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Senior Constable David Upston
NSW Water Police
Wharf 25
Harris Street
Pyrmont 2009

Dear David

With reference to our previous conversations, attached are copies of my letters and papers relating to the 1998 Sydney Hobart Race and safety training conducted by the Cruising Yacht Club of Australia.

I have also attached separately, for your information, a copy of a letter sent by me to the CYCA in relation to the liferaft testing conducted in Launceston in September.

The papers are numbered as follows:

- 1 Teki Dalton background
- 2 CYCA letter to safety inspectors 22/10/98
- 3 E-mail from Dalton to AYF re. Certificates of competency for Hobart race 12/1/99
- 4 E-mail reply from AYF 12/1/99
- 5 Letter from Dalton to Australian Maritime Safety Authority containing 31 questions relating to operational and SAR aspects of 1998 Sydney Hobart race 3/2/99
- 6 Additional questions from Dalton to AMSA 8/2/99
- 7 Letter from Dalton to Greg Halls, CYCA 1998 SHR Review Committee member, with questions and additional questions relating to questionnaire sent to 1998 SHR competitors 13/2/99
- 8 E-mail (19/7/99) from Dalton to CYCA with comments and criticism of Helicopter Rescue Safety Seminar 17/7/99
- 9 E-mail from Dalton with questions relating to Notice of Race for 1999 SHR 19/7/99
- 10 CYCA Flare Demonstration Safety Seminar (25/7/99) safety information handed to participants
- 11 Copy of E-mail from Dalton to CYCA with comments and criticisms of Flare Demonstration 26/7/99
- 12 Copy of E-mail from Dalton to CYCA with questions relating to safety seminars and Notice of Race for 1999 SHR
- 13 CYCA answers to above questions

- 14 Letter from Dalton to Peter Campbell (CYCA media officer) asking him to represent my questions and comments to the CYCA 1/9/99
- 15 Outline of AYF National Training Scheme and AYF/Oceans Certificates of Competency
- 16 Marine Safety and Survival syllabus developed by Teki Dalton
- 17 AYF Draft Yacht Safety and Survival syllabus
- 18 E-mail reply from CYCA to Dalton re. Safety seminars 12/8/99
- 19 Fax from CYCA with confirmation of response 15/8/99
- 20 E-mail from Dalton to Pains-Wessex re. CYCA Flare Demonstration 16/8/99
- 21 E-mail reply from Pains-Wessex 20/8/99
- 22 E-mail from Dalton to Pains-Wessex re P-W 20/8/99
- 23 E-mail from Campbell to Dalton re. CYCA questions 1/9/99
- 24 E-mail from Campbell to Dalton re. CYCA questions 1/9/99
- 25 E-mail from CYCA to Dalton re. meeting with Sailing Committee 6/9/99
- 26 E-mail from Dalton to CYCA re. Sailing Committee meeting 9/9/99

Please call me if I can be of help in any way.

Best wishes



Teki Dalton

4 October 1999

TEKI DALTON

Teki Dalton, has competed (either as crew, sailing master, navigator or skipper) in fifteen Sydney to Hobart races, crossed the China Sea twelve times (racing and cruising) and has raced in the Mediterranean, the Pacific and the Atlantic Oceans. He has represented Australia (as well as being Australian Team Manager) and the ACT in yachting. He owns the ocean racing yacht *Nadia IV* and is a member of the Cruising Yacht Club of Australia where he won the Blue Water Championship twice, in *Mercedes IV* in 1984/85 and *Nadia IV* in 1988/89. He is also a member of the Canberra Yacht Club and a board member of the Canberra Yacht Club Sailing School and Youth Sailing Academy.

In December 1993 Teki completed a three-year appointment on the inaugural Board of the Australian Maritime Safety Authority. He is the editor of the book '*Sea Safety for Small Craft*' and writer/presenter of the videos '*Safe Boating*' and '*mayday, mayday, mayday*' and contributes to Australian and overseas sailing publications. He is the author of a recently published twelve-part series on sea safety for the Australian magazine '*Cruising Helmsman*'.

Teki Dalton's Adventure Sailing School is an AYF Recognised Training Establishment accredited to instruct and issue certificates for all National Logbook Schemes (except TL7) and is accredited to instruct and issue certificates of competency in all AYF/Oceans training programs including Ocean Yachtmaster.

Teki holds Australian Yachting Federation accreditation as Yachtmaster Offshore Instructor, National Powerboat Examiner, and Yacht Racing Instructor and is an accredited Level 1 (sailing) coach. Teki was Yachting Association of the ACT Sailing Coach in 1996/97. He is an accredited NSW Waterways sailing school instructor and holds the Recreation Industry Assessor qualification.



Cruising Yacht Club of Australia

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ADDRESS ALL CORRESPONDENCE TO THE GENERAL MANAGER

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22nd. October, '98

Dear *TEKI*

As you are aware once again we tried to have all or most of the necessary Safety Inspections carried out over the weekends in September when no racing was programmed for the coming season. Unfortunately we did not seem to get the message across to the boat owners and only a very few of them arranged to have Inspections carried out at this time.

As a result of this and the problems we had with late Inspections for the last Sydney to Hobart Race I was invited to attend the last Sailing Committee meeting to see if we could improve the system. To inform you of the result of this meeting the following is the list of items discussed and agreements which I believe will be adhered to.

Sydney to Hobart - Telstra Cup Races :-

The Notice of Race states that each yacht must submit a current Category 1 Safety Certificate and a Radio Inspection Certificate with their entry. This rule will be adhered to by the Sailing Office. As entries close on the 27th. November it will mean that the only items to check after this date should be items on certificates that expire after the closing date. Yachts may submit a late Entry at the discretion of the Race Committee but the same rules will apply.

This year we intend to carry out spot checks during the running of the Telstra Cup Races. The suggested dates are Thursday 17th. and Sunday 20th. of December. If you happen to be available on either of these days I would appreciate it if you could let me know.

There will probably be an amendment to the Notice of Race defining the amount of fuel required for the Hobart Race. This will be the second paragraph of 3.23.(e) which states Litres = LWL (metres) / 0.135. I am aware that some yachts do not have the required tankage to carry the necessary amount but they will be informed that they will have to comply by carrying the excess in containers.

'99 Inspections : -

It will be necessary to carry out spot checks for both the Mooloolaba and Southport Races. Over the past few years some boat owners who intended to continue further north to compete in regattas such as Hamilton Island have requested Category 2 Inspections to be carried out before the Southport Race. As Certificates expire in September we will be requesting these owners to have their Inspections carried out when they arrive home which is usually mid September.

One of the problems with the September Inspections seems to be the lack of Notification to boat owners. To overcome this problem it has been agreed that the Sailing Office will be sending separate notices to Owners beginning in early July regarding '99 Inspections and placing on the Sailing Office Notice Board in a prominent position a similar notice.

It is also proposed that for anyone not having Inspections carried out over this period, except in extenuating circumstances, that a fee, as yet to be decided on and made payable to the Youth Sailing Academy, be charged.

In summary I feel that if the above proposals are adhered to it will make life a lot easier for all of us. After talking to representatives of other Clubs I know they were very interested in the outcome of this meeting and if the C.Y.C.A set these lines they intimated that they could possibly be following suit.

There is one other point I would like to bring up and that is the misapprehension that some of the owners have about Safety Certificates. They seem to think that once the Inspection is carried out that it is valid until the next year. It should be pointed out to them that the Certificate is only valid until any item, such as fire extinguishers, flares, life rafts etc. fall out of date and remains so until those items are updated. To this end we are setting up a Data Base of Certificates and will be able to keep a closer watch on these items.

I hope the above information will be of help to you and if you have any queries please do not hesitate to contact me,

Regards Lawson

David Lawson.
Chief Safety Inspector.

From: Teki Dalton <teki@ozemail.com.au>
 To: Kristen Kosmala <kosmalak@ausport.gov.au>
 Cc: Terry Wise <terryj@enternet.com.au>; Don Gillies <drg@ozemail.com.au>
 Date: Tuesday, 12 January 1999 10:05
 Subject: AYF Yachtmaster

Dear Kristen

You will recall that I spoke to you last week about the AYF Fundamental Regulations 2.4 (RRS) which says, in part:

"It is recommended that the skipper and/or sailing master have a recognised AYF Certificate appropriate to the race category"

I have searched all of my AYF records and published material, including logbooks, and cannot find a table which lists the recommended 'appropriate' certificate with the race category.

Commonsense would lead me to assume the following:

- Category 0 Yachtmaster Ocean TL4
- Category 1 Yachtmaster Offshore TL4/Offshore Racing Skipper TL6
 except for races to Noumea or Fiji where Yachtmaster Ocean
 where Yachtmaster Ocean would be appropriate
- Category 2/3 Coastal Skipper

I am at present preparing a submission to the CYCA on behalf of Pacific Sailing School in relation to discussions held by them last year on the subject of Pacific Sailing School providing AYF logbook scheme courses (Yachtmaster etc and other specialist courses) to CYCA members in order to comply with the AYF recommendations. Given the recent tragic events arising from the Hobart race, I believe it is in everybody's interest to have this matter clarified.

You said you would consult with the resident 'gurus' - can I get a speedy decision on this, please?

Best wishes

Teki

From: kosmalak@ausport.gov.au <kosmalak@ausport.gov.au>
To: teki@ozemail.com.au <teki@ozemail.com.au>
Date: Tuesday, 12 January 1999 1:38
Subject: Re: AYF Yachtmaster

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Dear Teki

I have spoken with Tony Mooney regarding the recommendation and more concrete recommendations being written into the Rules book.

Tony's response was that the AYF had received advice that the decision as to the 'appropriate certificate' should be left to the discretion of the individual/s involved.

I trust this information is of assistance to you

Yours sincerely

Kristen Kosmala
Training & Coach Education Officer

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Phone 02 6273 4040 Fax 02 6273 5053
Mobile 0411 498 232 E-mail teki@ozemail.com.au

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Mr Clive Davidson
Chief Executive
Australian Maritime Safety Authority
GPO Box 2181
Canberra City ACT 2601

Dear Clive

The recent Sydney Hobart race has brought to light some interesting SAR operational information and questions and as I am continually updating my research and knowledge on the subject for future publications and lectures, I would appreciate it if you would forward the following questions to the appropriate section of AMSA, for an early reply, please.

During the period of the 1998 Sydney to Hobart Race;

1. How many 121.5/243MHz distress beacons were activated?
2. How many 406MHz beacons were activated?
3. What was the operational effect and/or difficulty at AusSAR, of multiple 121.5/243MHz beacons, in close proximity, being detected?
4. Given that the initial signal from a 121.5/243MHz beacon shows as a mirror-image on the COSPAS/SARSAT mission control operators screen until the second satellite pass; with multiple signals, how were the individual distress locations determined?
5. How many satellites passed over the footprint area and what were the time intervals, from the first detection until the time the final beacon was switched off?
6. Given that the detection and location accuracy of the 121.5/243MHz beacon is approx 20 kms, and several beacons were activated within that area, would the screen image of multiple signals merge into one image?
7. If so, how was the number of craft in distress determined?
8. If a 406MHz beacon was detected during the SAR period, was the signal masked in any way by the multiple 121.5/243MHz signals?
9. If there was a 406MHz beacon detected, was the signal detected in the Australian footprint and relayed to an Australian area ground station or another in the chain of ground stations?
10. If there was a 406MHz beacon detected, was the Australian registration correct and in order?
11. If the 406MHz beacon was not registered in Australia, then in which country was it registered?
12. How did searching civil aircraft, equipped with 121.5MHz homing devices and receiving multiple signals, determine which craft or survivor they were searching for?

13. Were searching aircraft (without the benefit of the craft's position given from a mayday call) and given an approximate longitude and latitude by AusSAR (determined from the mission control screen image) responding and searching only to the 121.5MHz RDF signals?
14. How many craft, who had broadcast a 'mayday' call, were told by AusSAR to activate their distress beacon?
15. How many craft activated their distress beacon in the first instance and subsequently broadcast a mayday call or distress signal?
16. How many craft activated their distress beacon and did not broadcast a mayday call or distress signal?
17. Were all distress beacons which had been activated, recovered and switched off after rescue?
18. If not, for how long did they continue to send a signal?
19. Given that there is a move towards the recommendation of personal 121.5MHz distress beacons; had (say) half of the number of crew that were either in liferafts or were rescued from their craft, carried beacons which they activated, what problems (if any) would this have caused AusSAR?
20. How many 'mayday' calls were broadcast on 2182kHz?
21. Ditto 4483kHz?
22. Ditto 4125kHz?
23. Ditto 6215kHz?
24. Ditto VHF Channel 16?
25. Ditto VHF Channel 73?
26. Of the 20 or so yachts which were supplied and fitted with Satcom-C satellite communication units by Telstra, how many of those yachts broadcast a 'mayday' call, relayed a distress message or confirmed their position, by using that method of communication?
27. How many radio reports were relayed to AusSAR, during the race, of the following items being washed overboard and not recovered? (liferaft, man overboard retrieval gear, danbouy (flag marker) Jonbouy, life rings, sails, storm dodgers)
28. When each craft was identified as being in trouble or of some concern to the organisers, did AusSAR staff refer to the *Small Craft Particulars Form* held in their office?
29. If not, from which source did they get details of the craft?
30. During the period from 25th December 1998 until 5th January 1999, did the operators of the AMSA DGPS control stations detect any excess manipulation of the Selective Availability by the US Military as a consequence of the US military activity in Iraq?
31. If this was detected, what were the navigational consequences for those mariners with GPS but without DGPS receiver facilities?

Thanks,

Teki Dalton

3/2/99

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Clive Davidson
Chief Executive
Australian Maritime Safety Authority
Constitution Avenue
Canberra City 2601

Dear Clive

Further to my recent letter regarding the 1998 Sydney to Hobart Race, I have some supplementary questions to ask.

It is on record that when I was a board member of AMSA and later, I subjected the proposal and subsequent purchase and deployment of PADS equipment units by AMSA to close scrutiny. In one of the early AMSA/Dept of Civil Aviation evaluation tests at Merimbula, I was the target in a raft for one of the liferaft drops. More recently, when PADS was in the news, I offered to AMSA and the then Federal Minister for Transport, my yacht Nadia IV as the target for testing the system at sea in extreme conditions. For whatever reason, this offer was never taken up.

In a recent joint press release by AMSA and PADS referring to the number of awards for design, efficiency and accuracy by PADS (for the system of delivering emergency supplies such as liferaft, pumps, food and water from aircraft to people in distress at sea) it was announced that the equipment was to be deployed at sites around Australia.

The questions, in relation to the 1998 Sydney Hobart race, are:

- 1 During the distress period of the race, how many Civil SAR units were equipped with PADS equipment?
- 2 How many PADS equipment units were deployed during the period?
- 3 If any equipment units were deployed: were they liferafts; pumps; food and water?
- 4 If no PADS equipment units were deployed, why did the Senior Coordinator make that decision?
- 5 If the decision was not to deploy PADS equipment, what was the reasoning behind that decision?

An early reply would be appreciated,
Sincerely

8/2/99

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Greg Halls
Review Committee
Cruising Yacht Club of Australia

Dear Greg

I thought that I would send to you a few general supplementary questions, relating to the distributed survey, prior to our meeting on Sunday 14 February 1999.

The first part ties in with particular existing questions; the second part is both supplementary and specific.

Q1 Is Exotic to mean only carbon fibre and GRP include Kevlar?

Q2A Has the boat retired from a previous Hobart race?

Q5B include 'special crew overboard retrieval gear', 'sea anchor'

Q6 Hold certificates of competency or qualifications? (list AYC or similar recognised)

Number of Sydney Hobarts completed?

Retired from any of those races? (1977,1984,1993, 1979 Fastnet)

Which boat and why retired?

Q8 Supplementary; where and what did you practice?

Q14 What form of training is there?

Q73 **Jackstays**; were they adequate? were they wire or fabric? was there one full-length jackstay or more than one? did they stretch? if so, did that cause a problem?

Stanchions; did they break or bend?

Lifelines; were they adequate? Did they break?

Toerails; were they adequate?

Supplementary questions

1. What is the date of the Category 1 Safety certificate?
2. Issued where and by whom?
3. Who signed on behalf of the owner?
4. What was the date of the CYCA spot check?
5. Done by whom?
6. Who signed on behalf of the owner?
7. Name the crew who were present during the;
Category 1 safety inspection
Spot-check
8. Did you lose any piece of equipment overboard during the race eg?
liferings; danbuoy; Johnbuoy; liferaft; crew overboard retrieval gear;
sails etc?
9. If you did, was race control or SAR notified?
10. How many liferafts did you carry?
11. Were they secured on deck or down below?
12. At any stage during the race, did they break loose?
13. If your boat took on water, were your pumps adequate to handle the
volume?
14. If an EPIRB was activated, detail procedure of activation and
deployment
15. Was your EPIRB 121.5/243MHz or 406MHz?
16. Was your boat one of the boats fitted with Satcom C prior to the
start?
17. If so, were any messages (distress, position reports, private calls) sent
using that equipment?
18. If not, why not?
19. If the decision was made to deploy the liferaft(s), then who made
that decision?

20. If the decision was to abandon ship, who made that decision?
21. Had any of the crew, prior to the race, abandon ship/survival training or experience?
22. If so, what form of training or experience?
23. Had any of the crew viewed the AMSA abandon ship video 'mayday, mayday, mayday'?
24. At any stage during the storm or rescue period, was the book 'Annual Australian Notices to Mariners' referred to?
25. Did the owner or skipper, prior to the race, submit a 'Small Craft Particulars Form' to AMSA?
26. If not, do you know what it is?

I have already submitted a list of 36 questions to AMSA (AusSAR) requesting information relating to policy and operational procedures. I have a meeting with them next week.

Best wishes

Teki
13 February 1999

From: Teki Dalton <teki@ozemail.com.au>
 To: Cruising Yacht Club of Australi <cyca@bigpond.com>
 Date: Monday, 19 July 1999 10:34
 Subject: Please pass to Phil Thompson

Phil

Congratulations on a very successful education seminar on Saturday. I'm sure it is pleasing to all that the sessions was well-attended and gives an indication that there is now a growing and continuing need for sea safety education.

I have some general comments to make:

Notwithstanding the fact that the sessions were generally aimed at the extreme end of the safety and survival process ie. liferaft deployment and helicopter rescue procedures, there was an opportunity missed to even briefly touch on other related procedures such as taking the time, when the groups were assembled upstairs, to show the contents of the raft and explain some of the processes (many people mentioned that they saw the raft contents on the ground or on a table and would have preferred the items to be held up and demonstrated) and show the first nine minutes of the video I did for AMSA, 'mayday, mayday, mayday' which demonstrates all of the liferaft deployment and procedures and more. All of the groups would have stayed for the extra time if it meant that they would get more safety information.

The presentation by the RAN crew was excellent and was well received. However, during their presentation they confirmed the following:

- Military assets are the last to be used in a civil SAR operation
- Their rescue procedures are different to the ones used by Civil SAR units
- They were not able to outline the procedures used by Civil SAR units, however if there was an ex RAN/RAAF crew member in that civil unit, they 'sometimes' use military procedures
- They were not 'sure' of the communication equipment used by civil SAR units

Although the information all of the participants received was first class and valid, there is potential for some confusion in the role of Military SAR and their rescue procedures. In my view, there should be some additional information covering this circulated to the participants as well as the CYCA taking up Westpacs LifeSaver Rescue Helicopter recent offer to provide a complete briefing and demonstration on the civil SAR rescue procedures (including the differences between agencies). I also have the RAN presentation on video/audio for confirmation of the above.

The demonstration in the pond missed out on showing:

- Correct PFD donning procedure and the drills to show how cumbersome they are when they are worn in the water and in the raft
- A demonstration of the 'huddle' position and how difficult it is to maintain
- They demonstrators were fit men wearing inflatable drysuits and gave the impression that it was not so difficult to board a raft from the water
- The pre-publicity for the demonstration not calling for volunteers to come prepared to participate in the in-the-water pond activities. The fully clothed volunteers who entered the raft gained nothing in the way of experience.

I write this to support the club's efforts in safety education.

I would be pleased to receive your views on the above.

19/07/99

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From: Teki Dalton <teki@ozemail.com.au>
To: Cyca@bigpond.com <Cyca@bigpond.com>
Date: Monday, 19 July 1999 2:30
Subject: Second message for Phil Thompson

Phil

As the NOR for the 1999 Sydney Hobart race is being prepared and there is considerable interest in the CYCA's SHR Inquiry Recommendations, could you please advise how you will handle the following enquiries:

- In relation to crew experience and AYF Fundamental Regulation 2.4 '*recognised AYF Certificate appropriate to the race category*' could you advise which AYF Certificate is to be recommended or made compulsory? The AYF have advised that "it is up to the clubs to decide which is the appropriate certificate".
- For interstate competitors, what constitutes an equivalent local race of 180nm? If a crew has only done one approx. 180nm race in light conditions, does this suffice?

For those who will carry out the safety inspections on behalf of the CYCA, the following questions need clarification:

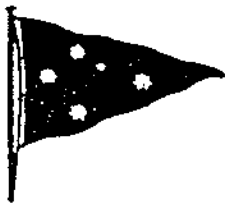
- Will there be a definition or standard published for the prescriptive 'high intensity light'? (I assume that the regulations will accept any available strobe to be passed as a personal strobe)
- What is the reasoning behind the carrying of white parachute flares?
- Which personal dye marker, the packet or bottle? (If the packet is carried in a pocket of wet weather gear there is every chance that the dye will escape and cause real problems with clothes and on the boat)
- Will there be a briefing on the new SHR regulations in plenty of time for interested parties to express views and provide experience and knowledge?

Look forward to hearing from you

Best wishes

Teki Dalton

19/07/99



Cruising Yacht Club of Australia

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ADDRESS ALL CORRESPONDENCE TO THE GENERAL MANAGER

DISTRESS FLARE SAFETY PROCEDURES

The following procedures are given as a guideline only. It is the responsibility of each and every person who uses a distress flare to do so in a safe and responsible manner. Distress flares should only be fired in an emergency or at a properly organised flare demonstration.

HAND FLARES

1. Read the instructions carefully before arriving at the demonstration. If you don't understand them, ask the manufacturer or his representative.
2. Prepare a large metal bucket filled with water to extinguish burnt flares. (Plastic will do, but it can melt with the hot flare tube).
3. On the lee side of the boat, prepare the flare for firing by removing the caps.
4. Activate the flare according to the instructions provided by the manufacturer.
5. Hold the flare by the area marked "handle", up, outboard and leeward. (Over the side and down wind)
DO NOT point the flare at anyone and DO NOT look into the flare at any time.
6. When the flare stops burning, extinguish the hot tube in the bucket of water.
7. Any flares that fail to ignite should be returned to the manufacturer or Waterways Authority for correct and safe disposal.
8. Fired flares can be disposed of in the conventional rubbish.

PARACHUTE ROCKET FLARE SAFETY PROCEDURE

1. Read the instructions carefully before arriving at the demonstration. If you do not understand them, ask the manufacturer or his representative.
2. Parachute Rockets should be fired into the wind at about 20° to 30°
3. Select a safe position on the boat and ensure the rocket will not fire into the rigging
4. When all clear to fire, call to all people on board that you are "firing" and activate the rocket.
5. If the rocket fails to launch, hold the rocket launch tube in the fire position for 2 mins. It could just be a slow starter. This only happens with time-expired or wet product.
6. DO NOT at any time look into the launch tube.
7. Return unfired product to the manufacturer for safe disposal.
8. Empty parachute launch tubes can be disposed of in conventional rubbish.

* ONLY USE PRODUCT THAT APPEARS IN GOOD CONDITION. ANY PRODUCT THAT SHOWS SIGNS OF DETERIORATION SHOULD BE RETURNED TO THE MANUFACTURER FOR DISPOSAL.

Phil Thompson
CYCA

Phil

I have a few suggestions to make for the next flare demonstration.

Considering the demonstration is to be without direct supervision and all information is promulgated by printed material prepared and produced by the CYCA, it is essential that this information is accurate and easily understood.

In my view, the photocopied page distributed for the flare demonstration on 25th July 1999 did not include some important technical and safety information and did not take account of the 'do-it-yourself' nature of the exercise.

I make the following comments:

- The instruction page did not detail or describe the types of flares (red hand-held, orange smoke, white) or give an indication of when they are best used or their characteristics for effective use. An important piece of information, the raised symbols on the orange and red (to distinguish between them in the dark) was not included.
- Other basic safety considerations should have been pointed out, in particular that a red hand-held activated during daylight (as a demonstration) does not show the same intensity of red as at night and people are tempted to look into the burning flare. Red hand-held flares would not normally be activated during daylight.
- It should have been pointed out that, in some cases, there are flares of different manufacturers (with different operating procedures) contained in liferaft survival packs. Skippers and crew should not always assume that they are the same as contained in the vessel's flare container.
- In the instructions for HAND FLARES, instruction 5 should precede instruction 4. An additional instruction, *extend your arm*, should have been included.
- In the section on PARACHUTE ROCKET FLARE SAFETY PROCEDURE, instruction 2 is misleading. The correct procedure is to face downwind, extend your arm to vertical, aim approximately 15 degrees downwind, and then activate firing mechanism. In low cloud conditions, aim downwind to approximately 45 degrees. Strong wind acts on the tail of

parachute rockets and turns them to the wind. Firing them upwind can reduce the height attained by the rocket.

- Instruction 5 should also include the fact that sometimes the firing mechanism can be broken or distorted and this can result in the parachute rocket flare not being activated. Correct disposal is then essential, as the failed mechanism is then sensitive to movement or knocks.

- In distress situations, parachute rockets should be activated in pairs, the second 2 to 3 minutes after the first. This helps with recognition and location.

Best wishes

Teki Dalton

26 July 1999

CYCA Safety Procedures Programme

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Questions from Teki Dalton

I noticed that the topics are now called Modules. What specific course (accredited or otherwise) are they modules of? (Modules are generally units of a course)

- Will these Modules be repeated in other states/clubs?
- If so, what are the dates and who will conduct them?
- If not, how will the CYCA ensure a similar standard of presentation?
- Have the states/clubs been informed? (ORCV are conducting a Heavy weather seminar on 11 September)

Helicopter and Life Raft

- Will the Helicopter and Lift? (the notice had Lift instead of Life) Raft module be practical only?
- If so, what will the arrangements be for in-the-water crew participation?
- Will participants be advised of the differences in rescue procedures between RAN and Civil SAR units?
- Will this module be available or repeated in other states/clubs?
- Will the RAN conduct similar demonstrations for other states/clubs?
- Why was the offer of a similar demonstration from Westpac Lifesaver Rescue Helicopter organisation not taken up this time? (This would have shown another aspect of helicopter rescue)
- The 17th December is a Friday and the date of the Canon Big Boat Challenge, is this the correct date for the module?

Flare Day

Apart from the obvious legal and safety risks associated with conducting an unsupervised on-the-water flare demonstration, will:

- All of the issues and comments raised in my note to Phil Thompson (26 July 1999) be included in any printed instruction sheet?
- What provisions for emergency first aid will be made?

- How will the participants be informed of first aid arrangements?
- Was there a report submitted to the Sailing Committee of the CYCA on the efficacy or otherwise of the flare day conducted on the 25th July 1999?
- If so, did the report contain details or records of the number of flares which failed to ignite and information from participants including inadvertent activation and near misses? (disturbing anecdotal stories are already circulating through the club)
- Will similar flare demonstrations be held in states/clubs?

Man overboard

- What topics will this segment cover?
- How much time will be devoted to this segment?
- What will be the visual content (video, slides, o/head slides etc) contained in the segment?
- Is the AMSA publication *Survival at Sea* the most appropriate publication for this segment?
- For those who already have a copy of the AMSA publication, I assume there is no cost for the segment?
- The notice says 'Book at Reception.' Does this mean to book for the module at (CYCA) Reception or that the book '*Survival at Sea*' is available from (CYCA) Reception or (Millennium Hotel) Reception
- Who will present the segment?

Weather and Heavy Weather

- What topics will this segment cover?
- What will be the visual content (video, slides, o/head slides etc) contained in this segment?
- Who will deliver it?
- Will a similar segment be delivered by other states/clubs?
- When and by whom?

In addition to the Notice of Race questions I asked Phil on 19th July, and to which I received an unsatisfactory reply, some supplementary questions follow:

- Does water proof VHF hand-held radio mean water-resistant cover or capable of being immersed in water and remain operational?
- Why was Australian VHF supplementary distress frequency Channel 67 not included as a requirement?
- Why was the international distress frequency 2182kHz not included as a requirement?
- Why are the distress frequencies not required to be tested during a pre-race radio check?
- Why is the VHF radio not required to have a pre-race radio check?
- Yachts are required to maintain a 24-hour listening watch on Channel 16; why not, in addition, the HF race frequency or HF distress frequency?
- Yachts, when abeam of Green Cape, are required to report to race control that the HF radio is operational. Why not have them confirm that the VHF is operational as well?
- In relation to attendance at safety seminars; what are the CYCA approved equivalents?
- As the AYF Yacht Safety and Survival Course syllabus is listed as an alternative course, will it be available before the Hobart race?
- In relation to the recommendation of 'the skipper or sailing master holding a recognised AYF certificate (or equivalent)', the certificate Offshore Skipper does not exist. Does it mean Yachtmaster Offshore (AYF TL4), Offshore Racing Skipper (AYF TL6), AYF/Oceans Coastal Yachtmaster or AYF/Oceans Coastal Racing Yachtmaster?
- As next seasons safety inspections are scheduled for early September, when will there be briefing for YA of NSW safety inspectors?

CYCA Safety Procedures Program

Answers from CYCA in **bold/italic**

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The only CYCA responses to my suggestions and comments in relation to:

RAN helicopter and RFD liferaft display

The liferaft and Helicopter Drills did not ask for all aspects of the Safety Procedure and it is intended to involve other rescue agencies

Flare day

All printed material supplied to members on the flare day was supplied by the Flare Manufacturers

Additional questions from Teki Dalton forwarded through Peter Campbell

I noticed that the topics are now called Modules. What specific course (accredited or otherwise) are they modules of? (Modules are generally units of a course)

No response

- Will these Modules be repeated in other states/clubs?
Modules/days will be run in other states
- If so, what are the dates and who will conduct them?
At this stage RYCT, CYCSA, ORCV, DSS, Sandringham Yacht Club, Academy of Maritime Training
- How will the CYCA ensure a similar standard of presentation?
No response
- Have the states/clubs been informed? (ORCV are conducting a Heavy weather seminar on 11 September)
No response

Helicopter and Life Raft

- Will the Helicopter and Lift? (the notice had Lift instead of Life) Raft module be practical only?
Helicopter module is both theory and practical
- If so, what will the arrangements be for in-the-water crew participation?
In water participation is prearrange with crews
- Will participants be advised of the differences in rescue procedures between RAN and Civil SAR units?
AMSA is working with both groups to agree on a standard rescue procedure

- Will this module be available or repeated in other states/clubs?
Helicopter and all other modules will be conducted in other states
- Will the RAN conduct similar demonstrations for other states/clubs?
The clubs will determine which rescue facility are available for there training days
- Why was the offer of a similar demonstration from Westpac Lifesaver Rescue Helicopter organisation not taken up this time? (This would have shown another aspect of helicopter rescue)
Westpac and Careflight are involved
- The 17th December is a Friday and the date of the Canon Big Boat Challenge, is this the correct date for the module?
The 17 Dec is big boat race day and a training day

Flare Day

Apart from the obvious legal and safety risks associated with conducting an unsupervised on-the-water flare demonstration, will:

- All of the issues and comments raised in my note to Phil Thompson (26 July 1999) be included in any printed instruction sheet?
The flare manufactures will supply all the printed information for this day, they are updating the information prior to the november flare day
- What provisions for emergency first aid will be made?
Fist aid officers were on the water
- How will the participants be informed of first aid arrangements?
Fist aid officres visted most of the participants on the day
- Was there a report submitted to the Sailing Committee of the CYCA on the efficacy or otherwise of the flare day conducted on the 25th July 1999?
Yes a report was made to the sailing committee
- If so, did the report contain details or records of the number of flares which failed to ignite and information from participants including inadvertent activation and near misses? (disturbing anecdotal stories are already circulating through the club)
The report did not list numbers of flares fired etc. all unfired flares were collected by cyca staff, anecdotal stories at the club always have a beer factor
- Will similar flare demonstrations be held in states/clubs?
All modules are being carried out at the other clubs

Man overboard

- What topics will this segment cover?
The presenter will decide on contents
- How much time will be devoted to this segment?
Approx 45 minutes
- What will be the visual content (video, slides, o/head slides etc) contained in the segment?

The presenter will decide on aids

- Is the AMSA publication *Survival at Sea* the most appropriate publication for this segment?

AMSA publication is being distributed at this module It is a guide for participants to refer to

- For those who already have a copy of the AMSA publication, I assume there is no cost for the segment?

All participants will receive the publication and pay

- The notice says 'Book at Reception.' Does this mean to book for the module at (CYCA) Reception or that the book '*Survival at Sea*' is available from (CYCA) Reception or (Millennium Hotel) Reception

Book at cyca reception

- Who will present the segment?

No response

Weather and Heavy Weather

- What topics will this segment cover?

Two topics. Weather the presenter will decide. Heavy weather sailing P Thompson gives a brief at line of this topic

- What will be the visual content (video, slides, o/head slides etc) contained in this segment?

Aids are up to presenter

- Who will deliver it?

Weather bureau and skippers of ocean racing yachts

- Will a similar segment be delivered by other states/clubs?

Yes this module will be repeated in other states

- When and by whom?

No response

Notice of Race E-mail questions asked on 19th July

In relation to crew experience and AYF Fundamental regulation 2.4 'recognised certificate appropriate to the race category' could you advise which AYF Certificate is to be recommended or made compulsory? The AYF have advised that "it is up to the clubs to decide which is the appropriate certificate"

The Sydney Hobart Notice of race has been finalized and AYF Certification for skippers is not compulsory

For interstate competitors, what constitutes an equivalent local race of 180nm? If a crew has only done one approx. 180nm race in light conditions, does this suffice?

We also suffer the same weather related issues in all long races

For those who will carry out the safety inspections on behalf of the CYCA, the following questions need clarification:

- Will there be a definition or standard published for the

prescriptive 'high intensity light'? (I assume that the regulations will accept any available strobe to be passed as a personal strobe)

No response

- What is the reasoning behind the carrying of white parachute flares?

No response

- Which personal dye marker; the packet or bottle? (If the packet is carried in a pocket of wet weather gear there is every chance that the dye will escape and cause real problems with clothes and on the boat)

No response

- Will there be a briefing on the new SHR regulations in plenty of time for interested parties to express views and provide experience and knowledge?

Safety inspectors will be briefed on the new requirements for the Sydney Hobart, however no changes to the Notice of race can now be made

In addition to the Notice of Race questions I asked Phil on 19th July, and to which I received an unsatisfactory reply, some supplementary questions follow:

- Does water proof VHF hand-held radio mean water-resistant cover or capable of being immersed in water and remain operational?

Waterproof VHF is waterproof only

- Why was Australian VHF supplementary distress frequency Channel 67 not included as a requirement?

VHF 67 & HF 2182 are mandatory requirements

- Why was the international distress frequency 2182kHz not included as a requirement?

VHF 67 & HF 2182 are mandatory requirements

- Why are the distress frequencies not required to be tested during a pre-race radio check?

Distress frequencies are checked by radio technicians

- Why is the VHF radio not required to have a pre-race radio check?

VHF radios are checked by radio technicians

- Yachts are required to maintain a 24-hour listening watch on Channel 16; why not, in addition, the HF race frequency or HF distress frequency?

Channel 16 listening watch was a finding of the report

- Yachts, when abeam of Green Cape, are required to report to race control that the HF radio is operational. Why not have them confirm that the VHF is operational as well?

Yachts may not be in VHF range of radio relay vessel

- In relation to attendance at safety seminars; what are the CYCA approved equivalents?

Equivalents are approved upon application

- As the AYF Yacht Safety and Survival Course syllabus is listed as an alternative course, will it be available before the Hobart race?

AYF is endeavouring to have course operating ASAP

- In relation to the recommendation of 'the skipper or sailing master holding a recognised AYF certificate (or equivalent)', the certificate Offshore Skipper does not exist. Does it mean Yachtmaster Offshore (AYF TL4), Offshore Racing Skipper (AYF TL6), AYF/Oceans Coastal Yachtmaster or AYF/Oceans Coastal Racing Yachtmaster?

No response

- As next seasons safety inspections are scheduled for early September, when will there be briefing for YA of NSW safety inspectors?

Briefing for CYCA inspectors was on 7 Sept 99

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14

Dear Peter *CAMPBELL*

Further to my call to you this morning.

I am close to finishing an article on sea safety education, training and, among other things, the response by the Cruising Yacht Club of Australia to requirements and recommendations contained in the Sydney Hobart Race Review Committee Report.

Immediately after the CYCA's two safety seminar days (which I attended) I wrote to Phil Thompson with comments, suggestions and some criticism of the way those days were conducted and the validity of the information which was made available to those who attended. I also wrote and requested some clarification of some safety issues that were to be made mandatory for the 1999 Sydney Hobart race.

The reply I received was less than satisfactory, to me as a long standing member of the club, a potential SHR competitor and (probably more importantly) as one who teaches sea safety education and training and understands better than most, the difficulty in getting the safety message across to recreational sailors.

I have just received the dates and topics of the next round of CYCA safety seminars and, before I submit the article, I would like to get more details on them and perhaps a more meaningful response to my previous correspondence.

As it stands with the information I have already received from the CYCA, my article will highlight the lack of understanding of some basic safety issues and be critical of the club's attempts at conducting essential safety education seminars. I would much prefer to be positive and complimentary of the club's efforts if it could be shown that they are on the right track. I know that their response will be that they consult with AYF and the YA of NSW on these matters but it will be the CYCA who will get the media and NSW Coroners attention if they are shown to be less than competent.

I have attached a list of questions I would like you to put forward on my behalf as well as copies of my previous correspondence.

Thanks

Teki Dalton

**THE AYF NATIONAL LOGBOOK SCHEME
AYF/OCEANS ACCREDITED PROGRAM
CERTIFICATES OF COMPETENCY**

15

Australian Yachting Federation Racing Rules for Sailing for 1997-2000
Fundamental Regulations 2.4 (Crew Experience) states:

"At least half the crew including the Skipper and/or Sailing Master shall have completed one race of the category entered or an equivalent passage. Evidence of such shall be provided if requested by the organising authority. **It is recommended that the Skipper and/or Sailing Master have a recognised AYF certificate appropriate to the race category**"

Although the AYF have not published their recommendations, and are reluctant to do so preferring the decision be left to the organising authority, it has been noted that in 1998 the CYCA endorsed the Yachtmaster Offshore Certificate as an appropriate certificate for Category 1 ocean races.

The following AYF Certificates should be considered as appropriate to the race category:

Category 1	AYF TL4 Yachtmaster Offshore/AYF TL6 Offshore Racing Skipper/ AYF Oceans Yachtmaster Offshore Cruising/AYF Oceans Yachtmaster Offshore Racing
Category 2/3	AYF TL4 Coastal Skipper/AYF TL6 Inshore Racing Skipper/AYF Oceans Coastal Cruising/AYF Oceans Coastal Racing

The courses making up the **AYF National Yacht Cruising Scheme (TL4)** are intended for both skippers and crews of sailing yachts and are aimed primarily at the encouragement of high standards of boat handling, navigation and pilotage, and seamanship at each level of ability and experience.

In the TL4 Logbook scheme, there are five grades of course, ranging from the Introductory Course to the Yachtmaster (Ocean). Except for the Yachtmaster (Ocean) Certificate, it is not mandatory that any candidate for examination for any grade should already hold the next lower qualification. Candidates may be brought into the scheme at a level that their previous experience and ability suggests as applicable.

It would be a mistake; however, to take a Yachtmaster course or examination without a sound knowledge of the seamanship and navigation which is available during the previous courses. The Yachting Association of NSW history has shown that, for those experienced yachtsmen who presented themselves for the Yachtmaster (Offshore)

assessment and examination for the first time without formal preparation suffered a failure rate of 80%.

The **AYF National Yacht Racing Certificates (TL6)** comprise Club Racing Crew; Offshore Racing Crew; Inshore Racing Skipper; Offshore Navigator and Offshore Racing Skipper and are run in conjunction with the TL4 Logbook Scheme and are intended to provide proper training and guidance for crew members and skippers of yachts racing offshore, in open waters.

The courses are intended to provide specialist training in the techniques involved in handling an offshore racing yacht and its gear, and are intended to provide specific information to enable those participating to receive expert training in the type of yacht they have chosen to sail.

REVIEW OF TL4 AND TL6

The YA of NSW Training Committee has been reviewing the Yacht Cruising Scheme (TL4) and as a matter of urgency reviewed the Yacht Racing Scheme (TL6). They believe that crew participation in structured training involving a modified TL6 scheme will meet the training requirements of offshore racing skippers and crews.

AYF/OCEANS

The new **AYF/Oceans** competency based vocational cruising and ocean racing training programs will be introduced to the public by clubs and commercial sailing schools at some stage through 1999. The AYF and Oceans, arising from the need to update and revise the Logbook scheme and the needs of the vocational sector developed the programs from basic sailing to yachtmaster. All course modules and certificates are approved by the Australian National Training Authority in the name of the AYF and, under the accredited training system, may be credited to other certificates and qualifications in industry.

PRESENT ARRANGEMENTS FOR RECOGNITION OF PRIOR LEARNING AND YACHTMASTER CHECKOUT

Assessments are also available for the following Certificates

AYF TL4/97

Competent Crew Certificate
Inshore Certificate
Coastal Skippers Certificate
Yachtmaster Offshore Certificate

AYF TL6/96

Club Racing Crew
Inshore Racing Crew
Offshore Racing Crew
Inshore Racing Skipper
Offshore Racing Skipper

Candidates who wish to be assessed under RPL must present a logbook with entries verified by a club or examiner. Statutory declarations are not accepted by the AYF.

The Yachtmaster Checkout is essentially a refresher course that will check out gaps in the candidate's knowledge and prepare them for the Yachtmaster examination. This assessment includes a short multiple choice examination paper. The **AYF/Oceans** program has an inbuilt system where a series of published learning outcomes can assist in the assessment of competency in the various modules.

Note: (* Candidates for the Yachtmaster Ocean Certificate examination must already hold the Yachtmaster Offshore Certificate)

The Yachting Association of NSW notes that 80% of 'experienced' yachties, without formal preparation, fail the Yachtmaster Offshore Certificate examination first time round. It costs \$150 for re-assessment.

YACHTMASTER OFFSHORE CERTIFICATE EXAMINATION

AYF Examiners will conduct examinations. Examinations, for a minimum group of three, are available at short notice.

Before candidates for this certificate come forward for examination, they must have gained the following minimum experience –

- 50 days living aboard a yacht in commission
- 2500 nautical miles logged, offshore, to include
 - a. three passages over 60 miles (measured along the rhumb line course from port of departure to destination) and
 - b. two passages of over 60 miles, for the duration of which the candidate must have been acting as skipper, and which must have included overnight passages

To be eligible for examination, candidates must –

- have achieved the above-mentioned minimum experience requirement in offshore waters
- be in possession of course completion certificates for the Yachtmaster Offshore Theory and Practical courses, or –
- have their logbooks correctly completed to include details of the required minimum passage experience and undertake an oral or written examination covering the syllabus of the Yachtmaster Offshore shorebased course prior to examination afloat
- hold the recognised First Aid Certificate and a Restricted Radiotelephone Operators Certificate of Proficiency or 1999 equivalent.

Candidates should note that although the above experience requirement is quite minimal it is the quality of experience which is important.

Under normal circumstances, yachtsmen and women will be working in comparatively local waters and can usually avoid adverse weather conditions with planning. However, candidates will be expected to demonstrate their competence and confidence to deal with unfamiliar situations and emergencies which might be encountered on extended passage well offshore, where they must be self reliant and fully aware of the organisation required for a yacht to be able to function efficiently during such passages.

To qualify for an AYF **Offshore Racing Skipper Certificate** a candidate must have gained and logged the following minimum experience –

- a. 30 days living aboard a racing yacht in commission
- b. 2500 nautical miles logged at sea to include –
 - three passages of over 60 miles (measured along the rhumb line course between marks from port of departure to destination)
 - two passages of over 90 miles (measured as above)
 - one passage of over 500 miles, non-stop, measured along the most direct navigable route from port of departure to destination

For all of these passages the candidate must have been acting as skipper and each of the passages must have included overnight passage making.

In addition, the candidate is required to prove satisfactory practical proof of their ability as outlined in the Offshore Racing Skipper syllabus.

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16

MARINE SAFETY AND SURVIVAL COURSE

SAFETY PREAMBLE

PREPARATION AND PLANNING

Crew briefing before undertaking voyage

Personal preparation: clothing and equipment, grab bag, personal strobe, EPIRB,

Designated first aid officer, medications, allergies, seasickness

Knowledge of vessel

Layout and stowage plan

On-board equipment checklists

Voyage plan, schedules, weather forecasts

AMSA Small Craft Particulars Form

AUSREP

WHAT IF?

Vessel preparation prior to voyage

Category 1 safety checklist

Fire safety and drill

Preparing for heavy weather, 'battening down', remove sheets and braces, secure spinnaker pole, install storm boards, wear harnesses below, prepare food and hot drinks (large capacity thermos)

Sea anchor or drogue, 'heaving to'

Stowage and inspection of survival equipment, liferaft, hand-held VHF radio, grab bag, EPIRB, flares and smoke signals, extra water

PFD's (lifejackets) types, procedure when jumping and wearing, stowage

Safety harness, tethers, strong points, harness points, jack stays (webbing, wire, spectra rope)

Immersion suits, dry suits, thermal or wet suits

Distress communications procedures

Chain of command, Leadership

CAUSES OF MARINE INCIDENTS

Human error

Poor seamanship and navigation

Weather; wind, waves, wave trains, sea and swell, fog

Open sea, coastal

Vessel construction and maintenance

Collision: vessels, objects, whales, water ingress (show tables), snorkel, goggles, extension tube

Fire, explosion

Stability and loading, capsize

Grounding

Rig failure, rig stress

Loss of steering

Injury: first aid, radio medical service (RFDS), medivac

Discuss elements of AYF/Oceans Marine First Aid module

Legal responsibilities and obligations

CREW OVERBOARD

Life ring, danbuoy, drogue, whistle, strobe, buoyant line

Secured to craft, ease of operation

Alternative appliances for initial emergency deployment, cushion, fender, torch, strobe (all with buoyant line)

6 knots equals 180 metres in one minute (15 seconds means 45 metres away from target)

SHOUT; LOOK AND POINT; THROW; TURN AND SEARCH

Distress signal, Mayday or Pan Pan?

Search Patterns: Quick Stop, Williamson Turn, expanding square, parallel, Join the Dots, GPS MOB,

Survival: signalling mirror, personal EPIRB, strobe, reflective tape, smoke signal, HELP, buoyancy, conserve energy and body heat, tread water,

Sea Marshall 121.5 MHz EPIRB, on-board alarm, RDF

Recovery: Lifesling apparatus, boarding ladder, other arrangements

Hypothermia, salt water intake; micro organisms

Handling recovered crew, seek medical advice and attention

ABANDONING VESSEL

Fundamental rule (step up into a liferaft)

Describe (prior to practical day) liferaft, construction, contents of survival pack (SOLAS, Coastal, AYF), stability, drogue, righting after capsize, extra equipment e.g. EPIRB, reverse osmosis pump, extra drogue, inflation/deflation

Grab bag

Distress signals and communications procedure from raft (flares, signalling mirror, VHF, other)

ABANDON VESSEL PROCEDURE

How many liferafts? Stowed above or below?

Muster station

Order and direction, training and drills

MAYDAY, EPIRB

Liferaft stowage and lashing, hydrostatic devices

Liferaft deployment, incl. when to launch, painter, strong point, weak link, entering and getting clear

Liferaft procedure, incl., righting capsized raft and routine, lookout, leadership and morale

SURVIVING

Safety related behaviour

Trauma, shock, decision making

Leadership and morale

Physiology of survival

Exposure; cold, heat, UV, water immersion, seasickness tablets

Hypothermia, dehydration, ration water intake, sources of water, reverse osmosis pump, rainwater, spare water

Starvation, protein and carbohydrates, sources of food, survival rations

Drowning, EAR, CPR
Injury, illness, death

Reduced physical functioning, stress fatigue metabolism, mobility, strength, human waste, constipation injury

Sea sickness, debilitation

Dangers in the sea, whales, sharks, fish, jelly fish

PSYCHOLOGY OF SURVIVAL

Disaster syndrome

Should the skipper of the disaster/incident be the leader of the survival?

Trauma, perceived dangers

Death

Emofional instability

Guilt

Delusion

Stress

Fatigue

Team cohesion, understanding individual characteristics and needs, leadership

Mental preparation, repetition training (drills), importance of prior and regular visualisation

'I'm OK now and I'll be OK tomorrow'

Importance of maintaining a positive approach and plan of action

Focus on the actions that have gone right rather the things that have gone wrong

Navigation (as an exercise)

Being aware, keep log, observations, ocean currents, bird life, clouds

SEARCH AND RESCUE

Responsibilities of Search & Rescue Authorities and search agencies
AusSAR

AMSA
National Search and Rescue Manual
Annual Australian Notices to Mariners

MARINE DISTRESS COMMUNICATIONS

MAYDAY, PAN PAN, SECURITE
Distress frequencies, HF, VHF
Race frequencies
Use of EPIRB's, flares and smoke signals, See-Blitz, HF and VHF

Other distress signals, 1998 Sydney Hobart experience, V sheet, sail number

Aircraft; search datum, procedures and patterns, communications
PADS, survival equipment, liferaft, pumps
RAAF, ASRK

If you have done everything right, help is on the way!

Location by fixed-wing aircraft, RDF, signals, response

RESCUE BY HELICOPTER

Civil SAR unit or military

Vessel speed and direction, pilot/observer line of sight, rotor downwash area, noise, clear vessel decks, updraught danger

Distress signals, orange smoke, rocket flares, signalling mirror

Communication, hand signals, dropped written message, helibox

Traditional recovery (jump into water for rescue), rescue from life raft, hi-line transfer, recovery from vessel

Handling winch line, winch line and strop, electrical discharge static

Rescue Paramedic control and actions

Stokes/Johnson basket, Billy Pugh basket, blood drain

Winch and hoist speed

Responsibilities and actions of helicopter crew

RESCUE BY SURFACE VESSELS

Communication, use of flares and smoke signals, dangers associated with rescue by large surface craft

PRACTICAL DAY

NOTE: Where possible liferaft procedures incl. launching is conducted as practical exercises

Rescue boat on stand-by, first aid kit on dock, diver ready for water

Liferaft, survival equipment, lifting strop and winch, life jackets, danbuoy and lifebuoy

Demonstrate and evaluate liferaft emergency and survival equipment

Students to wear wet weather gear (seaboots optional)

Correct donning procedure and demonstration of PFD

Demonstrate HEAT (Heat Escape Lessening Posture)

Jump in water, swim 25 metres

Huddle position, number off

Take off PFD in water and put on in water, number off

LIFERAFT DEPLOYMENT

Deploy raft, secure container

Board raft from water, overturn raft on students, number off

Each student right capsized/overturned raft, number off; all students climb back in raft from water

Student remain in raft for as long as possible

Deploy drogue, EPIRB, handle items in raft survival kit, activate orange smoke signal

Students to go to next phase of instruction from raft, swim to sling area

HELICOPTER SLING RETRIEVAL

(assisted and unassisted)

Instructor to demonstrate correct technique donning sling and lift position

Lift until feet clear water

Return to dock area

Showers, change, Debrief

Issue certificates

SUGGESTED REFERENCES

BOOKS, ARTICLES

Teki Dalton	<i>Seamanship and Safety (Chapters: Mayday, Mayday, Mayday and Search and Rescue, Survival in a Liferaft, Fire Safety, Medical Aid at Sea)</i>
	<i>Quinn's Swim</i> (Australian Sailing March 1994)
	<i>Join the Dots</i> (Australian Sailing 1995)
	<i>Safety First</i> (Cruising Helmsman Sept 1996)
AMSA	<i>Survival at Sea</i>
Michael Greenwald	<i>Survivor</i>
AusSAR	<i>National Search and Rescue Manual</i>
RAAN	<i>Annual Australian Notices to Mariners</i>
AMSA	<i>Safety Brochures</i>
HMSO	<i>Ship Captain's Medical Guide</i>
St John Ambulance	<i>Australian First Aid</i>
Michael Stadler	<i>Psychology of Sailing</i>
Neil Hollander and	
Harald Mertes	<i>The Yachtsman's Emergency Handbook</i>
Sid Stapleton	<i>Chapman's Emergencies at Sea</i>
Lynn Gillis	<i>Human Behaviour in Illness</i>
Jack H. Coote	<i>Total Loss</i>

VIDEOS

AMSA	<i>mayday,mayday, mayday</i>
AMSA	<i>From the Ground Up</i>
AMSA	<i>Alive Via Satellite</i>
Pains Wessex	<i>A Flare for Safety</i>
Moviemaster	<i>How to Survive in Cold Water</i>
WA Dept Transport	<i>Storm Alert</i>
Ninox Films	<i>Pacific Rescue</i>
Unedited news video	<i>Yamba Yacht Rescue 1993</i>
Various sources	<i>Selected 1998 Sydney Hobart Race footage</i>
RFD	<i>Liferafts</i>
TV Film	<i>17 Days in a Liferaft</i>

DRAFT #3

17

DRAFT - Syllabus and arrangements for A.Y.F. YACHT SAFETY & SURVIVAL COURSE

AIM: - To raise the level of safety awareness in offshore sailing

OBJECTIVES: - To assist offshore sailors, skippers and crews, to be aware of their responsibilities.

- To offer and discuss possible and practical strategies for coping with emergencies afloat.

- To help familiarise anyone contemplating an offshore passage with their safety and emergency equipment, its purpose, deployment and use.

- To learn from experiences.

VIDEOS: "Search and Rescue" (A.M.S.A.)

" Mayday Mayday Mayday" (A.M.S.A.)

" Storm Alert " (A guide to Severe Weather at Sea - W.A. Transport)

" Edited footage of the 1998 Sydney/Hobart Race Rescues " (A.B.C.)

PUBLICATIONS: A.Y.F. Manual (to be written)

Survival at Sea (A.G.P.S.)

A.Y.F. Special Regulations (A.Y.F.)

ARTICULATION: The Draft A.Y.F. Yacht Safety & Survival Course syllabus and content takes into account the draft requirements of the National Marine Safety Committee for on board safety training of crews, and the requirements of the I.M.O. Standards of Training and Watchkeeping.

DELIVERY OPTIONS: (1) Course Attendance, Demonstrations and supporting Literature, (sponsored manual)

(2) A.Y.F. Web Page, (perhaps added to (1) above)

(3) Custom made video of Course Content for use by individual course conductors.

The Course is provided in four modules:

- (1) PERSONAL SURVIVAL TECHNIQUES (7 Hours)
- (2) EARLY MANAGEMENT OF INJURY (1 Hour)
- (3) FIRE PREVENTION & FIRE FIGHTING (2 Hours)
- (4) RISK ASSESSMENT & MANAGEMENT (6 Hours)

Note: The times suggested above and in the Course Outline given below, depend upon the numbers of attendees. They are proposed as maximums. Small numbers will need less time than that proposed.

COURSE OUTLINE

(1) PERSONAL SURVIVAL TECHNIQUES

SUBJECT AREA	Lecture	Practical
1.0 Introduction, Safety and Survival: 1.1 Safety Guidance 1.2 Preparations for Severe Weather 1.3 Principles of survival at sea 1.4 Survival craft and Appliances	0.75	
2.0 Emergency Situations 2.1 Types of Emergencies 2.2 Precautions 2.3 Crew Expertise 2.4 Musters and Signals 2.5 Crew and Emergency instructions 2.6 Extra Equipment and survival 2.7 Abandoning Ship & Complications	0.50	
3.0 Evacuation 3.1 Abandoning Ship - Last Resort 3.2 Personal preparation 3.3 Need to prevent panic 3.4 Crew duties - launching survival craft 3.5 Master's Orders to Abandon Ship 3.6 Means of Survival	0.75	
4.0 Liferafts - Functions and Equipment		1.0
5.0 Personal Lifesaving Appliances 5.1 Lifebuoys 5.2 Lifejackets 5.3 Immersion Suits 5.4 Thermal Protective Aids 5.5 Harnesses 5.6 EPIRB's and PLB's 5.7 Strobe Lights	0.50	

6.0 Personal Lifesaving Appliances - DEMONSTRATIONS 6.1 Lifebuoys 6.2 Lifejackets 6.3 Inflatable Lifejackets 6.4 Immersion Suits 6.5 Thermal Protective Aids 6.6 Personal Survival without Lifejackets 6.7 Launching Survival Craft 6.8 Boarding Survival Craft from vessel and water 6.9 Securing Craft and Deploying equipment 6.10 Deploying EPIRB's 6.11 Use of Flares and Smoke Signals		2.25
7.0 Survival at Sea 7.1 Dangers to Survivors 7.2 Best Use of Survival Craft Facilities 7.3 Need to maintain Watch 7.4 Need to assist Rescue	0.50	
8.0 Helicopter Rescue 8.1 Communicating with Helicopter 8.2 Evacuation from Vessel and Liferaft 8.3 Methods of Helicopter pick-up 8.4 Correct use of Helicopter Harness		0.50
9.0 Weather Forecasts and Emergency Radio Equipment 9.1 Interpretation of Weather Forecast Information 9.2 Portable radio (VHF) 9.3 EPIRB's 9.4 Sources of Weather Information	0.25	

(1) EARLY MANAGEMENT OF INJURY - 1 Hour

SUBJECT AREA	Lecture	Practical
General Principles	*	
Positioning of Casualty		*

The Unconscious Casualty, & Hypothermia	*	
Resuscitation	*	*
Bleeding, Marine Organisms & Management of Shock	*	
Burns, Scalds, Fractures & Dehydration	*	
Rescue and Transport of the Casualty	*	

(1) FIRE PREVENTION & FIRE FIGHTING - 2 Hours

SUBJECT AREA	Lecture	Practical
1.0 Introduction and Safety Principles	*	
2.0 Theory of Fire 2.1 Conditions for Fire 2.2 Fire Hazard and Spread of Fire 2.3 Classification of Fires and Suitable Extinguishing Agents	*	
3.0 Fire Prevention 3.1 Fire Prevention Principles 3.2 Vessel Construction Arrangements 3.3 Safe Practices	*	
4.0 Fire Fighting Equipment 4.1 General 4.2 Smothering Equipment & Fire Blankets 4.3 Cooling Systems 4.4 Portable Fire Extinguishers 4.5 Positioning and Maintenance of Extinguishers 4.6 Suitable Clothing	*	*
5.0 Fire Fighting Organisation 5.1 General Emergency Alarm 5.2 Fire Control Plans 5.3 Communication 5.4 Personnel Safety Procedures 5.5 Periodic Drills	*	

6.0 Fire Fighting Methods 6.1 Knowledge of Fire Safety arrangements 6.2 Fire Alarms and First Actions 6.3 Fire Fighting	*	*
7.0 Fire Fighting Drills 7.1 Small fires 7.2 Extensive Fires 7.3 Drills in smoke-filled spaces		*
8.0 Safety of Personnel & Vessel	*	
9.0 Review	*	

(1) RISK ASSESSMENT & MANAGEMENT

SUBJECT AREA	Lecture	Practical
1.0 Responsibility of Owner/Skipper and Crew 1.1 Compliance v/s Prescriptive Regulations 1.2 Duty of Care 1.3 Importance of Training, Preparation and Rehearsal	*	
2.0 Risk Assessment Methods 2.1 The Safety Case Approach 2.2 Numerical 2.3 Others	*	
3.0 Areas of Risk 3.1 Voyage Preparation - Equipment / Weather 3.2 Access to and Boarding the vessel 3.3 General Working in Exposed Positions 3.4 Fouled Gear and Repairs 3.5 Rough Weather Operations 3.6 Severe Weather Strategies 3.7 Watch-Keeping 3.8 Engine & Machinery/Sail Handling/Winches 3.9 Galley Operations 3.10 Accommodation Access/Exits 3.11 Emergencies at Sea	*	*

<ul style="list-style-type: none"> - led vessel strategies - of Rudder - of Mast - Overboard - ing - ding - e Weather Damage - cal - ion - doning Ship - enance Work - nal Welfare <p>3.12 Environmental Damage</p>	<ul style="list-style-type: none"> Disab Loss Loss Fire Man Flood Stran Sever Medi Collis Aban Maint Perso 		
4.0 Identifying Hazards		*	*
5.0 Evaluating Hazards		*	*
6.0 Risk Reduction & Controls		*	*
7.0 Documentation		*	
8.0 Physical Hazards			*
9.0 Chemical Hazards			*

10.0 Biological Hazards		*
11.0 Mechanical & Ergonomic Hazards		*
12.0 Human Hazards		*
13.0 Logbooks & Records	*	

COURSE COMPLETION

Satisfactory Course Completion is by attendance, observation and, where practicable, participation in all required Modules.

RECOMMENDATION

Effective from 1 January 2001, all crewmembers participating in a Category 1 or Category 2 Ocean race must produce evidence of attendance at an approved course covering Modules (1) - (4) outlined above, at least once in every 3 years.

Clubs may introduce this requirement at an earlier time and by progressive numbers of crewmembers on each boat, provided they are satisfied that prospective crewmembers have had adequate access to a course.

CLUBS:

- (a) Clubs which run Category 1 and 2 Races must ensure that all the above Modules (1) - (4) are available annually for all participating members.
- (b) Clubs running Category 1 Races must run a course/short seminar covering items (3) - (8) of Module (1) immediately prior to each race.
- (c) Recommended as above (a) for Clubs running Category 3 Races.

SKIPPERS/CREWS:

- (a) Every participant in any Category 1 and Category 2 Race must produce evidence of attendance at an approved course covering Modules (1) - (4) at least once in every three years, and -
- (b) Attend the required pre-race Modules immediately prior to any Category 1 race entered.
- (c) Category 3 recommended as for (a) above.

18

From: Andrea Holt (Gus) <gus@cyca.com.au>
To: teki@ozemail.com.au <teki@ozemail.com.au>
Date: Thursday, 12 August 1999 10:50
Subject: CYCA Seminars, Safety etc.

Dear Teki,

Thank you for your comments on the recent seminars. All printed material supplied to members on the Flare Day was supplied by the Flare Manufacturers.

The Life Raft and Helicopter Drills did not ask for all aspects of the Safety Procedure and it is intended to involve other Rescue Agencies.

The Sydney-Hobart Notice of race has been finalized and AYF Certification for skippers is not compulsory. We also suffer the same weather related issues in all long races.

Safety inspectors will be briefed on the new requirements for the Sydney Hobart, however no changes to the Notice of Race can now be made.

Yours faithfully,
Phil Thompson.

15/09/99

fax: 19

Re: Attention Andrew Thomson

From: Teki Dalton
To: Christina
Subject: Re: Attention Andrew Thomson
Date: Sunday, August 15, 1999 18:46:59

Dear Christina
Sorry about that, the technology beats me some time.
Best wishes
Teki

From: Andrea Holt (Gus) <gus@cyca.com.au>
To: teki@ozemail.com.au <teki@ozemail.com.au>
Subject: CYCA Seminars, Safety etc.
Date: Thursday, 12 August 1999 10:50

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Safety inspectors will be briefed on the new requirements for the Sydney Hobart, however no changes to the Notice of Race can now be made.
Yours faithfully,
Phil Thompson.

-----Original Message-----
From: Christina <cyca@bigpond.com>
To: Teki Dalton <teki@ozemail.com.au>
Date: Monday, 16 August 1999 10:19
Subject: Re: Attention Andrew Thomson

- > Teki,
- >
- > You forgot to include attachment.
- >
- > Regards,
- >
- > Christina Del Conte
- >
- > _____
- >> Dear Andrew
- >> With reference to my notes to Phil Thompson on the sea safety seminars and
- >> the Hobart race safety items, I have received a reply (attached).
- >> Is this the official CYCA response to those matters? ----->
- >> Look forward to hearing from you
- >> Teki Dalton
- >
- >
- >

To: Teki Dalton
From: Andrew Thomson

- Sorry, Teki.
- Notice of Race is out and follows the recommendation of the S.H.R Review.

Andrew 22

Yes!

0262475753 fax

From: Teki Dalton <teki@ozemail.com.au>
To: charlestegner@painswessex.com.au <charlestegner@painswessex.com.au>
Date: Monday, 16 August 1999 12:16
Subject: Fw: CYCA Flare day

20

-----Original Message-----

From: Teki Dalton <teki@ozemail.com.au>
To: geneng@painswessex.com.au <geneng@painswessex.com.au>
Date: Sunday, 15 August 1999 6:55
Subject: CYCA Flare day

Attention Charles Tegner

Dear Charles

I recently sent an E-mail to the CYCA in relation to the flare day they conducted on 25th July. My comments included some criticism of the information contained in the printed material they distributed prior to the exercise. They have replied to me and said that the printed material (I assume the information) was provided by the manufacturers. Is this correct?

I have attached a copy of my E-mail, and their reply. I would be pleased to receive your comments as soon as possible.

Yours sincerely

Teki Dalton

From: Charles Tegner <charlestegner@painswessex.com.au>
To: Teki Dalton <teki@ozemail.com.au>
Date: Friday, 20 August 1999 3:34
Subject: Distress Flare Procedures

21

Dear Teki,

Thank you for your e-mail of 16th August with helpful suggestions; these are always most welcome.

The information was prepared by Dale Thompson of Pains Wessex as a guide for the CYCA only. These guidelines were not intended as a stand alone document on the correct use of distress flares, but as a supplement to other information already in the marketplace.

Night time identification by raised symbols is very important and required under Australian Standards. However, Pains Wessex are the only flares to meet this requirement. Perhaps we should raise the issue with the AYF and CYCA to mandate that only Australian Standards accredited flares should be used. Other brands claim "compliance" but do not have night identification, and do not bear the Standards Mark. We believe that, as for fire extinguishers and lifejackets, flares should also bear the Standards Mark of accreditation.

The CYCA are planning another Flare Day in December. Your comments will be taken on board and included with other improvements for material to be prepared for that event.

Best regards,
Charles Tegner

22

From: Teki Dalton <teki@ozemail.com.au>
To: Charles Tegner <chariestegner@painswessex.com.au>
Date: Friday, 20 August 1999 6:08
Subject: CYCA flare day

Dear Charles

Thank you for your reply. Did you see a copy of the CYCA information sheet? The printed sheet which was distributed to the participants prior to the exercise was a page with CYCA letterhead and produced in the sailing office. There was no other information (such as your pamphlet) distributed or offered.

As I have said in my note to the CYCA, some of the information supplied to participants was misleading and I'm surprised that, as you were acknowledged as being involved, your man did not take more care in checking and confirming the information well before the date as the exercise was advertised for nearly six weeks prior.

I recently ran a flare exercise on the edge of Lake Burley Griffin (day and night) for 10 people doing a yachtmaster course with me. I would have been very embarrassed and probably found to be incompetent to run such a course had I issued the same information as the CYCA.

The safety seminars which will be held for offshore sailors around the country are in response to a terrible tragedy. It seems that most of those involved in the organisation and delivery of those events are not capable of recognising or understanding the process and delivery of safety education and are satisfied with a third rate approach and "she'll be right, mate!"

I would not be surprised if the NSW Coroner is taking some note of the lack of seriousness and expertise in the sport's approach to safety education.

As you can see, I am not happy with the handling of a most serious matter.

Kind regards

Teki Dalton

15/09/99

23

From: Peter_Campbell <Peter_Campbell@bigpond.com>
To: Teki Dalton <teki@ozemail.com.au>
Date: Wednesday, 1 September 1999 5:34
Subject: Re: CYCA

Dear Teki

I agree with you that your questions need specific answers, where possible. Unfortunately, I don't have the answers to many of the questions as that is being handled by the Sailing Office. However, the general policy of the CYCA is that it is not an educator and where possible it will bring in experts to lecture, eg the makes of life rafts, flares, etc. They will have other S&R people involved as well as the Navy in future exercises.

In other states, clubs are using experienced yachtsmen to talk of how they handled the 1998 Sydney-Hobart, eg Lou Abrahams and his crew in Victoria, John Saul in Tasmania.

I have spoken to Phil Thompson about your specific questions have also onpassed your comments and questions to the Commodore. I have stressed the urgency of answers to meet your publication deadlines.

Kind regards - Peter

-----Original Message-----

From: Teki Dalton <teki@ozemail.com.au>
To: Peter Campbell <peter_campbell@bigpond.com>
Date: Wednesday, 1 September 1999 2:18
Subject: CYCA

Don't want to push - but -did you receive my E-mails and what do you think?
My deadline is approaching fast.
Best wishes
Teki

From: Peter_Campbell <Peter_Campbell@bigpond.com>
To: Teki Dalton <teki@ozemail.com.au>
Date: Wednesday, 1 September 1999 5:41
Subject: Re: CYCA

24

Dear Teki

Not sure if my reply went through, but basically I have spoken to Phil Thompson about the need to answer your questions ASAP. He has agreed to do so in consultation with the Commodore, so you should get an early reply.

Basically, the policy of the CYCA is not to be an educator but to bring in technical experts to talk about liferaft, helicopter drill, flares etc. They will be using S&R people other than the Navy at future seminars and also asking experienced yachtsmen to talk about they way they handled the 1998 and previous storms. Clubs in Tasmania and Victoria are doing much the same.

I trust you get an early and positive response from the Club.

Kind regards - Peter

-----Original Message-----

From: Teki Dalton <teki@ozemail.com.au>
To: Peter Campbell <peter_campbell@bigpond.com>
Date: Wednesday, 1 September 1999 2:18
Subject: CYCA

Peter

Don't want to push - but -did you receive my E-mails and what do you think?
My deadline is approaching fast.

Best wishes

Teki

15/09/99

From: Christina Del Conte <cyca@bigpond.com>
To: Teki Dalton <teki@ozemail.com.au>
Date: Monday, 6 September 1999 4:07
Subject: CYCA Training Seminars

25

Teki,

Peter Campbell has passed your information onto the Chairman of the Sailing Committee. He would prefer a more positive tone to your article and to facilitate this, he is offering you the opportunity to present a detailed proposal outlining procedures and content to be followed for the training days at the next Sailing Committee meeting. Meeting will be held on Thursday 16 September at 6:00pm in the CYCA Conference room.

Could you please advise the Sailing Office of your attendance.

Phil Thompson for
Hans Sommer.

From: Teki Dalton <teki@ozemail.com.au>
To: Christina <cyca@bigpond.com>
Date: Thursday, 9 September 1999 9:44
Subject: Attention Hans Sommer Sailing Committee

26

Dear Hans

Thanks for the invitation to speak to the Sailing Committee on Thursday 16th September. I will be delighted to attend.

The content and procedures involved in the safety seminars to be conducted by the CYCA is only a small part of the problem of safety education, but, although I believe my presentation will be valuable (and I hope enlightening) it will not be able to address the fact that the CYCA is not, by it's own admission, an educator nor an accredited AYF Recognised Training Establishment and therefore not able to issue meaningful certificates, particularly for a series of meetings to discuss isolated safety issues which the CYCA has called safety seminars.

There is a complete administrative, training structure and consultative process which has been overlooked by the CYCA and this process has been given a surprising lack of urgent attention by the AYF. I can't solve those problems but (with others who have a deep concern with the direction the CYCA is taking) can only show where the system has fallen down and ways to correct it.

You have asked me to provide some answers on the 16th. I am happy to do that but I would like to receive, soon, answers to my questions forwarded to you by Peter Campbell. If you don't have a copy, then I will be happy to send another.

Kind regards

Teki

15/09/99