Queenscliff Lonsdale Yacht Club
Race Officer Guide

September 2023

Modules

1. Roles of race officials
2. Boat handling
3. Race management
4. Recording and timing
5. Radio communication and safety
6. Tides and Streams and Weather
7. Emergency Plan

Module 1 Roles of the race officials

According to Sailing Australia:

“Race Officiating is a fun way to volunteer and contribute to the running of sailing competitions. Australian Sailing offers an Accredited pathway for you to become an accredited Race Official with the national sailing authority. “

This is encouraged, and will be a requirement for racing in the future.

We all realise that our club cannot race without Race Officers and depend on the generous contributions made by those willing to volunteer to support the club by operating the committee boat for races at QLYC.

At QLYC we want to foster an environment where everyone involved – whether competitors, volunteer officials and helpers, on shore or on the water **– all feel valued**, feel involved, and feel that they have had an opportunity to grow and develop their own skills and experience.

To this end, the following **7 principles** may be important to consider for the race officials.

Fairness for all. Racing needs to be run so that all those involved feel fairly and equitably treated, whatever their role.

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Challenging but safe competition. Racing should be run so that the competition is appropriately challenging but also safe for competitors – taking into account the experience level and capacities of the competitors and volunteers.

Repeatable processes. A core of good performance is to have well planned, well tested and well executed processes that allow both experienced and new members of race management teams to understand and maximise their personal contribution.

Flexibility of approach. Circumstances or the weather can change unexpectedly, be prepared and able to respond appropriately.

Timely delivery. As far as possible events should follow the announced timings, including briefings, on and off water times, start times, race duration, etc.

Learn from experience. To develop and grow from our sport, all need to review and assess what they are doing, both during and after racing and events, listen constructively to advice and identify and apply any improvements as soon as possible.

Personal development. Through continuous engagement and a willingness to learn, all club members including race management volunteers have potential to flourish.

When going to sea - be prepared

<u>Some items are provided on Swan.</u>

- PFDs
- Wind direction indicator
- Hand bearing compass and boat compass
- Anemometer Wind speed indicator
- VHF radio
- Stop clock/ Timer
- Signal flags
- Course Board

<u>Some things you will need to provide</u>

- All weather clothing
- Personal items such as sunscreen, water, snacks and a hat
- Personal fitted PFD Preferred

Roles on SWAN:
There are the many “hats” you wear on the day of duty:
All are part of the Race Committee and are considered race officials
2 people is minimal 3 is better

Race Officer
(sometimes called the Officer of the Day, or OOD)
In charge of the race and the crew on Swan
Determines the course and conducts safety briefing for all Skippers and Crews, and Swan

Swan Skipper
Must be licensed to drive a powerboat in Victoria (Marine License) hold a VHF radio Licence and has completed the QLYC orientation Program

Controls the safe passage of Swan from berth to course, as required on course, then returns to harbour berth, in accordance with safe operating standards, rules and regulations. Skipper is responsible for safety gear signal flags and able to operate radio

Crew
Assist in operating the vessel and the race by preparing and making good all equipment including fenders, berthing or mooring lines, anchors, flags, anchor and marks.
Assist in conducting the race by contributing to the Course Boat Team, the Race Start Team, the Race Finish Team, the Safety Boat Team and the Results Team.
Assist the RO in recording and communicating results and operating radio when required

Course Boat Team
Attend briefing
Setting out to sea and returning safely – boat operation
Setting a starting position and start line (mark) – on station
Communications - Flags, VHF and Signs
Recording Boat log
Tidying and leaving the boat tidy

Race Start Team
Recording start times
Recording POB
Recording Timer
Sound signals

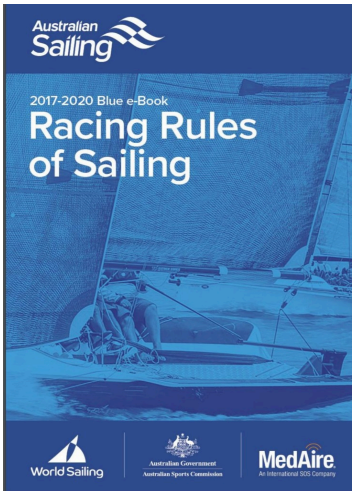
Safety Boat Team
Monitoring Channel 72 and 16
Responding to calls for assistance
Following VHF protocols and calls

Race Finish Team
Displaying Flags
Recording finishing times
Notice of abandonment

Results Team
Collating and recording results for Handicapper

You need to know the rules

All Race officers and crew should know the rules of racing:
The Rules of Racing can be downloaded from the following site:
https://www.sailingresources.org.au/officials/racing-rules/ AND should be read with Queenscliff Lonsdale Yacht Club Sailing Instructions - Season 2023 - 24

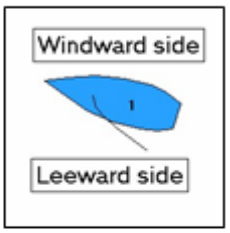


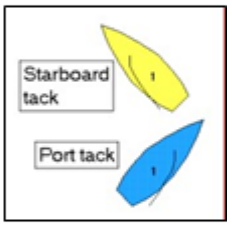
Here are some basic rules of sailing (simplified)

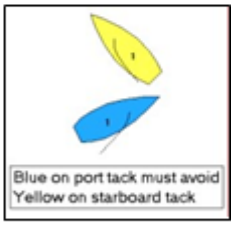
1. Sailors must comply with the principles of good sportsmanship.
2. They must try not to collide with another boat.
3. At the starting signal boats must be behind the starting line.
4. After the starting signal, each boat must sail the course described by the race organisers.
5. Boats must not touch a mark of the course.

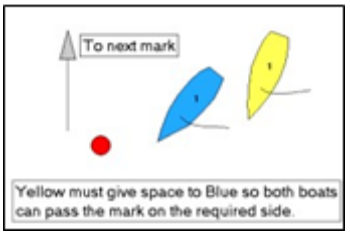
Rules When Boats Meet

1. When boats are on opposite tacks, the boat on a port tack you must avoid the boat on starboard tack.
2. When boats are on the same tack, a boat must avoid the other boat(a) if she is in front, or (b) if she is on your leeward side.
3. Each boat must give the other boat an adequate opportunity to avoid collision.









Responsibilities of Race Officers

(a) To run fair, enjoyable and safe races.

(b) To inform all the competitors about the sequence of starting signals, the starting and finishing lines, the course to be sailed and the marks to be rounded.

(c) Record the start and finish times of each boat (wristwatch), and elapsed time (stopwatch/stop-clock)

(d) Complete the Race Record Sheet and pass on to OOD

Module 2 Boat Handling - Swan

operation, anchoring, retrieving marks and anchors, boat orientation, flags and safety equipment

General rules

No smoking
No drugs or alcohol
No children or dogs

Preparation

Ensure you have done boat orientation prior to journey with the club captain

Swan is kept front-in on the first pontoon from west end of Queenscliff Marina
Access is via a security door. Keys are with Club Captain, the Bosun and Commodore.

Always attend Briefing (usually at 11.30am) unless there are other arrangements made. Briefing is held at the flagpole outside the Harbour office, Queenscliff

Be aware of currents, wind and weather conditions and tidal flow.
Consult with the Principal Race Officer or Club Captain who will set a course with the Sailing Committee

Swan Standard Operating Procedures SOP

As crew you may be asked to assist with the following Operational Procedures

MV SWAN
Checklist for start up **<u>Under the Engine Hatch:</u>**

- tie off the hatch.
- turn on **sea cock**
- clean **water strainer**
- check **engine oil**
- visual **inspection** (BOWL) :

(**B**elt tension, **O**bstructions, **W**ater in Sump, **L**eaks (oil)

· **<u>On Shore:</u>**

- turn **off power** to sump pump and boat
- roll up & **stow lead**
- remove the air cap and open the valve.
- **flood** dry dock

· **<u>On Deck:</u>**

- Use a push rod to lower the stern of the dock to assist flooding.
- Remove **winch cover** and stow
- fit swan **pennant**
- Affix **Safety ring** and tie off.

· - check all race gear is on board and all gear is **stowed safely**

· **<u>In Cabin:</u>**

- turn on **battery** power
- **power** up (switch on) all (electrical) systems

Ensure Throttle/Gear shift in "Neutral"

- start **engine**
- check **oil pressure**
- check **water flow**
- allow engine to **warm up**
- check no leaks from the strainer bowl.

<u>Getting Away:</u>

Check rudder is in the neutral position.

check dry dock is well below the stern

- Remove unnecessary **lines**
- **Manually** haul boat into channel
- **Engage** the engine and make way

· **<u>Returning to Pen.</u>**

- Trim tabs level (Bow Up) and clear of end.
- Idle the engine for 5 minutes to cool down.
- Turn engine off and shut down all 12V systems
- Stow all deck gear and fit bird net
- Turn off raw water cock
- Fit winch cover and retrieve pennant
- Inflate dock
- Plug in and turn on 240V power X2
- Lift cushions to dry
- Complete log book and lock cabin
- Final look over before leaving

Module 3: Race management

QLYC Swan Race Management

Laying a start line

Tacking Start

Start lines for tacking start (i.e. when the wind is forward of the beam for sailing vessels on course to first mark) shall be laid 90 degrees to the wind.

Running Start

Start lines for running start (i.e. wind aft of the beam for sailing vessels on course to first mark) shall be laid 90 degrees to the first mark.

Location for Start

Starting position is described in the Standard Courses for each race

(See appendix for GPS coordinates)

SOPs

Check wind direction and tidal flow – note these affect the start boat at anchor

Check location for anchorage

- **Avoid proximity to fixed marks and other vessels (fishing etc)**

Lay starting mark overboard

- **Go around mark and motor down wind 50 meters below the line.**

- **Check depth is 3 metres +, in 50 – 100 meter radius of start - Sufficient depth for keel boats**

Motor upwind to find suitable starting boat position

- **90 degrees to starboard of mark at length**
- **For QLYC starts always have a minimum of 50 metres for start and finish line, or allow fleet length plus 100% to allow for tidal influence.**
- **Define length of line for anchorage - 5 times depth**
- **Proceed anchor length upwind allowing for tidal flow and wind balance for desired starting position**

Launch anchor

- **A long anchor allows for adjustment with wind shifts**
- **Reverse gently back to start line as anchor is being laid to secure anchorage**

Check the wind direction again and boat secure

- **90 degrees to the start line. (or first mark for running start) and hold**
- **Take a sight to fixed marks and ensure anchor holding and holding position.**

Make boat ready

- **Be sure to have stopwatches (or clock) set to start timing prior to starting sequence**
- **Have the signal flags and recall flags ready**
- **Raise Orange Flag**

Note An orange flag is displayed when boat is on station (in position for the start)

The orange flag should be removed five minutes after the start of the last division. i.e., when no further starts can be made.

The start line is an imagined line between the Orange Flag displayed uppermost on Swan and the mark (buoy).

Trouble shooting

Sometimes things don't go to plan!

False starts

A sudden but continuous wind shift may have completely altered the start

You may have had complications with sheets, radio, timers etc or a mishap on board

In which case you can Postpone the start

Or a boat may cross the line too early. In which case you have to display the individual recall flag

Or the whole fleet may be over together, and you could start them again using a general recall flag

RACE ABANDONED

A race is abandoned usually due to prevailing weather conditions.

- **The race is unsafe – too much wind**
- **In the view of the OOD that the race will not be completed – too little wind**

Recording:

On the water: only starting and finishing times need to be recorded.

Simply record the divisional race starting times, i.e.: 13:30, 13:40, 13:50 for each division (for calculation of race results) and the time vessels

actually crossed the line so that their handicap is adjusted fairly as a result of being late in starting.

Each division will start at 10-minute intervals unless otherwise stated. (e.g .: stern chaser)

THE STARTING LINE - LENGTH

The formula is:

- Number of boats x length of the boat, plus 10% to 200%

Other factors are:

- Size and manoeuvrability of boats
- Sea conditions
- Wind strength
- Current

Starting a race

Starting sequence for QLYC.
A start sequence chart is available on Swan and follows in this booklet.

QLYC Starting Flag Procedure

There is a 5 minute starting sequence and 10 minutes between divisions.
There may be up to three or division or more.
Division starts may be concurrent in which the division flags will be flown together.
Divisions and their start sequence will be announced at briefing or in notice of race.
The flags are changed as the stopwatch shows the elapsed minutes as indicated in the first column.

STOPWATCH ELAPSED MINUTES	FLAG	POSITION	DISPLAYED FLAGS	SOUND HORN
Zero	Division 1	Up		YES
+ 1	Preparatory	Up		YES
+4	Preparatory	Down		YES
+5	Division 1	Down	RACE STARTS	YES
+10	Division 2	Up		YES
+ 11	Preparatory	Up		YES
+ 14	Preparatory	Down		YES
+ 15	Division 2	Down	RACE STARTS	YES
+ 20	Division 3	Up		YES
+21	Preparatory	Up		YES
+ 24	Preparatory	Down		YES
+ 25	Division 3	Down	RACE STARTS	YES

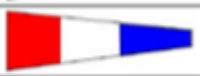
The chart above gives a complete call sheet for our 3 division start and shows when flags are raised and when hooters are sounded.

False start

Sometimes things don't go to plan.
A sudden but continuous wind shift may have completely altered the start
You may have had complications with sheets, radio, timers etc or a mishap on board
In which case you can
Postpone the start

Or a boat may cross the line too early
In which case you may have to display the **individual recall flag**

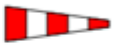
Or the whole fleet may be over together and you could start them again using a **general recall flag**

Flag Description	Flag
AP - Postponement	
Pennant 1 **Division 1**	
P - Preparatory signal	
Pennant 2 **Division 2**	
Pennant 3 **Division 3**	
X - Individual recall	
First Substitute - General recall	
S - Shortened Course	
C - Changing the Next Leg	
N - Abandonment Signal	

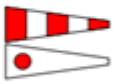
POSTPONEMENT

There are four Postponement signals

- Indefinite Postponement



- Postponement of scheduled starting time



- Races Postponed – further signals ashore

- Races Postponed –no more racing today

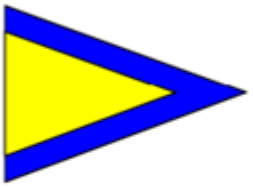
INDIVIDUAL RECALL

Flag X and 1 sound signal (RRS 29.1)

- This signal must be displayed within 5 seconds of the start signal
- It must be accompanied simultaneously with a sound signal
- It remains on display until all OCS boats have returned and started, or for 4 minutes, or until 1 minute before the next starting signal
- It is removed without a sound signal
- Make every effort to identify all OCS boats
- Refer to Case Book - Case 79

GENERAL RECALL

Flag 1st Sub – 2 sound signals (RRS 29.2)



- Should be used reluctantly
- A good start line will reduce the need for this signal
- A short start line with fewer boats will make this signal almost redundant
- Take care when penalty signals are used as the Prep Signal, especially the Black Flag
- Removed with 1 sound signal

RACE ABANDONED

A race is abandoned usually due to prevailing weather conditions.

- The race is unsafe – too much wind
- In the view of the OOD that the race will not be completed – too little wind

Recording:

On the water: only starting and finishing times need to be recorded.
Not mark times.

Simply record the divisional race starting times, i.e.: 13:30, 13:40, 13:50 for each division (for calculation of race results) **and** the time vessels actually crossed the line so that their handicap is adjusted fairly as a result of being late in starting.

Each division will start at 10-minute intervals unless otherwise stated. (e.g .: stern chaser)

Sign on next race

QUEENSCLIFF LONSDALE YACHT CLUB Inc (Please note any comments, mishap reports etc. Use back of page if required)

Previous race-> 19/10/19	Date	19/10/19	Wind speed		Sea						Course no.	
	Race	Ray Maki 2	Wind Dir'n		OODs							
Clock start time (timer set): 13:25												

Division	Div Start Time	BOAT NAME	SAIL NO.	PERSONS ON BOARD	SIGNATURE (Skipper)	Vessel over start line (Stopwatch)	FINISH TIME (Stopwatch)	ELAPSED TIME	DECIMAL ELAPSED TIME	PERF H'CAP	CORRECTED TIME	PLACE	Note
Div 3		Imagine	Q270							0.7900			
		Sundance	Q6000							0.7900			
Division 2		Valentine	Q127							0.6450			
		Tiercel	Q241							0.6450			
		Boomaroo	Q23							0.6550			
		Wave Dancer	B24							0.6261			
Division 1		Defiance	JS806							0.0000			
		Warrior	Q17							0.5700			
		Tintagel	Q37							0.5700			
		Nellie	C148							0.5520			
		Fancy	C144							0.5408			
		Maud	C178							0.5400			
		Rosie	C114							0.5500			
		Drizabone	Q3227							0.5700			

Elapsed time, corrected times adjusted for handicaps etc. are generated after the event, by the handicapper.

The only information that needs to be recorded at sea is indicated in green above, plus that required in text boxes including, weather observations, seas, wind strength and direction, course number and names of Swan crew.

During the race - monitoring the fleet

During the race, **the fleet must be monitored closely** for the earliest indication of a possible distress, capsize or any safety issue and the possibility of assistance being required

Always keep the fleet in view

Note down roundings of each boat on repetitive courses

Boats retiring from or finishing the race should be monitored until they are within the safety of the harbour

Make notes of interesting events to assist the race report

It's great if you can take a few photos to share

Prepare a finish line

Shortening the Race

On occasions the race may need to be shortened as the wind is either too light or conditions are deteriorating and threatening to become unsafe.

In making this decision, observe the position and pace of the slowest boat in the fleet and set the finish to allow them to complete the race in a sensible/safe time

When shortening a course, the new finish line should be at a mark of the course or in a line between two marks ordinarily sailed.

Raise the Shortened Course flag (S) at the earliest opportunity once the decision has been made usually before the first boat has rounded the previous mark of the course.

As a courtesy - notify the fleet by radio.

Abandoning the Race

The race may be abandoned in the event of insufficient wind or unsafe conditions.
A race is abandoned **usually due to prevailing weather conditions.** When the race is unsafe – too much wind, or; **in the view of the OOD** the race will not be completed – too little wind
Remember, safety is paramount and is more important than getting a race result.
If the committee boat cannot monitor the fleet safely this role can be shared by willing keel boats on confirmation via radio communication.

Finish Line

A blue flag is displayed to signal that the Committee boat is on station at the finish line
The finish line should be set perpendicular to the last mark of course and **always be a minimum of 50 Metres.**
A blue flag is displayed to mark that you are on station on the the finish line

The finish line is an imagined line between the Blue Flag displayed on Swan and the mark (buoy) as for the starting line.

Normally set a mark to port and committee boat to starboard for finishing boats.
Where this is varied, notify the fleet.
Set the finish line perpendicular to the last mark of the course
Be on station before the first boat passes the last mark of the course
The Blue Finish flag should be raised only to show you are on the finish line
Record the elapsed time (hour minutes and seconds) from a stopwatch or EST via GPS (Mobile Phone) of each boat as they finish

Post-Race

Once all yachts have finished or retired (or deemed safe), buoys can be retrieved

Retrieving marks and anchors
Up anchor
Motor directly to marks from downwind and reduce speed to almost stop on mark
Take up marks on port side
Monitor all boats returning to harbour

Return SWAN to harbour and secure (reverse into berth)
Ensure all equipment is stored neatly away in the correct place as per the guide sheet
Note journey in logbook
Deliver recording sheets to the Handicapper or OOD
Notify the Race Officer of any safety incidents and complete an incident report

Module 6 Radio and Safety

Basic use of the VHF radio

As Race Officers you are responsible for the use of your radio.
Special VHF channels or frequencies are allocated for **distress** (emergencies) or **working** (racing)

On VHF the distress/calling channel is channel 16
The VHF working channel used for QLYC racing on Swan is channels 72
Set the radio to receive on both channels: dual watch.

Making a call
Listen for a moment before transmitting to make sure that you don't cut across someone else's call. *Always state the name of the vessel you are speaking to first (x2)*
*Conclude your speaking with the word, "**over**"*
Fleet calling in Responding to a specific boat:
All competitors should call Swan as they leave the harbour to ensure they have declared the number of POB, and to establish radio communication on Channel 72

Listen for the call
E.g.: *"Swan, Swan, this is Valentine, Valentine over."*

Respond with a simple clear response to show you are ready to receive their message:
"Valentine, this is Swan, over.

They should respond with
"Swan this is Valentine, we are leaving the harbour with the intention of racing and have x POB (or x people on board)"

Swan should also respond by repeating the message. E.g. "Valentine this is Swan, copy that x people on board. Over '

Initiating a call to a specific boat:
Depress the **Talk** button on the handset and **STATE CLEARLY:**
The vessel name of **the boat you are calling**, spoken twice followed by the name of **your vessel** twice.
For example: "*Boomaroo, Boomaroo, this is Swan, Swan, over."*

Wait for a response for 3 minutes, before repeating.

Initiating a call to the fleet:
Depress the **Talk** button on the handset and **STATE CLEARLY:**
The name of the fleet you are calling, spoken twice

For example: *"**QLYC Fleet, QLYC Fleet, this is Swan, Swan** …*
(Then proceed with your announcement, e.g.*)*
We are now flying the course shortened flag, the last leg of the course will be QA to finish line at Grass Beds, over."

In an emergency

Use common sense, communication and calm compassion

Give assistance where possible.

If you need help call 000 and ask for on-water assistance

Calling for assistance VHF Channel 16

Your two-way radio is your communication life-line, so it is important to remember that you:

- Do not transmit unnecessarily
- Listen before transmitting and avoid interfering with other stations
- Use the following calling distress channel: VHF channel 16
- Be guided by the coast guard when sending distress messages
- Always use your call sign or the name of your vessel for identification
- Keep messages brief and clear
- Be familiar with the type and syntax of emergency, urgency and safety messages
- State your position, the nature of the distress, the time afloat, the type of vessel and the number of people involved if making a distress call
- Stop transmitting when requested to do so by a coast station.

For further information consult the QLYC Club Racing Emergency Plan

Module: Weather and Tides

Weather and Tides play an important role in conducting Racing in our local waters

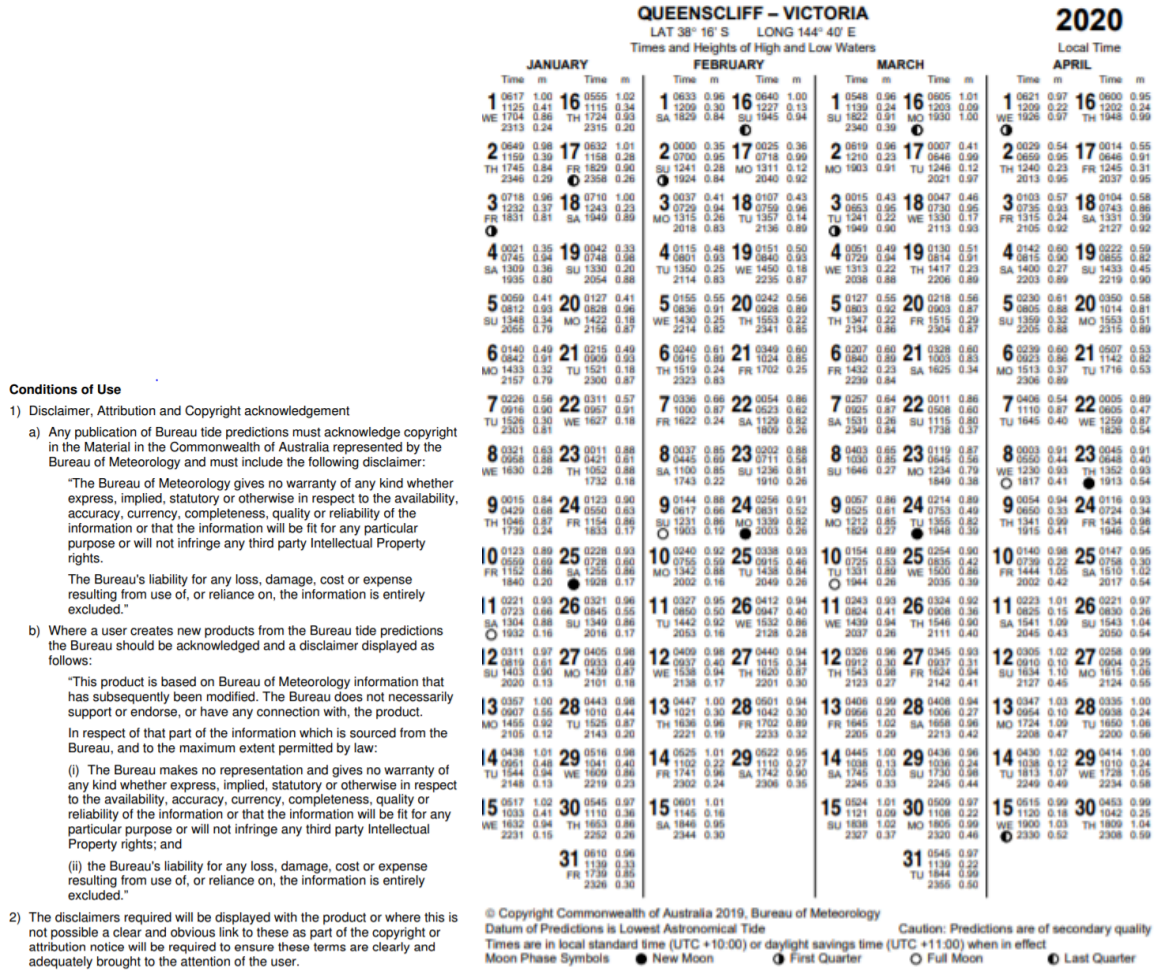
Weather

The most reliable source of information is through the Bureau of Meteorology at http://www.bom.gov.au/

Key points to remember about weather is not to sail in extreme conditions which may threaten the safety of our fleet of sailors
Do not sail in conditions predicted above 25 knots. Couta boats should not sail above 22 knots in our club
Beware of electrical storms
Do not race when there are strong wind warnings for Port Phillip

Tides
Important notes on Tides in our region
Tides are different to Streams which usually run on for an extra two hours
Streams indicate the strength and direction of currents determined by tidal flow

For the purposes of study let's look at some tide charts



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QUEENSCLIFF – VICTORIA **2020**

LAT 38° 16' S LONG 144° 40' E

Times and Heights of High and Low Waters

Local Time

JANUARY

	Time	m		Time	m
1 WE	0617	1.00	16 TH	0555	1.02
	1125	0.41		1115	0.34
	1704	0.86		1724	0.93
	2313	0.24		2315	0.20
2 TH	0649	0.98	17 FR	0632	1.01
	1159	0.39		1158	0.28
	1745	0.84		1829	0.90
	2346	0.29	◐	2358	0.26
3 FR ◑	0718	0.96	18 SA	0710	1.00
	1232	0.37		1243	0.23
	1831	0.81		1949	0.89
4 SA	0021	0.35	19 SU	0042	0.33
	0745	0.94		0748	0.98
	1309	0.36		1330	0.20
	1935	0.80		2054	0.88
5 SU	0059	0.41	20 MO	0127	0.41
	0812	0.93		0828	0.96
	1348	0.34		1422	0.18
	2055	0.79		2156	0.87
6 MO	0140	0.49	21 TU	0215	0.49
	0842	0.91		0909	0.93
	1433	0.32		1521	0.18
	2157	0.79		2300	0.87
7 TU	0226	0.56	22 WE	0311	0.57
	0916	0.90		0957	0.91
	1526	0.30		1627	0.18
	2303	0.81			
8 WE	0321	0.63	23 TH	0011	0.88
	0958	0.88		0421	0.61
	1630	0.28		1052	0.88
				1732	0.18
9 TH	0015	0.84	24 FR	0123	0.90
	0429	0.68		0550	0.63
	1045	0.87		1154	0.86
	1739	0.24		1833	0.17
10 FR	0123	0.89	25 SA ●	0228	0.93
	0559	0.69		0728	0.60
	1152	0.86		1255	0.86
	1840	0.20		1928	0.17
11 SA ○	0221	0.93	26 SU	0321	0.96
	0723	0.66		0845	0.55
	1304	0.88		1349	0.86
	1932	0.16		2016	0.17
12 SU	0311	0.97	27 MO	0405	0.98
	0819	0.61		0933	0.49
	1403	0.90		1439	0.87
	2020	0.13		2101	0.18
13 MO	0357	1.00	28 TU	0443	0.98
	0907	0.55		1010	0.44
	1455	0.92		1525	0.87
	2105	0.12		2143	0.20
14 TU	0438	1.01	29 WE	0516	0.98
	0951	0.48		1041	0.40
	1544	0.94		1609	0.86
	2148	0.13		2219	0.23
15 WE	0517	1.02	30 TH	0545	0.97
	1033	0.41		1110	0.36
	1632	0.94		1653	0.86
	2231	0.15		2252	0.26
			31 FR	0610	0.96
				1139	0.33
				1739	0.85
				2326	0.30

FEBRUARY

	Time	m		Time	m
1 SA	0633	0.96	16 SU ◐	0640	1.00
	1209	0.30		1227	0.13
	1829	0.84		1945	0.94
2 SU ◑	0000	0.35	17 MO	0025	0.36
	0700	0.95		0718	0.99
	1241	0.28		1311	0.12
	1924	0.84		2040	0.92
3 MO	0037	0.41	18 TU	0107	0.43
	0729	0.94		0759	0.96
	1315	0.26		1357	0.14
	2018	0.83		2136	0.89
4 TU	0115	0.48	19 WE	0151	0.50
	0801	0.93		0840	0.93
	1350	0.25		1450	0.18
	2114	0.83		2235	0.87
5 WE	0155	0.55	20 TH	0242	0.56
	0836	0.91		0928	0.89
	1430	0.25		1553	0.22
	2214	0.82		2341	0.85
6 TH	0240	0.61	21 FR	0349	0.60
	0915	0.89		1024	0.85
	1519	0.24		1702	0.25
	2323	0.83			
7 FR	0336	0.66	22 SA	0054	0.86
	1000	0.87		0523	0.62
	1622	0.24		1129	0.82
				1809	0.26
8 SA	0037	0.85	23 SU	0202	0.88
	0445	0.69		0711	0.58
	1100	0.85		1236	0.81
	1743	0.22		1910	0.26
9 SU ○	0144	0.88	24 MO ●	0256	0.91
	0617	0.66		0831	0.52
	1231	0.86		1339	0.82
	1903	0.19		2003	0.26
10 MO	0240	0.92	25 TU	0338	0.93
	0755	0.59		0915	0.46
	1342	0.88		1438	0.84
	2002	0.16		2049	0.26
11 TU	0327	0.95	26 WE	0412	0.94
	0850	0.50		0947	0.40
	1442	0.92		1532	0.86
	2053	0.16		2128	0.28
12 WE	0409	0.98	27 TH	0440	0.94
	0937	0.40		1015	0.34
	1538	0.94		1620	0.87
	2138	0.17		2201	0.30
13 TH	0447	1.00	28 FR	0501	0.94
	1021	0.30		1042	0.30
	1636	0.96		1702	0.89
	2221	0.19		2233	0.32
14 FR	0525	1.01	29 SA	0522	0.95
	1102	0.22		1110	0.27
	1741	0.96		1742	0.90
	2302	0.24		2306	0.35
15 SA	0601	1.01			
	1145	0.16			
	1846	0.95			
	2344	0.30			

MARCH

	Time	m		Time	m
1 SU	0548	0.96	16 MO ◐	0605	1.01
	1139	0.24		1203	0.09
	1822	0.91		1930	1.00
	2340	0.39			
2 MO	0619	0.96	17 TU	0007	0.41
	1210	0.23		0646	0.99
	1903	0.91		1246	0.12
				2021	0.97
3 TU ◑	0015	0.43	18 WE	0047	0.46
	0653	0.95		0730	0.95
	1241	0.22		1330	0.17
	1949	0.90		2113	0.93
4 WE	0051	0.49	19 TH	0130	0.51
	0729	0.94		0814	0.91
	1313	0.22		1417	0.23
	2038	0.88		2206	0.89
5 TH	0127	0.55	20 FR	0218	0.56
	0803	0.92		0903	0.87
	1347	0.22		1515	0.29
	2134	0.86		2304	0.87
6 FR	0207	0.60	21 SA	0328	0.60
	0840	0.89		1003	0.83
	1432	0.23		1625	0.34
	2239	0.84			
7 SA	0257	0.64	22 SU	0011	0.86
	0925	0.87		0508	0.60
	1531	0.26		1115	0.80
	2349	0.84		1738	0.37
8 SU	0403	0.65	23 MO	0119	0.87
	1030	0.85		0645	0.56
	1646	0.27		1234	0.79
				1849	0.38
9 MO	0057	0.86	24 TU ●	0214	0.89
	0525	0.61		0753	0.49
	1212	0.85		1355	0.82
	1829	0.27		1948	0.39
10 TU ○	0154	0.89	25 WE	0254	0.90
	0725	0.53		0835	0.42
	1331	0.89		1500	0.86
	1944	0.26		2035	0.39
11 WE	0243	0.93	26 TH	0324	0.92
	0824	0.41		0908	0.36
	1439	0.94		1546	0.90
	2037	0.26		2111	0.40
12 TH	0326	0.96	27 FR	0345	0.93
	0912	0.30		0937	0.31
	1543	0.98		1624	0.94
	2123	0.27		2142	0.41
13 FR	0406	0.99	28 SA	0408	0.94
	0956	0.20		1006	0.27
	1645	1.02		1658	0.96
	2205	0.29		2213	0.42
14 SA	0445	1.00	29 SU	0436	0.96
	1038	0.13		1036	0.24
	1745	1.03		1730	0.98
	2245	0.33		2245	0.44
15 SU	0524	1.01	30 MO	0509	0.97
	1121	0.09		1108	0.22
	1838	1.02		1805	0.99
	2327	0.37		2320	0.46
			31 TU	0545	0.97
				1139	0.22
				1844	0.99
				2355	0.50

APRIL

	Time	m		Time	m
1 WE ◑	0621	0.97	16 TH	0600	0.95
	1209	0.22		1202	0.24
	1926	0.97		1948	0.99
2 TH	0029	0.54	17 FR	0014	0.55
	0659	0.95		0646	0.91
	1240	0.23		1245	0.31
	2013	0.95		2037	0.95
3 FR	0103	0.57	18 SA	0104	0.58
	0735	0.93		0743	0.86
	1315	0.24		1331	0.39
	2105	0.92		2127	0.92
4 SA	0142	0.60	19 SU	0222	0.59
	0815	0.90		0855	0.82
	1400	0.27		1433	0.45
	2203	0.89		2219	0.90
5 SU	0230	0.61	20 MO	0350	0.58
	0805	0.88		1014	0.81
	1359	0.32		1553	0.51
	2205	0.88		2315	0.89
6 MO	0239	0.60	21 TU	0507	0.53
	0923	0.86		1142	0.82
	1513	0.37		1716	0.53
	2306	0.89			
7 TU	0406	0.54	22 WE	0005	0.89
	1110	0.87		0605	0.47
	1645	0.40		1259	0.87
				1826	0.54
8 WE ○	0003	0.91	23 TH ●	0045	0.91
	0550	0.44		0648	0.40
	1230	0.93		1352	0.93
	1817	0.41		1913	0.54
9 TH	0054	0.94	24 FR	0116	0.93
	0650	0.33		0724	0.34
	1341	0.99		1434	0.98
	1915	0.41		1946	0.54
10 FR	0140	0.98	25 SA	0147	0.95
	0739	0.22		0758	0.30
	1444	1.05		1510	1.02
	2002	0.42		2017	0.54
11 SA	0223	1.01	26 SU	0221	0.97
	0825	0.15		0830	0.26
	1541	1.09		1543	1.04
	2045	0.43		2050	0.54
12 SU	0305	1.02	27 MO	0258	0.99
	0910	0.10		0904	0.25
	1634	1.10		1615	1.08
	2127	0.45		2124	0.55
13 MO	0347	1.03	28 TU	0335	1.00
	0954	0.10		0938	0.24
	1724	1.09		1650	1.06
	2208	0.47		2200	0.56
14 TU	0430	1.02	29 WE	0414	1.00
	1038	0.12		1010	0.24
	1813	1.07		1728	1.05
	2249	0.49		2234	0.58
15 WE ◐	0515	0.99	30 TH	0453	0.99
	1120	0.18		1042	0.25
	1900	1.03		1809	1.04
	2330	0.52		2308	0.59

Datum of Predictions is Lowest Astronomical Tide

Caution: Predictions are of secondary quality

Times are in local standard time (UTC +10:00) or daylight savings time (UTC +11:00) when in effect

Moon Phase Symbols ● New Moon ◑ First Quarter ○ Full Moon ◐ Last Quarter

These show us the time and depth of high and low tides
Now let's consider Tidal streams which also show us the rate of current

Port Phillip Heads (The Rip) Victoria

Due to the restriction of the tidal range within Port Phillip caused by the relatively narrow entrance the tidal stream near the Heads does not turn at high and low water. The force of the tidal streams depends upon the relative water levels inside and outside Port Phillip. The greatest differences in levels occur at about the time of high and low water in the Entrance when the streams run at their strongest, up to 6 knots under normal conditions and approaching 9 knots in extreme conditions.

Slack water occurs at about 3 hours before and after high water, when the levels inside and outside are the same. The ingoing stream runs from about 3 hours before to about 3 hours after high water and the outgoing stream at other times.

The main body of the ingoing stream from the southward and eastward sets at about 38 degrees directly through the entrance fairway, with drifts of considerable force across and through the reefs, spreading towards Shortland Bluff (Queenscliff) and the southern shore; thence directly through the channels of the Great Sand Bar. The outgoing stream coming directly from the Great Sand Bar channels sets towards

Lonsdale Bight, and from there out through the Entrance with great force partly athwart the channel at 200 degrees thence away south eastward along the land towards Cape Schanck.

The water level and hence tidal streams can be significantly affected by barometric pressure and the direction and duration of the winds. West to south west winds cause a rise in sea level outside Port Phillip and a consequent increase both in rate and duration of the ingoing steam will continue till sea levels inside and outside have reached equality, then the increased ingoing stream will cease and the streams become normal. On the winds ceasing, sea level outside falls to normal, causing the outgoing stream to increase both in duration and in rate until sea level in Port Phillip has fallen to normal and the levels outside and inside are again equal.

THE RIP – VICTORIA

LAT 38° 18′ S LONG 144° 38′ E

Tidal Stream Predictions (Rates in knots)

2020

Local Time

JANUARY

	Slack Time	Maximum Time	Rate		Slack Time	Maximum Time	Rate
1 WE	0134	0415	4.28	16 TH	0133	0413	4.43
	0807	1042	-4.83		0755	1032	-5.31
	1427	1709	3.19		1419	1704	3.59
	1935	2224	-4.95		1943	2226	-5.60
2 TH	0207	0451	4.12	17 FR ◐	0217	0456	4.26
	0836	1113	-4.85		0829	1109	-5.61
	1502	1745	3.14		1505	1749	3.65
	2019	2306	-4.59		2042	2321	-5.20
3 FR ◑	0240	0524	3.91	18 SA	0300	0540	4.04
	0903	1143	-4.84		0903	1146	-5.79
	1538	1822	3.08		1552	1838	3.66
	2105	2349	-4.19		2144		
4 SA	0312	0556	3.67	19 SU		0016	-4.69
	0931	1214	-4.79		0343	0625	3.78
	1616	1903	3.03		0939	1224	-5.82
	2156				1642	1929	3.64
					2250		
5 SU	0347	0036	-3.74	20 MO	0428	0114	-4.14
	0959	0630	3.36		1017	0711	3.44
	1657	1246	-4.72		1734	1308	-5.69
	2256	1949	3.02			2023	3.62
6 MO	0425	0129	-3.25	21 TU	0002	0219	-3.63
	1031	0709	2.96		0520	0804	3.03
	1743	1322	-4.61		1101	1356	-5.43
		2042	3.07		1830	2120	3.63
7 TU	0005	0229	-2.76	22 WE	0117	0328	-3.24
	0513	0757	2.44		0626	0911	2.55
	1107	1404	-4.50		1152	1455	-5.12
	1834	2140	3.24		1930	2221	3.68
8 WE	0122	0337	-2.40	23 TH	0232	0442	-3.07
	0618	0909	1.90		0751	1035	2.20
	1151	1455	-4.45		1254	1602	-4.87
	1930	2237	3.50		2033	2322	3.80
9 TH	0239	0451	-2.35	24 FR	0340	0554	-3.21
	0749	1031	1.60		0922	1158	2.19
	1245	1553	-4.50		1403	1716	-4.79
	2028	2329	3.81		2133		
10 FR	0346	0603	-2.70	25 SA ●	0438	0019	3.96
	0922	1149	1.67		1035	0656	-3.56
	1349	1653	-4.70		1513	1309	2.44
	2125				2229	1822	-4.90
11 SA ○	0440	0019	4.11	26 SU	0526	0112	4.10
	1030	0702	-3.23		1131	0748	-3.94
	1456	1254	2.03		1615	1409	2.77
	2219	1752	-5.03		2319	1918	-5.06
12 SU	0526	0107	4.35	27 MO	0606	0200	4.21
	1122	0750	-3.71		1216	0832	-4.28
	1558	1350	2.50		1710	1458	3.06
	2311	1848	-5.39			2006	-5.17
13 MO	0607	0155	4.50	28 TU	0003	0243	4.26
	1207	0834	-4.14		0640	0910	-4.57
	1656	1440	2.92		1256	1539	3.26
		1943	-5.69		1758	2049	-5.18
14 TU	0000	0242	4.56	29 WE	0042	0323	4.25
	0645	0915	-4.54		0710	0944	-4.80
	1250	1529	3.24		1331	1614	3.39
	1752	2038	-5.85		1842	2131	-5.09
15 WE	0047	0328	4.53	30 TH	0117	0358	4.17
	0721	0955	-4.93		0737	1015	-4.97
	1334	1616	3.45		1404	1647	3.45
	1847	2132	-5.82		1924	2210	-4.92
				31 FR	0148	0430	4.06
					0802	1043	-5.10
					1436	1718	3.49
					2005	2248	-4.68

FEBRUARY

	Slack Time	Maximum Time	Rate		Slack Time	Maximum Time	Rate
1 SA	0219	0501	3.91	16 SU ◐	0250	0527	3.98
	0826	1109	-5.19		0834	1121	-6.37
	1508	1750	3.50		1534	1815	4.07
	2047	2326	-4.40		2141		
2 SU ◑	0250	0531	3.73	17 MO		0009	-4.74
	0851	1136	-5.22		0331	0609	3.72
	1541	1826	3.48		0911	1200	-6.24
	2132				1620	1902	3.94
					2240		
3 MO	0322	0009	-4.04	18 TU		0101	-4.24
	0917	0601	3.50		0413	0652	3.40
	1617	1203	-5.20		0950	1242	-5.89
	2223	1904	3.44		1707	1952	3.77
					2341		
4 TU	0355	0053	-3.63	19 WE		0157	-3.75
	0946	0635	3.18		0500	0739	2.98
	1656	1235	-5.12		1033	1330	-5.41
	2320	1948	3.39		1758	2045	3.58
5 WE	0434	0144	-3.15	20 TH	0047	0259	-3.29
	1017	0712	2.75		0557	0839	2.46
	1741	1313	-4.98		1124	1428	-4.87
		2042	3.36		1856	2146	3.45
6 TH	0027	0244	-2.66	21 FR	0158	0408	-2.95
	0522	0758	2.20		0715	1003	2.00
	1055	1402	-4.80		1226	1537	-4.41
	1835	2144	3.41		2000	2253	3.42
7 FR	0144	0353	-2.30	22 SA	0309	0523	-2.94
	0631	0909	1.63		0855	1134	1.94
	1146	1501	-4.64		1342	1658	-4.20
	1939	2248	3.59		2108	2359	3.52
8 SA	0302	0511	-2.36	23 SU	0410	0630	-3.30
	0811	1047	1.45		1015	1250	2.27
	1258	1612	-4.62		1500	1811	-4.30
	2048	2349	3.84		2210		
9 SU ○	0406	0623	-2.88	24 MO ●		0057	3.70
	0945	1216	1.86		0459	0723	-3.77
	1422	1723	-4.82		1111	1350	2.75
	2154				1610	1908	-4.53
					2302		
10 MO	0457	0046	4.08	25 TU	0537	0147	3.86
	1050	0718	-3.55		1154	0805	-4.20
	1541	1326	2.56		1706	1435	3.16
	2253	1832	-5.19		2347	1957	-4.75
11 TU	0539	0139	4.27	26 WE		0230	3.96
	1142	0805	-4.17		0609	0841	-4.57
	1650	1423	3.19		1231	1512	3.46
	2348	1936	-5.56		1753	2039	-4.87
12 WE	0616	0230	4.37	27 TH	0026	0307	3.99
	1230	0849	-4.79		0635	0913	-4.88
	1752	1514	3.64		1303	1544	3.68
		2036	-5.78		1835	2119	-4.90
13 TH	0038	0317	4.38	28 FR	0059	0340	3.96
	0651	0929	-5.39		0700	0942	-5.12
	1317	1601	3.92		1333	1614	3.82
	1850	2132	-5.79		1913	2157	-4.84
14 FR	0124	0402	4.31	29 SA	0130	0410	3.88
	0725	1007	-5.91		0723	1007	-5.31
	1403	1645	4.08		1402	1644	3.90
	1947	2226	-5.58		1951	2232	-4.72
15 SA	0208	0445	4.17				
	0759	1043	-6.25				
	1449	1729	4.12				
	2044	2318	-5.21				

MARCH

	Slack Time	Maximum Time	Rate		Slack Time	Maximum Time	Rate
1 SU	0201	0437	3.77	16 MO ◐	0237	0511	3.80
	0747	1031	-5.43		0805	1053	-6.57
	1432	1714	3.94		1508	1748	4.35
	2029	2308	-4.53		2130	2355	-4.73
2 MO	0231	0506	3.64	17 TU	0317	0552	3.57
	0812	1056	-5.49		0844	1134	-6.24
	1504	1745	3.92		1552	1832	4.12
	2110	2345	-4.27		2221		
3 TU ◑	0301	0536	3.46	18 WE		0042	-4.34
	0839	1124	-5.48		0358	0635	3.26
	1537	1819	3.84		0925	1219	-5.72
	2155				1636	1918	3.84
					2313		
4 WE	0333	0024	-3.93	19 TH	0443	0132	-3.91
	0908	0608	3.20		1011	0722	2.85
	1614	1156	-5.39		1722	1308	-5.09
	2244	1858	3.71			2009	3.53
5 TH	0407	0109	-3.51	20 FR	0011	0227	-3.47
	0939	0642	2.85		0537	0819	2.35
	1656	1235	-5.21		1103	1405	-4.45
	2342	1946	3.52		1815	2108	3.25
6 FR	0449	0201	-3.03	21 SA	0115	0331	-3.08
	1016	0721	2.40		0651	0939	1.93
	1747	1323	-4.94		1208	1516	-3.89
		2049	3.36		1920	2221	3.08
7 SA	0051	0304	-2.63	22 SU	0223	0445	-2.96
	0547	0819	1.87		0827	1112	1.91
	1109	1426	-4.63		1330	1640	-3.59
	1852	2210	3.37		2035	2338	3.13
8 SU	0207	0419	-2.53	23 MO	0326	0554	-3.25
	0718	1004	1.62		0946	1227	2.33
	1231	1543	-4.43		1457	1757	-3.68
	2010	2322	3.55		2145		
9 MO	0317	0535	-2.97	24 TU ●		0041	3.31
	0902	1149	2.14		0416	0647	-3.73
	1408	1705	-4.52		1040	1322	2.89
	2127				1609	1857	-3.98
					2241		
10 TU ○	0411	0026	3.79	25 WE		0131	3.48
	1016	0638	-3.72		0453	0728	-4.21
	1536	1303	2.97		1121	1402	3.37
	2235	1824	-4.88		1703	1944	-4.28
					2327		
11 WE	0455	0124	3.98	26 TH	0523	0213	3.59
	1114	0729	-4.49		1155	0803	-4.62
	1650	1401	3.65		1748	1436	3.75
	2332	1934	-5.27			2027	-4.51
12 TH	0534	0215	4.10	27 FR	0005	0249	3.64
	1205	0814	-5.24		0550	0833	-4.96
	1754	1449	4.12		1226	1506	4.02
		2035	-5.50		1826	2106	-4.64
13 FR	0024	0304	4.13	28 SA	0040	0320	3.63
	0612	0855	-5.92		0615	0900	-5.23
	1253	1534	4.41		1256	1536	4.20
	1852	2131	-5.52		1902	2142	-4.68
14 SA	0111	0348	4.08	29 SU	0112	0348	3.59
	0649	0934	-6.41		0640	0926	-5.42
	1340	1619	4.52		1325	1607	4.29
	1946	2222	-5.37		1938	2217	-4.65
15 SU	0155	0430	3.96	30 MO	0143	0415	3.52
	0726	1013	-6.64		0707	0951	-5.54
	1425	1704	4.50		1356	1637	4.32
	2038	2309	-5.09		2014	2250	-4.54
				31 TU	0213	0443	3.42
					0736	1018	-5.58
					1428	1710	4.27
					2051	2325	-4.34

Predictions for The Rip computed by Cardno Pty Ltd

Updated on 24-Sep-2019

Positive (+) Direction 038° Negative (-) Direction 200°

Times are in local standard time (UTC +10:00) or daylight savings time (UTC +11:00) when in effect

Moon Phase Symbols ● New Moon ◑ First Quarter ○ Full Moon ◐ Last Quarter

Reading a synoptic chart

The belt of westerly winds south of the high pressure region contains disturbances which usually travel from west to east. Barbed lines indicate the leading edge of travelling cold (and occasionally warm) fronts, the boundaries between different types of air. The term 'front' was applied during World War 1 by European meteorologists who saw similarities between atmospheric structures and the large-scale conflict along battle fronts.

Nearer the pole, **a series of deep subpolar lows** is usually centred between latitudes 50-60 degrees South.

A high pressure area over Antarctica -- associated with extremely cold and dense air is ringed by easterly winds which form the boundary with the subpolar low pressure belt.

These typical features vary in intensity and location according to the season. For instance, in summer the high pressure belt is usually found just south of Australia, while the subtropical easterlies cover most of the continent. Monsoon flows and associated lows over the tropics bring significant summer rain; tropical cyclones may develop. In winter the high pressure belt is usually located over the continent, allowing westerlies and strong cold fronts to affect southern Australia.

It is important to be alert to significant exceptions to this 'normal' situation when, for example, strong high pressure systems move slowly across the oceans well south of Australia. Closed or 'cut off' lows may then move across southern Australia or intensify over the Tasman Sea, possibly causing prolonged heavy rain.

It is also important to remember that all weather systems have a life cycle of development, maturity and decay. They occasionally show unusual behaviour. They may become stationary or even briefly reverse their usual direction of travel.

Hot or cold?

Remembering that air flows clockwise around low pressure systems and anticlockwise around high pressure systems, a fairly typical summer weather map (Figure 2) shows:

North to northwesterly winds over eastern Australia on the western flank of a Tasman Sea high. They carry hot, dry air from inland Australia southward over Victoria and Tasmania. With strong winds associated with an approaching trough and cold front, this represents a classic weather situation with extreme bushfire risk.

Moist, easterly flow from the Coral Sea onto the Queensland coast causes very warm, humid and sultry weather east of the Great Dividing Range. This air, often susceptible to the development of showers and thunderstorms, is described as 'unstable'.

The **cold front** approaching Tasmania will replace the hot, dry northwesterlies with southwesterlies carrying cooler, often relatively humid air from waters south of the continent.

Such summer fronts are often quite shallow and may not penetrate far inland, particularly if they are distorted and slowed over the Victorian mountains.

In (Figure 3) a relatively common winter weather map shows:

Very cold, unstable air from well south of Tasmania flows northward over Tasmania, Victoria and southeast New South Wales, reducing normal day temperatures typically by five degrees or more. Note the cold front, the low pressure centres over Tasmania and the south island of New Zealand, and the high (1036 hectopascals) over the Bight. Occasionally, rapid interaction with other weather systems around the southern hemisphere can almost halt the pattern's eastward movement, causing successive cold fronts to bring a prolonged spell of cold, showery weather to southern Australia.

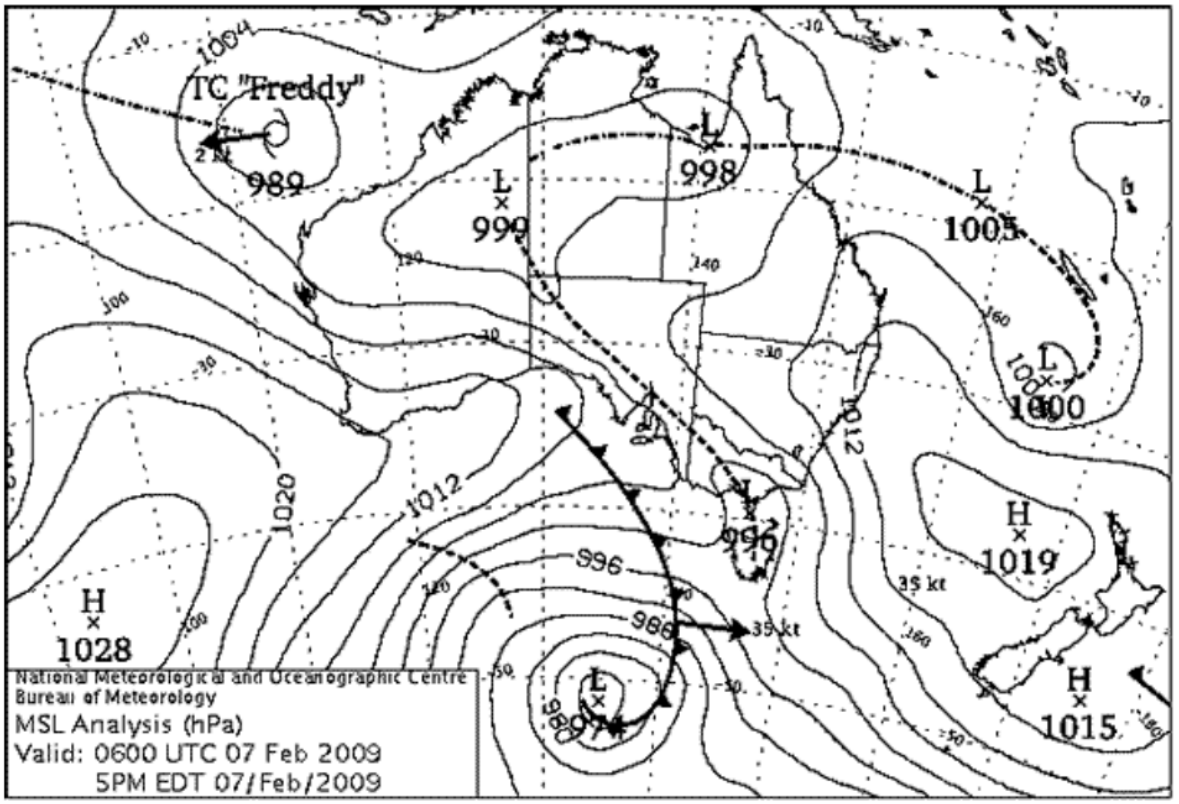

Figure 2. A summer MSLP analysis

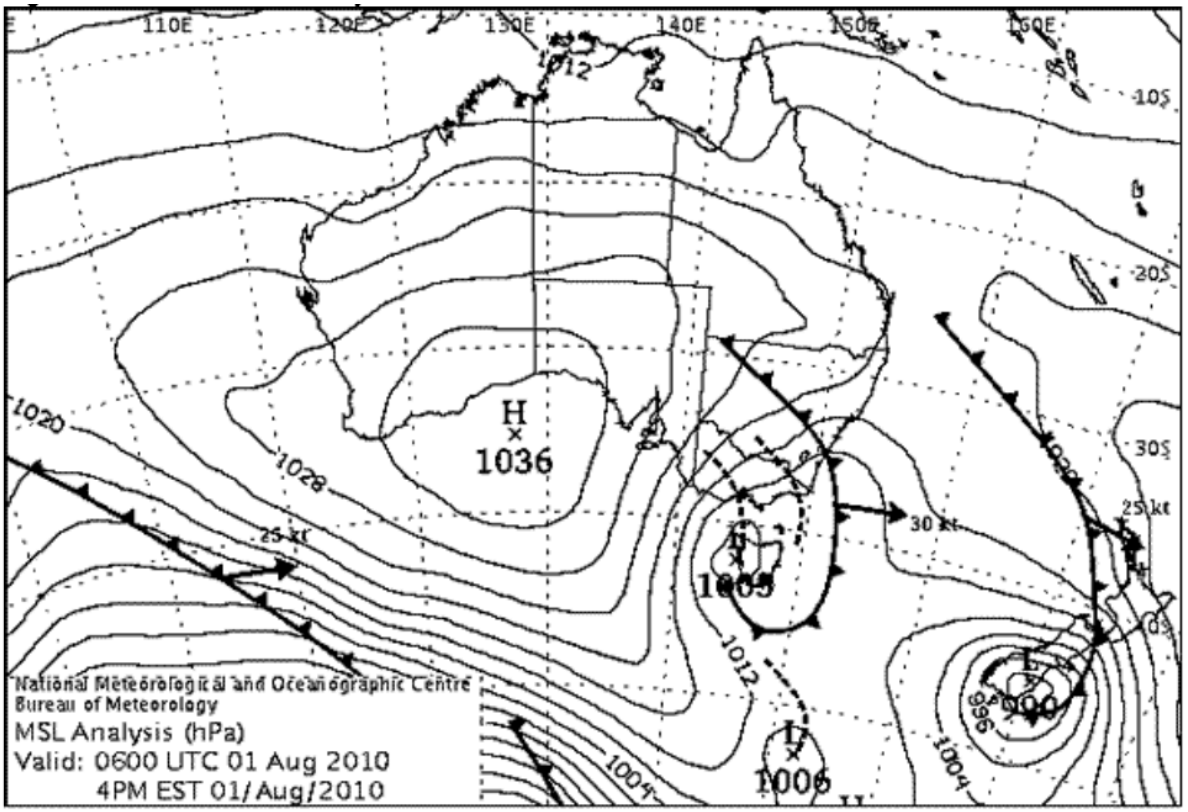

Figure 3. A winter MSLP analysis

Queenscliff Lonsdale Yacht Club

2020 - 2025

Club Racing

EMERGENCY PLAN

Written in May 2020

OBJECTIVE:

TO PROVIDE A SAFE ON-WATER ENVIRONMENT FOR COMPETITORS HAVING REGARD FOR BOTH EXPECTED AND UNFORESEEN CONDITIONS

This document provides the following:

- **Minimum safety requirements for the conduct of races.**
- **A coordinated emergency plan for Club Racing Events**
- **Recommended responses by rescue boats and emergency services under control of the rescue coordinator**

CONTENTS

1: RESPONSIBILITIES

<u>SAFETY OF COMPETITORS:</u>

Competitors' attention is drawn to fundamental RRS 1.2 and 4.

Competitors shall make their own decision to start or proceed in a race, taking into consideration the prevailing conditions at the time, the type of boat and the skill and competencies of their crew.

Committee Boat (SWAN)

- **Swan is the club committee boat responsible for managing the race. It has a communication capability but is NOT A RESCUE BOAT.**
- **All boats participating in races at QLYC assume responsibilities to provide support and rescue assistance when necessary other competitors while on the water engaged in racing.**
- **Communication with the Committee boat and other competitors is on Channel 72.**
- **In emergencies the committee boat will contact 000 and request assistance.**

Intention to Race

Each skipper intending to race shall personally “sign on”. This requirement should be included in the Sailing Instructions. To provide Race Management with a list of all boats on the water.

Each boat must confirm by Radio contact to Race management when on water, the intention to race and the People on Board (POB)

Crew Declaration

All sailors must be listed on the crew declaration sheet before briefing. This requirement is to ensure all boats have registered crew with active membership or Sailpass.

Safe Return Declaration

All boats must notify race management upon returning to shore in accordance with the Sailing Instructions. This requirement is to ensure all boats have safely returned to harbour.

Personal Buoyancy

All competitors shall carry, and wear when required, personal flotation devices (PFDs) which are in good condition and are in accordance with the specifications issued or approved by a national authority affiliated to the International Sailing Federation, or a standards organisation, or certification authority, recognised for the purpose by its respective government.

CONDUCT OF RACE MANAGEMENT:

All Race Management personnel will abide by the Sports Officials “Code of Ethics” and place the safety and welfare of the participants above all else and accept responsibility for their actions.

All race management boats are to be driven by licensed powerboat drivers in such a manner that will not cause any disturbance to competing yachts or injury to crews. All motor craft are to keep clear of competing yachts unless providing assistance.

It is important to assess if a boat requires help or not. The races may comprise people with little experience. Monitoring the fleet and observing the weather conditions are important tasks during the race or event. Patrol teams must be strategically placed to respond to emergencies.

In an emergency the priority is to save lives, not the boats. Drifting or anchored boats can be picked up later. Safety of competitors will always override the preservation of yachts.

2: MINIMUM SAFETY REQUIREMENTS FOR CONDUCT OF RACING:

Boats:

- All boats must comply with government safety regulations and be registered with the QLYC club

a. Boats may be inspected for compliance with the safety regulations.

b. Crew shall be at least one adult and one person over 14 years of age.

c. No trapeze allowed.

d. The appropriate Chart for this race is AUS 158 and should be carried.

e. Crews of boats without lifelines shall wear PFDs or life jackets.

f. Weather reports will be available from Queenscliff Coast Guard **VMR 369**.

g. Skippers are reminded of ISAF Fundamental Rule 1, Rendering Assistance. Redress for time so lost may be requested using a protest format.

- All boats must be insured and produce current insurance cover to club officials

Skippers:

- All boat skippers must hold a current Marine Licence and ensure they have briefed all sailors on board with the safety features and requirements of their boat.
- All skippers must be satisfied that they have competence on board to manage the boat in a rescue situation.

Crew:

- All crew shall be registered for sailing with Sailing Australia and QLYC All crew should be familiar with the Emergency Action Plan and the emergency plan for each vessel prior to sailing. It is the responsibility of the skipper to brief all new crew.

Briefing: (Principle Race Officer / Race Officer – PRO / RO)

- Members and volunteers should always be briefed on the rescue coordination plan before racing commences.

Race Management Personnel: (PRO / RO)

- Sufficient personnel to resource Race Management boat.
- Race Officer to have attended a race management course, which included the Risk Management module.
- Race Officer to be accredited to minimum of Club Race Officer.

Committee Boat SWAN: (PRO / RO)

- Rescue boats to be fully provided with all safety equipment as required by state law and recommended in the Yachting Australia Safety Boat Course.
- Sufficient personnel to set courses, communicate and conduct races
- Committee boat and crew to be capable of managing conditions expected.

Weather Information: (PRO / RO)

- Local weather forecast to be obtained from the Bureau of Meteorology
- Consideration must be given to wind strength, tidal flow, and marine weather warnings
- Volunteers and skippers must be briefed on days expected weather.

Wind Speed Limits: (PRO / RO)

- Race Officers to be aware of wind speed limits of each division
- Division 1 Cat 7 Off the beach boats, including Couta Boats and Trailerable - 22 Knots
- Division 2 Cat 5 In shore racer/cruisers fixed keel - 25 Knots
- Division 1 Cat 5 Offshore racer/cruisers – Larger than 38ft - 28 Knots

First Aid Provision

One qualified person at all times at the QLYC capable of providing first aid. A current level 1 First Aid certificate is a minimum, Level 2 preferred. QLYC shall maintain an adequate first aid kit stored in an accessible location on the Committee boat SWAN and in the clubhouse.

3: RESCUE COORDINATION

This document is prepared to provide a rescue plan and emergency response during a race, for expected prevailing conditions involving normal rescue procedures and for emergency situations in extreme conditions where outside help is required. Refer to “Emergency Procedures Operations Sheet” (section 6).

The Principal Race Officer (PRO) is responsible for the on-water event management.

The Race Officer (RO) is the person responsible for declaration of an emergency situation on the water on each course. The Race Officer (RO) should communicate this decision to the Principal Race Officer (PRO). Where the Race Officer abandons races, s/he will communicate with all boats and co-ordinate the rescue from on the water.

Consideration for each of the following rescue situations is given below:

Type 1 Extreme weather conditions

Type 2 Individual boat rescue or assistance

Type 3 Person overboard

Type 4 Multiple boat emergency incident

Type 5 Missing person/yacht

Normal rescue procedures

Type 1 Extreme weather conditions

Where extreme weather conditions call for all boats to leave the water. The RO should abandon the race and notify all boats with signals and by radio.

Stay on the water observing all boats returning safely to harbor.

Respond to each radio sign off, record sign off on results sheet.

Type 2 Individual boat rescue or assistance

Where an individual boat requires rescue or assistance due to accident, injury, illness, or mishap.

That boat shall notify all boats and the committee boat via radio.

Closest boat should abandon racing and notify RO and Boat in need of rescue of intention to assist. Note race position. Record GPS position.

Support boat is entitled to redress.

Support vessel approaches the boat in distress to check condition of all sailors on board and offers appropriate support

e.g.

accident: May require evacuation, repair support, observational awareness

injury: May require first aid or emergency transfer to shore

illness: May require first aid or emergency transfer to shore

mishap: Mechanical breakdown may require tow to safe waters

Support boat (competitor) should maintain regular communication with RO

Where SWAN is required to assist, a determination needs to be made by the RO as to whether or not the race can continue or be abandoned.

Race should continue if life is not threatened. In this instance:

Race officers should lay a second mark at the finish line and instruct all boats that they are leaving the finish line. All boats take their own finish times from EST on Mobile device.

Type 3 Person overboard

In the first instance each boat is responsible to recover its own crew from the water. See Appendix 2 MOB drill.

Where this is not possible, contact SWAN for assistance.

Race should continue if life is not threatened. In this instance:

Race officers should lay a second mark at the finish line and instruct all boats that they are leaving the finish line. All boats take their own finish times from EST on Mobile device.

Where life is threatened **call 000** and notify Water police of position and situation.

Emergency procedures

Type 4 – 5

Type 4 Multiple boat emergency incident

Where more than one boat is involved in an emergency incident at sea, collision or catastrophe, where a boat or boats are sinking and lives are at risk, **call 000** and notify Water police of position and situation. Coordination will transfer to Victoria Police / Water Police.

Type 5 Missing person/yacht/capsize or sinking

In the case of a missing person/yacht, **call 000** and notify Water police of position and situation. Coordination will transfer to Victoria Police / Water Police.

The Water Police Squad is the State Search and Rescue Authority for Victoria under the National Search and Rescue Agreement between the Federal Government and the various State Governments.

The Rescue Coordination Centre (RCC) is located at the Water Police Squad Headquarters and co-ordination of Marine SAR operations is conducted by qualified staff at the RRC.

Injuries to persons involved in any event should be responded to by the closest available boat.

If it appears that ambulance attendance will be required, the request for such is to be made via the Rescue Co-Ordinator or PRO.

4: PATROL PLAN

4.1 Approach:

- During scheduled races, "all boats" will be classed as "rescue boats".

4.2 Heading to the start:

- The starting position will be notified to the fleet on VHF channel 72
- While the yachts commence heading to the start, the RO will monitor the progress of the yachts to the course area.

4.3 During the races:

- The course shall be posted on the port side window of SWAN

  SWAN should always be in a position to maintain visual contact with the fleet.
- Where the fleet is split and this becomes impossible the closest boat will become a spotter for RO and notify SWAN if they lose visual contact
- In the event of bad visibility, due to fog, rain or smoke haze a race may be abandoned.

4.4 After the race

- SWAN shall stay on station until the last boat has crossed the finish line or when the race is abandoned, until five minutes after the abandonment
- Swan monitors all boats furling and returning to harbour, ie waits for last boat to enter harbour
- Monitors return to harbour calls on VHF 72

5: RESCUE TEAM

5.1 PERSONNEL

- Functional control for rescue will be performed by members / volunteers / all boats.
- ***All boat crews should always be fully briefed on the Rescue Coordination Plan before going afloat.***
- Each boat should have a skipper and a minimum of one crew (depending on size and type of boat) capable of picking up people from the water and managing damaged boats, etc, and be able to swim. Each crew member should bring personal wet weather gear and warm clothing. People prone to seasickness should not go out. Committee boat crews are encouraged to wear PFD's in strong winds/choppy seas.
- Boat Crews should be alert for the signs of hypothermia and know the treatment for the recovery for persons suffering from the effects
- ***Important note:***

Your safety and that of other skippers and crews is the most important factor in your rendering assistance. In any situation where you have to make a decision between boats and human life, **human life must come first.**

Do **not** however put your own life at risk to render assistance. Call for help.

5.2 DUTIES

5.2.1 RESCUE CO-ORDINATORS

Purpose:

Overall Command and supervision of rescue operations, until Victorian Police Water Police assume control (if required).

Nominated Persons:	***Commodore***	***Geoffrey Matthews***
	Club Captain	***Ian Campbell***
Location: On water	***Race officer***	***as rostered***
Location: On shore	***Principal Race Officer***	***Club Captain or nominee***
	Deputy Principal Race Officer	***Commodore or Nominee***

5.2.2 ASSISTANT RESCUE COORDINATOR

Purpose:

To quickly increase the rescue team size and resources according to the changing needs, free Rescue Coordinator of handling operational detail, and provide the means to get a quick second opinion.

Nominated Persons:	***Nominated member of the sailing / race committee***
Location: On Shore	***Harbour office / Clubhouse***

5.2.3 RADIO OPERATORS

Purpose:

To free up the SWAN crew from having to operate the clubs radio system, while monitoring rescue operations

Nominated Persons: ***Commodore*** ***Geoffrey Matthews***
Location: "location" ***Tintagel***

5.2.4 TELEPHONE OPERATOR

Purpose:

To answer, log and make phone calls related to rescue operations.

Nominated Persons: ***Names by OOD***
Location: ***Mobile***

5.2.5 BEACH MARSHALL / RECOVERY COORDINATOR

Purpose:

To manage and coordinate, report and record the recovery of persons and boats.
To assist in the recovery of persons (and boats and equipment where practicable).

Nominated Persons: ***Club Captain / Safety Officer Ian Campbell***

Location: Launching Docking area ***Queenscliff Harbour/ Swan Island***

6: EMERGENCY PROCEDURE OPERATIONS SHEET

GENERAL PATROL / RESCUE

LEVEL 1 Light 0 – 15 knots
Control Racing go ahead
SWAN to patrol designated course areas
Race Officer Watch for tidal influence
Monitor Ch.16 Communication CH 72

LEVEL 2 Moderate 15 – 22 knots
Control Racing go ahead
Race Officer **Normal Sailing**
Monitor Ch.16 Communication CH 72

LEVEL 2.1 High Couta Boat warning 15 – 22 knots
Consider abandoning Division 1 where gusts exceed 25 knots

LEVEL 3 Strong ABANDON RACING 25 + knots
Control All boats on watch,
Race Officer Swan to monitor fleet return to harbour
Monitor Ch.16 Communication CH 72

LEVEL 4 Gale ABANDON RACING 30 + knots
Control Race Officer

SWAN TO RETURN TO HARBOUR
OUTSIDE ASSISTANCE MAY BE REQUIRED 35 knots +
RO & Coordinator Decision to call - Follow emergency plan

7: PHONE NUMBERS

Club Secretary Alison Roberts Wray	Phone No
Commodore: Geoffrey Matthews	
Club Captain Ian Campbell	0439 626 630
Ambulance	000
Police:	000
Emergency	000
Coast Guard Victoria HQ	9598 9092
Coast Guard Geelong	5278 8440
Coast Guard Queenscliff	5258 2222
RCC, Search & Rescue Water Police	9399 7500 - 1800 135 729
Bureau of Meteorology	9669 4916 Forecasts General (24hrs)
www.bom.gov.au	
	9669 4000 National HQ
Australian Maritime Safety Authority	9674 3001 1800 641 792
Royal Life Saving Society	9567 0000
Point Lonsdale Surf Life Saving Club	
President Charlie Pitney	0430 355 353
Geelong Hospital	
Barwon Health General Enquiries:	03 4215 0000
Borough of Queenscliffe	03 5258 1377
Queenscliff Cruising Yacht Club	
Commodore Chris Laker	0418 521 199
Club Captain Michael Phelan	0429 982 832

9: Chart of sailing area

Sailing normally takes place in the waters in proximity of Queenscliff Harbour
Not a navigational map

HAZARDS

a. Hazards in the form of sandbars, reefs, etc. occur over the courses with extensive sandbars and tidal flats in the vicinity of Swan Island, Symonds Channel and around Mud Islands. Refer to AUS158 for detail. Shoaling in some areas may mean the location and depth of sandbars may not be as exactly indicated on the chart.

b. Race courses are set in an area, which experiences strong tidal currents. This can be a particular hazard in the vicinity of fixed structures and piles.

c. Skippers are warned that the course passes across and along shipping channels and should keep a watch for vessels at all times.

d. **The Sorrento-Queenscliff car ferry's** approach Queenscliff at approximately 10:40; 11:40; 12:40 etc. and is scheduled to depart on the hour at 11:00; 12:00; 13:00 etc

e. A number of Dive Charter boats and fishing operate in the area these include snorkel groups common around the Annulus (the rocks SW of the Wedge.)

Appendix 1: Person overboard

Brief Your Crew

Sailing isn't always a hugely dangerous sport, (although it is now listed as an extreme sport) and you don't want to scare your crew, but it pays to discuss Person Overboard (MOB).Have a regular drill in place, then you could buy yourself valuable time should the unthinkable ever happen.

To save confusion with People on Board (POB) this document will stick with the MOB acronym (as may be nominated on your chart plotter)

This is the accepted RYA Yachtmaster™ crew drill in the event of a Person Overboard:

- Shout 'person overboard' to alert the crew.
- Press the MOB (sic) button on the GPS.
- Throw a life buoy and dan buoy to the MOB. Mark the MOB with a buoyant smoke flare.
- Allocate a crewmember to point at the MOB in the water.
- Send a DSC distress alert and a Mayday.
- Keep pointing; don't lose sight of the MOB.
- If the motor has been started,
- Prepare a throwing line.
- The skipper will bring the boat alongside the MOB, with the boat pointing into the wind and the propeller stopped.
- Get a line around the MOB and get them aboard.

The man overboard (or fender in a drill) should be to leeward as you approach

Man Overboard Manoeuvres

So that's the crew briefed, now comes the tricky bit: actually pulling off the manoeuvre. A good method of practicing is by throwing a fender overboard weighted down with a bucket or a coil of rope. Just make sure the crew don't lose sight of the fender!

Under Power

If you've got a motor, and it works, you're going to want to use it in an emergency, so let's deal with that scenario first:

- Sheet in the mainsail and heave to in order to take the way off your boat pass buoyancy to the casualty and mark with a dan buoy. Instruct a crewmember to point at the MOB. Retrieve any warps from the water and start the engine.
- Furl or drop the headsail.
- Make ready the throwing line.
- Manoeuvre the boat downwind of the MOB, keeping the MOB in sight.
- Approach the MOB into the wind, so that the mainsail is depowered. Pick up the MOB on the leeward side, aft of the mast.

Under Sail

Now comes the really tricky bit! There's a definite art to coaxing your boat gently into the breeze and coming to a standstill alongside your target. Getting it right is a great feeling.

Even if you weren't concerned about safety, it's a trick that's well worth mastering and the fact is that a man overboard situation is EXACTLY the time when your motor will decide not to start, so it's in your interests to get this one nailed down.

On a close reach you can spill and fill your mainsail to control your speed

- As before, sheet in the mainsail and heave to, passing buoyancy to the casualty and marking with a dan buoy. Instruct a crewmember to check for warps.
- Turn away onto a beam/broad reach and sail away.
- Sail away for about five or six boat lengths, ensuring that you do not lose sight of the MOB.
- Tack, aiming the leeward side of the yacht at the MOB. Let out the headsail and mainsail sheets. The mainsail should flap; if not, bear off downwind to change the angle of approach. Point the boat back at the MOB until the mainsail flaps.
- The angle of approach should be a close reach so that the sails can be powered and de-powered. Drop the headsail if there from the mainsail alone.
- Fill and spill the mainsail and slowly approach the MOB. Pick up the MOB to leeward, aft of the mast.

Man Overboard Recovery

The final sticking point is recovery: if your boat has any kind of freeboard at all, you'll soon realise that trying to get them out of the water is not as simple as it looks.

If your boat has a bathing platform on the transom, then you might be able to get them back aboard via the ladder. It is worth bearing in mind that in rough conditions this will be a dangerous place to attempt to recover a MOB, as there is a risk of being drawn under the stern.

Parbuckle

This is set on the side of the boat with the foot attached to the gunwale. The head is attached either to a handy billy (block and tackle) or straight to the halyard.

MOB Recovery Raft

These are purpose built for the job. Again, you could use the halyard or, if your boat doesn't have a solid kicker, the boom and mainsheet.

“So there you have it” Keith said: “You’ve got to hope it never happens to you, but the key thing is simply to be prepared and then you can go out on the water with confidence and enjoy yourself.

Appendix 2
Recommended Class Wind Speed Limits

	ONSHORE			OFFSHORE			INLAND		
	KN	MPH	KPH	KN	MPH	KPH	KN	MPH	KPH
A Class	22	25	40	22	25	40	22	25	40
Arafura Cadet	18	20	32	18	20	32	18	20	32
Arrow	26	30	48	26	30	48	26	30	48
Bonito	*	*	*	*	*	*	*	*	*
Boomerang 20-Day	*	*	*	*	*	*	*	*	*
Boomerang -Night	30	35	56	30	35	56	30	35	56
Cadet (Int)	*	*	*	*	*	*	*	*	*
Castle 550/650	*	*	*	*	*	*	*	*	*
Cherub	22	25	40	26	30	48	26	30	48
Clifton	30	35	56	30	35	56	35	40	64
Cobra	22	25	40	22	25	40	26	30	48
Contender	22	25	40	22	25	40	26	30	48
Corsair	26	30	48	26	30	48	26	30	48
Diamond	25	29	46	30	35	56			
Dragon	26	30	48	26	30	48	26	30	48
Dolphin	26	30	48	26	30	48	26	30	48
National E	22	25	40	22	25	40	26	30	48
Elwood Junior	18	20	32	18	20	32	26	20	32
Etchell	22	25	40	22	25	40	22	25	40

Explorer 16	22	25	40	22	25	40	22	25	40
Fairy Penguin	22	25	40	22	25	40	26	30	48
Farr (All)	*	*	*	*	*	*	*	*	*
Int. Finn	26	30	48	26	30	48	26	30	48
Fireball	26	30	48	26	30	48	26	30	48
FJ	22	25	40	22	25	40	22	25	40
Flying Ant	22	25	40	26	30	48	26	30	48
Flying Dutchman	26	30	48	26	30	48	26	30	48
Flying Fifteen	22	25	40	26	30	48	26	30	48
Gwen 12	26	30	48	26	30	48	26	30	48
Hartley TS 16	22	25	40	22	25	40	22	25	40
Hartley TS 18/21	22	25	40	22	25	40	22	25	40
Heron	22	25	40	22	25	40	26	30	48
Hobie 14/16/21	26	30	48	26	30	48	26	30	48
Hydra	26	30	48	26	30	48	26	30	48
Impulse	22	25	40	22	25	40	22	25	40
Javelin	26	30	48	22	25	40	26	30	48
Laser II	22	25	40	22	25	40	26	30	48
Maricat	26	30	48	26	30	48	26	30	48
Matilda	*	*	*	*	*	*	*	*	*
Mini Quest	22	25	40	22	25	40	22	25	40
Minnow	22	25	40	18	20	32	22	25	40
Miracle	22	25	40	22	25	40	22	25	40
Mirror	22	25	40	18	20	32	22	25	40

Mosquito Mk I & II	26	30	48	22	25	40	26	30	48
Moth	22	25	40	22	25	40	22	25	40
Nacra 5.0/5.2/5.8	26	30	48	26	30	48	30	35	56
Nacra 162m, 182m	22	25	40	22	25	40	26	30	48
Northbridge Junior	18	20	32	18	20	32	18	20	32
NS 14	22	25	40	22	25	40	26	30	48
O.K	22	25	40	22	25	40	26	30	48
Pacer	22	25	40	22	25	40	26	30	48
Paper Tiger	22	25	40	22	25	40	22	25	40
Prindle 15	22	25	40	22	25	40	22	25	40
Prindle 16	22	25	40	26	30	48	26	30	48
Prindle 18	22	25	40	26	30	48	26	30	48
Q.B.2	22	25	40	26	30	48	26	30	48
Quickcat	22	25	40	13	15	24	26	30	48
Rainbow	22	25	40	26	30	48	26	30	48
R.L 24	22	30	40	13	15	24	26	30	48
Sabot(Senior)	22	25	40	22	25	40	22	256	40
Sabot(Junior)	18	20	32	18	20	32	18	20	32
Saber	22	25	40	22	25	40	26	30	48
Sailfish	18	20	32	18	20	32	22	25	40
Seabita	30	35	56	30	35	56	35	40	64
Sharpie	26	30	48	26	30	48	26	30	48
Solo (Mono)	22	25	40	22	25	40	22	25	40
Solo 16	22	25	40	22	25	40	22	25	40

Sonato (All)	30	35	56	30	25	56	30	25	56
Spacesailer 24	*	*	*	*	*	*	26	30	48
Sparrow	22	25	40	22	25	40	22	25	40
Status 580	22	25	40	26	30	48	26	30	48
Sunmaid 20	*	*	*	*	*	*	*	*	*
Sunbird 25	*	*	*	*	*	*	*	*	*
Tasar	22	25	40	22	25	40	26	30	48
Timpenney 670	26	30	48	26	30	48	26	30	48
Tornado	22	25	40	*	*		22	25	40
TS-500	22	25	40	22	25	40	26	30	48
Tumlaren	26	30	48	26	30	48	*		
Ultimate 16/18/23	*	*	*	*	*	*	*	*	*
Windrush 14	26	30	48	26	30	48	26	30	48
Windsurfer	22	25	40	22	25	40	26	30	48
14'Dinghy	22	25	40	26	30	48	26	30	48
125	22	25	40	22	25	40	26	30	48
145	22	25	40	22	25	40	22	25	40
420	22	25	40	22	25	40	26	30	48
470	22	25	40	22	25	40	22	25	40
505	22	25	40	22	25	40	26	30	48

Appendix 5
Operational Notes on SWAN

Always notify Club captain Bosun or Commodore if using Swan
Enter all journeys and notes in Log
Refuelling
Check fuel level before departure Fuel Gauge on dash
Bosun will top up as required

Reminders

Be aware of currents, wind and weather conditions and tidal flow.

Start-up protocols

- Remove anchor cover and instrument cover
- Remove signage
- Check safety gear on board
- Open water cock in engine bay
- Disengage gear
- Turn on instruments and battery
- Start boat
- Boat hook ready
- Take care when launching not to collide with pier and neighbouring boats
- Throw off mooring lines from boat to pier
- Remove fenders from water line after clearance
- Observe speed restrictions and stay clear of ferry backwash

Setting a start

- Check for location anchorage and sufficient depth for keel boats
- Avoid proximity to marks and other vessels (fishing etc)
- Lay starting mark overboard
- Check wind direction and note
- Go around mark down and to starboard of mark then upwind to find suitable position 90 degrees to wind to define length of line for anchorage
- Proceed anchor length upwind (consider tide) of desired starting position
- Launch anchor
- Motor back to start line as anchor is being laid to secure anchorage
- Check wind direction again is 90 degrees to start line
- Raise Orange Flag

Retrieving marks and anchors

- Up anchor
- Motor directly to marks from downwind and reduce speed to almost stop on mark
- Take up marks on port side or astern. Clear of propellor

Boat orientation

Ensure you have done boat orientation prior to journey with Bosun or Club captain

Flags and safety equipment

See elsewhere in this document

Recording and timing

A typical race recording sheet

Sample sheet completed:

Appendix 6
Navigational Marks in QLYC Standard Courses

Marks used by QLYC in races - as a guide for assistance				Dated (rev) November 2017
Mark	**Race used**	**Longitude**	**Latitude**	**Common Name or place**
Grass Beds	Most or All races - Generally			
Queenscliff Approach Pile	2,3,7,10,	38.15.7345S	144.41.4724E	Queenscliff Approach
Queenscliff Approach Laid Mark	8	38.15.7345S	144.41.4724E	Queenscliff Approach Laid Mark
Swan Spit Pile	1,2,4,6,8,9,10,11,12,13	38.15.3931S	144.42.1490E	Swan Spit
No.2 West Channel	Channels Race	38.15.6175S	144.42.4154E	Tuckey 2
Wedge Pile & Structure	2,3,5,6,7,9,13	38.16.5839S	144.41.8981E	Wedge Structure Incl Pile
No.3 West Channel	1,8,9,10 & Channels Race	38.15.9710S	144.42.6348E	Start of West Channel
Creek Mark Pile	3,4,5,7,9,11,12,13	38.16.0637S	144.40.5919E	Entrance to Creek
Drapers Pile	3,4,5,7,9,11,12,13	38.16.3309S	144.40.0069E	Drapers Pile
Bell Rock	Into Shortlands Bluff 12,13	38.16.5016S	144.39.5995E	Edge of Shortlands Bluff
Inner Parks Mark	Into Shortlands Bluff 4,12,13	38.16.5960S	144.37.6195E	Nth point of Marine Park
Outer Parks Mark	Into Shortlands Bluff 13	38.17.1348S	144.37.8700E	Sth point of Marine Park
Pope's Eye Pile	6, 13	38.17.3322S	144.41.2764E	Sth Channel mark (west)
Coles Channel Light	10 & Channels Race	38.14.3241S	144.42.2924E	Coles or White Lady
No.4 West	10 & Channels Race	38.14.7332S	144.43.0083E	West Channel Mark
No.5 West	Channels Race	38.14.8112S	144.43.1884E	West Channel Mark
No.6 West	10 & Channels Race	38.13.9192S	144.43.4600E	West Channel Mark
No.7 West	10 & Channels Race	38.13.9824S	144.43.6566E	West Channel Mark
No.8 West	Channels Race	38.13.0391S	144.43.9642E	West Channel Mark
No.9 West	Channels Race	38.13.0287S	144.44.3978E	West Channel Mark
No.3 Coles	Channels Race	38.12.9424S	144.42.8124E	Coles Channel Mark
No.1 Coles	Channels Race	38.13.7853S	144.42.4911E	Coles Channel Mark
No.10 West	Channels Race	38.12.3605S	144.44.4735E	West Channel Mark
No.11 West	Channels Race	38.12.3666S	144.44.9880E	West Channel Mark
West Channel Pile	Channels Race	38.11.5750S	144.45.3930E	West Channel Mark
No.13 West Channel	Channels Race	38.11.9411S	144.45.8422E	West Channel Mark
St Leonards No.3	Channels Race	38.10.3558S	144.43.5253E	Off Pier at St Leonards
No.5 Coles Channel	Channels Race	38.11.9615S	144.43.1832E	Coles Channel Mark
No.7 Coles Channel	Channels Race	38.11.1311S	144.43.4966E	Coles Channel Mark