum. Please endeavor to start the next sequence as soon as the last boat of the previous race crosses the finish line.
- **Preparing a race briefing** if required**.**
- Some race days like the Volvo and the Buxton Cup have elements of the day that are different to our normal practices, so it is therefore necessary to hold a pre-race briefing before launching to advise all sailors of what is going to happen on the water, weather conditions etc.

Boat Shed stuff

- Check out Peikatini as per the operating instructions on the shed wall (summarised below).
- Ensure there are two working radios on board (the mounted VHF and a fully charged portable VHF as backup for the RIBs) and a first aid kit. It could also be an advantage to have a cell phone on board. Ensure you have the race results record forms and adequate pens. Check the flag box contains the necessary flags. Check to see that both the hooter and race timer work. Check that both anchors are attached to boat and determine whether any extra buoys needed.
- Carry out radio check with RIB crews and insure all are charged and on the appropriate channel. At MPYC we normally use channel 17 but occasionally channel 77 may be used.

Water stuff.

- Plan to launch Peikatini at least 30 minutes before race start.
- Refer operating instructions on the shed wall.
- Peikatini launching involves tractor driving and reversing a large trailer some distance. (Emphasize that tractor driving is not a pre-requisite of being RO – but is helpful). If you are not an approved tractor driver, please ask someone who is to help.
- Drive Peikatini safely, anticipate your maneuvers well ahead. the boat is quite slow to respond to its controls.
- **Steering wheel danger**. Remember the wheel may spin if released when under power and cause injury to fingers.
- Beware of shallow areas. Don't get stuck on the mud, especially when returning to the pontoon when the tide is going out. Stick to the channel.



Picture of Estuary Channels

MPYC start-line area

Laying the anchor(s) and effective use of the anchor rope weight to prevent center board tangles.

- Ensure that the bow anchor ropes are not tangled.
- For a northeasterly wind drive Peikatini slowly directly into the wind past the right-hand start-line marker buoy. **Don't run over start buoys**. Bring Peikatini to a stop after approximately 40 meters, about six boat lengths past the buoy, and place the anchor over the bow roller.
- Do not run the chain or rope over the wooden gunnels or heave the anchor overboard (the anchor likely won't set properly). **Caution** keep feet and hands clear of anchor chain and rope.
- Allow Peikatini to drift backwards with the motor in neutral while paying out the anchor rope until the start line is almost square to the wind. Temporarily secure the anchor rope to the T cleat.

Setting a proper start-line. (bias)

- The start-line is between the main flagpole (flying the orange flag) on Peikatini and the buoy at the opposite (port) end of the line (known as the pin end).
- Once Peikatini has settled to the wind on anchor you should adjust the length of the anchor rope to ensure the start-line is square to the wind.
- Once you are satisfied with the setup of the start-line, clip the anchor buddy weight to the anchor rope, lower and push the clip as far forward of the bow as possible with a boat hook. This weight lowers the rope in the water and lessens the likely hood of a yacht catching its center board on the anchor rope.
- Sometimes due to swinging wind or currents, Peikatini may not stay in position. If this happens it may be necessary to deploy the stern anchor to hold it straight. It is a good idea when using the stern anchor to place a buoy over it. Ask the RIB to place the stern anchor for you – and also to retrieve it at the end of the day.
- Note – the proper length of the start-line is 1.5 times the sum of width of the boats in the race.

Start lines for Winds other than nor'easters

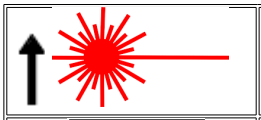
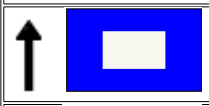
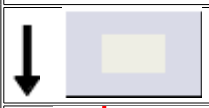
- The start-line positions for all winds are shown on the race cards. Please take special note of the setup for winds other than nor'easter.

Setting laid mark course.

- As it takes some time to set out laid marks, please make sure you go on the water early, so as to get the marks out well before race start time. While it is possible to set laid marks from Peikatini, there is often not be enough water early in the tide cycle, and you may get stuck. Discuss in detail with the RIB crew how you want to lay out the course before you go onto the water. The usual practice is to anchor Peikatini at the start-

line and direct a RIB by radio to drop the marks for you. Short-course race days which use laid marks are usually programmed for days with small tides (which limits the available sailing time) – so please arrive at the club extra early on those days.

Managing a race.

	**3 minute Preparatory**	**1 sound**  **Class flag raised**
	**2 minute Warning**	**1 sound**  **Code flag P raised**
	**1 minute Warning**	**1 long sound**  **Code flag P lowered**
	**Start**	**1 sound**  **Class flag lowered**

Three Minute Start Sequence – as used at MPYC

- The class flag can be replaced with a numerical flag if necessary.

Method of starting a race.

- The start-line is between the main flagpole on Peikatini (flying the orange flag) and the buoy (the pin end) at the opposite end of the line.
- Count the number of boats at the start line and record on the race log sheet (for each race).
- Set timer to normal clock mode.
- Identify the beginning of the minute you wish to use as the start of the start sequence.
- Approximately 15 to 20 seconds before the first start signal give three (3) short toots on the horn. This warn the sailors to be ready to activate their start watches.
- At race start time give a single one second burst of the horn and place the class flag on the aft corner of Peikatini on the start line side.
- Exactly one minute later give a single one second burst of the horn and place the "P" flag on the aft corner of Peikatini opposite the class flag.
- Exactly one minute later give a single two second burst of the horn and remove the "P" flag.
- Exactly one minute later give a single one second burst of the horn and remove the class flag. this signals the race start.
- To help you determine recalls you can ask the rib to sit at the pin end of the start and watch.
- If you have a boat over the line (on course side) on the start signal raise the individual recall flag and send rib (if the sailor doesn't respond) to advise the sailor to come back and re-cross the start line.
- Record the race start time on the race log sheet.

Finishing a race and recording times.

- The finish line is between the main flagpole flying the orange flag on Peikatini and the buoy (the pin end) at the opposite end of the line.
- Give one toot of the horn as the first boat of each class crosses the line
- As boats cross the finish line record sail number and their finish clock time.
- **Method of timing and recording race finishes** – as each boat or group of boats approaches the finish line record their sail number. Caution, several boats may cross the line in quick succession and their finish order may change from your recorded order at the last minute. If this happens make a quick note and carry on with the next finishers. Don't try to sort it out at the time if other boats are approaching the line. Sort it out after you have started the next race.
- As each boat finishes, (passes between the flagpole and the pin end buoy) record the clock time (minutes and seconds).
- To be able to get the optimum number of races run on any given day, start line delays must be kept to a minimum. Please endeavor to start the next sequence as soon as the last boat of the previous race crosses the finish line.

End of Day responsibilities.

- As soon as Peikatini is on the trailer and before processing the results give it a wash paying particular attention to wash the salt off the trailer (as per details in the next section). If you don't feel comfortable backing Peikatini into the shed arrange for someone else to do it.
- Check that all sailors have signed off the water (sign on sign off sheet) and are accounted for.
- Cheek to see if there are still any launching trolleys without boats by the ramps (Note a rescue boat and crew must remain on the water until the last sailor is off the water.
- **Processing results.** Once the days activates are completed, if possible, take a photo of the results sheet pages on your phone and email the photo(s) to the racing secretary. The results sheet, entry sheet and the cleared sign on/off sheets are then placed upstairs in the club house (beside the computer) for the racing secretary to collect. Even if you have already taken photos of them.
- Return the racecourse card to the cupboard with the clamps and course book.

PEIKATINI

- This boat is a 20ft wooden launch powered by a 20 hp Ducati air cooled diesel with a water-cooled exhaust. It drives a propeller mounted in a tunnel under the hull which allows safe operation in shallower water than would be possible if it were a normal inboard shaft drive design. The rudder is mounted aft of the propeller in the same tunnel. It is steered and the engine controlled from the center console.
- **DO NOT** release the steering wheel while operating under power. The wheel may spin and cause injury.

Prelaunch

- **Ensure bungs are installed and secured**.
- Check fuel level in sight glass on right side of fuel tank. This boat uses DIESEL FUEL – see Phil if low.
- Visually check trailer tires.
- Check that both the bow and stern anchors and their line are properly secured to the boat and not tangled.
- Ensure first aid kit is onboard.
- Ensure a Tow Rope and Boat Hook are onboard.
- Pickup one VHF Radio – don't turn on (spare for RIBs if their portable VHFs malfunction).
- Check appropriate flags and start horn are on board.

Launching

- Turn on the mounted VHF radio and check it is operating on channel 17 by doing a radio check.
  Note Peikatini's main power switch, the control panel VHF switch and the power switch on the radio **all** need to be in the on position.
- Skipper should be on board the boat during launching.
- All Persons must be wearing life jackets
- **NOTE** Inflatable life jackets are not permitted on MPYC boats.
- Slowly reverse the trailer into the water until it is submerged enough that the exhaust cooling water intake is below the surface.
- Start motor and check water is coming out of exhaust pipe. It can take up to a minute for water to appear.
- Disconnect the safety cable and winch strap / rope and push or reverse the boat into the water.
- Either maneuver the boat to the pontoon and secure or proceed to the start line
- **Caution** the incoming tide may be strong and take the boat under the bridge if it is not properly controlled.
- If the motor stops go forward quickly and deploy the anchor.

- After every start check that cooling water is flowing from exhaust.

Retrieving Peikatini

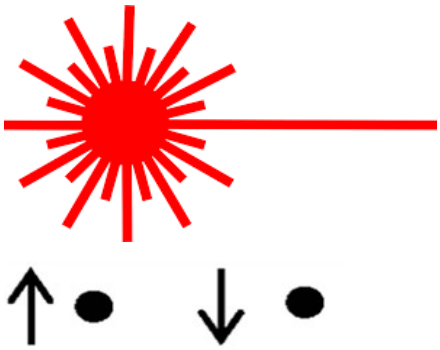
- **This boat must not be driven on to trailer**.
- Dock against pontoon with the bow towards the bridge. Ideally this operation would take three people. The tide is usually going out i.e. flowing from the bridge. Pull out the trailer winch line until the hook is in line with wheel axle and engage the winch ratchet. Back the trailer into the water with the water at the same level as the trailer wheel axles. If outgoing tide is strong or a southerly wind is blowing attach a long stern line to the starboard (right hand) rear cleat. Run the rope around the starboard side to the front of the boat. Secure the stern rope to the pontoon at the bow of the boat. Have someone on the boat with the engine running. Have one person slip the stern line as necessary around the cleat at the bridge end of the pontoon and another person holding the bow line pushing the bow of the boat away from the pontoon maneuver the bow onto the center rollers of the trailer. While holding the boat in line with the trailer with the stern line, hook the winch line onto the boat. Proceed to winch the boat up the trailer. **Do not attempt to drive the boat up the trailer** but it is okay to engage the propeller in forward to assist the winch winder to pull the boat up the trailer. Shut off the motor as soon as the boat is on the rubber bow block to avoid overheating the exhaust which is water cooled.
- Attach the safety hook then tow the boat and trailer out of the water.

End of Day Procedures (PEIKATINI.)

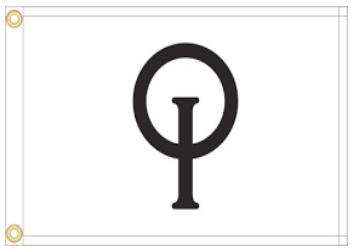
- Roll up the ropes and tidy the deck.
- Remove the bungs
- Wash trailer and boat thoroughly to remove all salt.
- Flush fresh water through exhaust cooler for one minute.
- Turn off power at isolation switch.
- Thoroughly wash boat inside and out.
- Thoroughly wash the trailer to prevent it from rusting.
- **Remove flagpole** from bracket and lay it on the deck.
- Once washed put boat away in boat shed.
- **Plug charger cable into boat**.
- Remove the portable radio and place in cupboard. Don't put the portable VHF radio into the charging cradle unless it was used.

Meaning of race flags

Laser class flag



Optimist class flag



The raising of a **class flag** signals the start of the race start sequence for that class. If two or more classes are starting at the same time a class flag may not be appropriate – in this case numerical pennants are used instead.
(The black arrow and dot indicate whether the horn is sounded as the flag is raised or lowered)

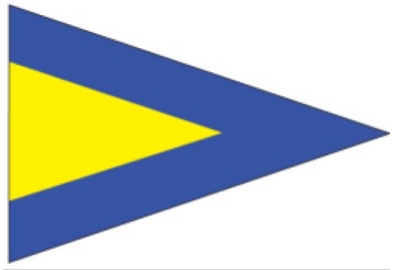
The (P) flag

This is often called the preparation flag and is the period during the start sequence when the sailors are positioning themselves for the run to the start line during the last minute before the class flag is lowered to start the race

Individual Recall (X)

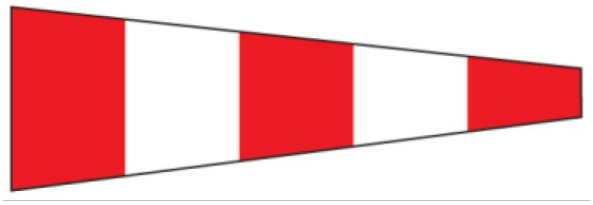
This flag signals that one or two sailors are over the start line early and are required to return behind the line and recross it. The RIB crew can help by confirming which sailors were "on course side" "OCS". The RIB driver must be careful not to impede the rest of the race boats.

General Recall



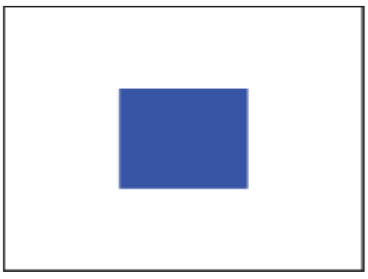
This flag signals that a large number of sailors are over the start line early, and a restart is required. The RIB crew can help by ensuring that all sailors are aware of the restart. Commence the restart sequence as soon as possible.

The Postponement Pennant



This can be flown any time warning of a delay for example if you are moored at the start line at the start of the day and the tide hasn't come in as quick as anticipated you fly this flag until the water is deep enough to start the first race.

Shorten course (S)



Some races have a time limit and if the race is going to exceed that limit the RO can direct a RIB to fly this flag at the next mark the lead boat will reach to advise all sailors to sail direct to the finish. The RIB will need a horn to sound the signal to each boat as they pass. This is almost never used at MPYC as our courses are already very short.

Course Change (C)

This flag is flown on the committee boat to indicate the course has changed for the next race.

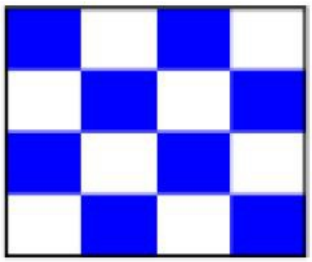
The Hail. (L)

This flag is flown on the committee boat tell sailors to approach the committee boat for instructions or discussion

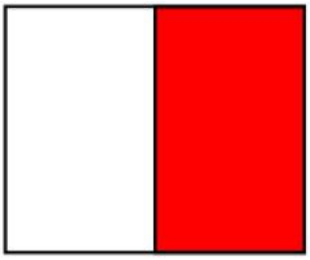
Race abandoned flag. (N)

This flag is flown on the committee boat to tell sailors that all races that have started are abandoned. Return to the starting area. The warning signal for the next start will be made 1 minute after removal unless at that time the race is abandoned again or postponed.

Races are abandoned for the day. Return to shore promptly (N over H)



These flags are flown on the committee boat to tell sailors that all racing for the day has been abandoned and that they should return to shore as quickly as possible.



Numerical Pennants

Can be used at the start instead of Class flag or to advise which course to be sailed. if multiple options have been proposed at the race briefing.