

# FINA



FEDERATION INTERNATIONALE  
DE NATATION  
FOUNDED IN 1908

# OPEN WATER SWIMMING MANUAL

2006 EDITION



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FEDERATION  
INTERNATIONALE  
DE NATATION



FOUNDED IN 1908



Dear Friends,

It is my great pleasure to introduce to you the *FINA Open Water Swimming Manual*, a valuable tool for all those interested in organising and promoting this spectacular discipline across the five continents.

On 27<sup>th</sup> October 2005 in Lausanne, the International Olympic Committee Executive Board decided to include the 10km event for men and women in open water swimming in the Beijing 2008 Olympic Games competition programme.

From now on, all five FINA disciplines – swimming, diving, water polo, synchronised swimming and open water swimming – will be represented at the Olympic Games.

This achievement demonstrates the value of open water swimming, a sport which can be practised by everyone in rivers, lakes or in the sea. It is a sport that is kind to the environment, reminding people of the need for all individuals to preserve the precious vital element of water. Swimming in open water constitutes the most natural of the sport activities and this Olympic recognition represents a victory for our 191 Member National Federations, who from now on will have additional means to facilitate the progress of the aquatic sports.

The decision also highlights the added value of the aquatic disciplines within the Olympic programme. At the same time, it represents an additional responsibility for FINA. Together with its National Federations and Continental Associations, we must continue working for the development of our Sport worldwide.

This increased visibility also leads to the importance of having such a manual. On this occasion, I would like to thank the FINA Technical Open Water Swimming Committee, and especially its member Dennis Miller, for the hard work in compiling these useful guidelines for all the organisers of open water swimming events.

I wish all those reading and following this manual a fruitful work and rewarding competitions. Your success is certainly the success of FINA.

A handwritten signature in black ink, appearing to read 'Mustapha Larfaoui'.

Mustapha Larfaoui  
FINA President

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## **PREFACE**

This manual is intended to assist the management committees of organising Federations in the successful staging of FINA Open Water Swimming Events.

Every open water swimming event will have specific challenges depending upon the venue, type of water, start and finish points, and safety considerations. While covering these points in general terms, each organising committee should appoint local specialists to interpret the guidelines to fit their specific needs.

Open water swimming competition has become incredibly popular. Whether it is a 1600 metre lake swim or a 25 kilometre ocean swim, a carnival-like atmosphere usually prevails at open water events, despite the arduous demands placed on the swimmers. Great respect is afforded those aquatic athletes who conquer any open water challenge. Those who organize the technical support and provide for the safety of these athletes must also be recognized for their efforts.

For many years, the majority of open water competitions were reserved for the hardy few who would specialize in specific training to overcome the special challenges they would face. However, over the past two decades literally millions of swimmers at every level have ventured into the world of open water swimming. With the increasing popularity of triathlons and the thousands of open water races now offered around the world, this number continues to increase rapidly. Many of these uninitiated swimmers have little idea of what they are getting themselves into, and the hazards and potential for trouble or tragedy have multiplied. The need for efficiently organising safe swims has become imperative.

FINA has certainly been at the forefront of this growing phenomenon and has included open water swimming in its World Championships since 1991. We have added new distances and encouraged both our National and Continental Federations to provide Championship events. In addition we have organized numerous Open Water Clinics around the world as we grow the sport.

With the inclusion of the 10km event for men and women in the 2008 Olympic Games aquatic programme, FINA looks forward to increased interest and support for open water swimming worldwide. Certainly this booklet should serve as a valuable resource to all who plan to join us in promoting the fantastic aquatic endeavour we know as 'Open Water Swimming'.

## INTRODUCTION

### OPEN WATER SWIMMING

FINA defines open water swimming as:

- OWS 1.1**            **OPEN WATER SWIMMING** shall be defined as any competition that takes place in a body of water such as rivers, lakes or oceans.
- OWS 1.1.1**        **LONG DISTANCE SWIMMING** shall be defined as any competition in open water events up to a maximum of 10 kilometres.
- OWS 1.1.2**        **MARATHON SWIMMING** shall be defined as any competition in open water events over 10 kilometres.
- OWS 1.2**            **The minimum age limit for all FINA open water swimming events should be at least 14 years of age.**

There are as many types of open water events as there are waves in the ocean. Rough water or open water swimming events normally occur in bodies of water such as an ocean, a lake or river, although man-made quarries, pools, rowing courses, reservoirs and the like are sometimes used.

### Ocean Swims

Ocean races have become increasingly popular. Traditionally ocean swims feature a mass start on the beach with a short run into the water. The course then:

- Parallels the beach; or
- Goes out to or around a fixed point such as a pier or island; or
- Circles a closed course marked by buoys; or
- Follows a course that is a combination of any of the above.

In some races there is a final run up the beach to the finish line. Most ocean races are between 2.5 and 8 kilometres. The traditional national championship distances are five, ten, fifteen, and twenty five kilometres.

In determining the type of course for your event, the environment of the race should be your guide. If there is a pier, why not go to the top of it? Can you get those fishing to pull in their line as swimmers go underneath? If there is a strong current running along the beach, you may want to swim wide.

If you do not have access to buoy markers, and sufficient boats and personnel needed to patrol a marked course off the shoreline, a closed course may not be feasible.

Keep in mind that a parallel point to point course usually does not finish where it starts, while most others generally do. In addition, some swims must have a finish line in the water. A parallel course will require more facilities and co-ordination between the start and finish.

### Lake and River Swims

The same course as in ocean swimming exists in lakes, rivers, dams or rowing courses:

- Parallel to a shore; or
- To and around a pier, rock, island or other identifiable landmark; or
- Around a closed course marked by buoys; or
- Point-to-point.

These types of swims are usually easier to organise than ocean events since the variables of ocean swimming are greater. Conditions in lakes or rivers remain more constant. In a river, make sure you take the strength of the current and the course distance into account to estimate the elapsed swimming time.

### **Escorted Swims**

When conditions or distance indicate, a swimmer must be escorted. As a guide, any event over 2 hours in duration (10km or more) should have escort craft for swimmers. This escort may be by paddler, water ski/canoe, rowing boat or larger powerboat/yacht depending on the safety factors. The difficulties in obtaining reliable escorts, whether they are paddlers or experienced boat captains, are obvious and they are essential to the safe conduct of the meet.

The danger of boats and propellers only a few feet away from swimmers is an added risk. Diesel and petrol (particularly two-stroke) fumes can be dangerous and annoying on still days. Anything that impedes the progress of a swimmer is a consideration when determining the number of escorts you need. You need to establish special rules such as 'no paddlers in the start area, escort boats may not go next to their swimmers for the first 500m', etc. The size and type of each escort is important. You probably do not need the Queen Mary, but you do need a craft large enough to carry the boat crew, special safety and feeding supplies and the swimmer's coach/handler/representative and the observer/judge.

The paddler must be sufficiently fit to complete the course. Boats must be capable of running at a very slow speed. Back-up paddlers and boats are mandatory. Boats are required to have the minimal safety equipment as prescribed by Coast Guard regulations. It is also suggested that each escort boat have a whistle to sound and flag to wave in case of emergency. This can also be used if the crew is unsure about the course direction.

You may also want to consider the use of both boats and paddleboards as escorts. The boats support the paddleboards with back-up paddlers, food, and coach for the swimmer. It may be possible, although not always necessary, to have one boat act as a hub for several satellite boats or swimmers.

### **Risk Management (Safety)**

Safety is the paramount issue in the organisation and conduct of any open water swimming event. The first step in planning an open water swim is the consideration of all safety factors. Throughout this guide you will find numerous recommendations and suggestions that minimise risks. It's up to the organiser how to implement these into your events.

The local Red Cross society or St John's Ambulance may be able to provide information, personnel and equipment to assist with the conduct of a meet. Local boat, canoe, rowing, and kayak clubs may also be able to assist. One word of caution: find out, in advance, if there will be any charges associated with their support.

If your event is very long and/or crosses heavily-used shipping lanes, contact the local Harbourmaster. Their main concern is for safety on the water and they can be of great help. One valuable service they are usually able to provide is the notification of ships in the area of the race. They will also provide you with assistance in filling out the necessary permit requests.

If you need help with communications, local amateur radio organisations are helpful and eager to assist.

Do not try to do it alone. There are any number of volunteer groups and organisations that are willing to assist. Try local Sea and Boy Scouts, Emergency Services Groups, civic groups, local swimming clubs, boat clubs etc. Their public service orientation can really help get jobs done that might otherwise prove unnecessarily expensive.

Don't forget to notify authorities such as local councils, police, hospitals and ambulance services that you are staging an event. You may just require their services and with prior advice they may offer assistance. It is highly advised that organisers have public liability insurance.

## **ORGANISING AN OPEN WATER COMPETITION**

*The organisation of an open water swim event is complex, time consuming and requires detailed organisation in order for it to be a success. This documentation provides a guide to assist organisers who are tasked with organising an open water or long distance swim event. The following details can be cross referenced to the checklist (Appendix 1).*

The organisation can be broken down into a team of officials, who are likely to include the following:

- **Event Organiser** – the person who has ultimate responsibility for the organisation of the team.
- **Event Administrator** – a person able to cope with the distribution of paperwork related to the event and who can step into the organiser's role.
- **Course Organiser** – person delegated with the responsibility for the marking and measuring of the site and each course.

### **Other officials that should be appointed:**

- **Race Referees and Judges** – refer to FINA definition
- **Safety Supervisor** – refer to FINA definition
- **Medical Officer** – refer to FINA definition
- **Finance Administrator** – a person to draw up and monitor a budget for the event
- **Race Recorder** – refer to FINA definition

These people form the core planning and event team. They hold responsibility for all aspects of the event, the results service, pre-event planning meetings, problem solving, assigning responsibilities, etc. It is recommended that planning should cover:

- A meeting to discuss the event.
- Meeting(s) to ensure that all formal approvals are available: e.g. Police, Red Cross, St. John's Ambulance, Local Authority, Coastguards etc.
- Safety review.
- Organisers' briefing to ensure that all involved are aware of their responsibilities.
- Competitors' briefing to cover safety and announce any alterations to the course or other relevant details.
- Officials' briefing to ensure that all officials are up to date with the current status of the event and any safety issues.
- Media briefing to address the press, TV, local radio, etc.
- Post-race meeting to confirm results, discuss procedures, event outcome and report preparation.

## **ADVANCE PREPARATION**

### **Permissions**

In order to run an event effectively, sufficient planning needs to be in place with entry forms being made available. The starting place for this is the Local Authorities, site and land-owners (as applicable) and Local Emergency Services (including Hospitals).

All preliminary notification of the event should include:

- Proposed date of the event
- Proposed venue
- Safety considerations
- Proposed start and anticipated finish
- Outline proposal of course; and alternative venues
- Estimated number of competitors.

## **Course Planning**

One of the most important factors is course planning. There are a number of factors and guidelines that should be observed and all need careful consideration for safety and suitability.

## **Course Measurement and Marking**

It is important that the course is determined following local advice and historical data and measured well in advance. This is to ensure that changes to the course can be made should weather or sea/water conditions deteriorate. Consideration should be given to planning an alternative course that can be put into effect with the minimum of delay.

## **Entry Forms and Race Information**

Competitors, as well as officials and other interested bodies need to know information about the course. The information needs to be as accurate as possible at the time of printing and imparted on the entry form and/or information pack. The basic information should include:

- **When:** date, start and finish time, prize giving;
- **Where:** location, direction and maps;
- **Refreshment:** arrangements in place communicated to competitors prior to their arrival at the event;
- **How much:** entry fee;
- **Health and safety information:** special local conditions, water temperature, light conditions and anticipated water conditions;
- **Format:** pool, river, lake or open water swims, wave starts, age categories;
- **Result:** show, when, where;
- **Disclaimers:** place a disclaimer on the entry form;
- **Medical conditions:** this information should be clearly stated on the back of the race number and on the entry form and include age, medication and drugs prohibition.

*Any alterations to the published information including safety issues need to be made available either in the race information pack or displayed in a prominent position and included in the race briefing.*

## **RACE ORGANISATION**

### **Registration**

The registration procedure needs to be clearly explained to competitors before the event. An area should be made available for registration that can cope with a number of entries. There should be a clearly defined entrance and exit point with marshals to ensure no undue delay occurs.

It is standard for registration to:

- Check disclaimer is signed, to include medical information and ability to swim the distance;
- Check competitor against list of entrants to determine starters, etc;
- Issue race numbers;
- Check competitor information is correct.

**The registration area is also a good place to have a race information board with race details and any last-minute changes to the published programme.**

### **Marshalling**

Once the course is finalised, numbers of marshals, safety officials, and escort boats need to be identified and positioned. Recruit sufficient marshals and escorts crews as soon as possible. Local swimming, canoe and rowing clubs are good sources of event marshals and escorts as well as local gyms, health clubs, scouts/guides, women's groups and service organisations (e.g. Rotary).

It is important you look after and identify marshals, who will then be willing to assist in the following years or for future events. This includes feeding them, donations to their clubs, etc.

Ensure marshals are of a calibre fit to carry out the function required. Brief them on their exact duties and responsibilities as far in advance of the event as possible and ensure each marshal knows their exact location. This can be done with maps or by a site visit. Each marshal should be given detailed race information, water data, details of emergency procedures, radio and contact numbers and the name of the safety officer (including call sign) and race judge. In longer events, refreshments should be supplied and/or relief marshals arranged.

It is vitally important that the organiser has made provision for non-attendance of marshals, particularly safety crews. A list of marshalling priorities should be produced and marshals re-assigned from lower priority points as required. Under no circumstances should marshals be asked to endanger themselves. **Where you are reliant upon a separate organisation providing safety crews it is essential that they are briefed on your safety procedures and that the compatibility of the two disparate procedures is assessed.** All marshals should be issued with safety equipment and clothing including weather protection and life jackets.

The following events will require marshalling and the type of venue will dictate the duties required. These may include refreshments, car parking, registration, timing and results.

- **Open water swims:** safety crew, start/finish marshals, marshals to control spectators and others;
- **Post race:** helpers are needed to clear up, take down signs, dismantle barriers, pick up litter, etc.

### Race Briefing

There should be a separate briefing for both competitors and marshals. The timing of the briefings needs to be clearly advertised beforehand. The competitors' briefing should take place in an area that allows the expected number of competitors to gather and hear the information clearly. Any information updates can be passed on at the briefing.

### Start and Finish

The start and finish need to be clearly defined. The start procedure should be made known to all competitors and there should be an **emergency system to either stop the event or change the course.**

### Timing and Results

A system needs to be in place that can cope with the demands of the race. Competitors need to be processed quickly and the results can be produced by hand. In large events, a more sophisticated system may need to be considered. If possible, the system and marshals should have a trial run before the race to iron out any problems. Whatever timing system is used, it should produce a list of competitors on the race day and a further list of results to dispatch to all competitors.

### Race Facilities

Consideration should be given to the following:

- Sufficient parking for competitors, spectators and officials, suitably sign posted;
- Toilet and wash/changing facilities (competitors should be advised in advance if these are not available at the venue);
- Baggage storage and secure areas;
- Refreshments and catering facilities for competitors, officials and spectators.

### First Aid and Medical Cover

**Medical Personnel:** The recruitment of suitable medical personnel is vital. There are a number of organisations such as the St. John's Ambulance and the Red Cross. Before the event the organiser

must ensure the availability of sufficient medical personnel and the local hospitals' emergency departments must be advised. This is compulsory for sea swims. There should be sufficient people to cope with a worst-case scenario particularly if the event is a sea swim or cold water swim. It is recommended that a minimum ratio of 1 first aid professional to every 80 competitors be maintained.

**Siting of Medical Facilities:** This is particularly important. They are most likely to be needed on open water swims at the race finish and at high risk points on the race route as well as having basic facilities on the escort boats. Consideration should also be given to providing a fast response boat with medical facilities. These points should be identified by a risk assessment carried out by the race organiser, sanctioning officer and appropriate medical personnel prior to the commencement of the race. All first aid points should be able to communicate with the Emergency Services.

**Drug Testing:** The relevant National Federation headquarters may notify the event organiser that a nominated Doctor will attend the race to conduct drug testing. If this happens, the organiser should provide personnel to assist. The organiser is to arrange an area where the Doctor can operate in relative seclusion.

### Communications

**Setting up the System:** A system can be technically advanced or simple, but it does need to be tried out in advance of the race. The system needs to be able to:

- Contact the Race Organiser in case of problems, queries or emergencies during the race;
- Contact the on-site medical personnel;
- Contact external medical services quickly;
- Relay information to the commentary team;
- Contact the race referee.

One practical option is to hire communication units, or to hire the units and allocate them to selected personnel. Any more than two or three units will become expensive.

An alternative is to use mobile phones as the majority of people have them these days. This is likely to be the least costly option if it is feasible, and a list of telephone numbers can be issued to all communication officers in advance, including the central information point (**you will need to check for mobile phone or radio black spots before the event**).

### Information

Information needs to be made available to all parties concerned. For large events, a good Public Address system can be hired and a race commentator briefed. This needs to be audible in as many areas as possible. Appeals and calls for particular personnel can be heard immediately.

### Finance

**Race Budget:** A race organiser needs to prepare a race budget. Without this it is not possible to accurately chart and calculate income, expenditure, committed funds or the balance of the account at the end of the event. A race budget needs to be approved in advance by the appropriate officers and the financial responsibilities understood. Extra or unexpected costs might be incurred from spectator facilities needed, attendance by the Police, etc.

**Entry Fees:** The setting of an entry fee is a decision made by the race organiser.

**Financial Security:** It is important that the race is able to fulfil its financial obligations. Failure to meet these commitments reflects badly on the sport, FINA and the race organisers.

### WHAT DO WE DO IF SOMETHING GOES WRONG?

Most events are carefully planned and well organised, but a few fail and some of these are due to unforeseen emergencies. The purpose of this section is to plan for these unforeseen events, to reduce their impact on the event, the participants and the reputation of the organising body.

### Lack of Course Marshals

If an event is inadequately marshalled it is likely to fail in some aspects, for example in the provision of suitable escort craft. Marshals must always be alert and capable of the demands of the task.

### Results

The preparation of results is important to competitors and can cause frustration at the end of an event. Pre-planning and rehearsal can reduce the risk of this problem.

### COURSE PREPARATION AND RISK ASSESSMENT

The organiser should make sure that the choice of water for an open water swim is suitable for the purpose and that the competitors are not being placed in any danger due to the location or condition of the selected water.

There are a number of factors that need to be considered and documented before an area of open water is used for an event, dependant on whether a sea, lake or river swim is being considered.

- Access, condition and proximity of start and finish points
- Likely water temperature (**set event minimum temperature**)
- Currents or eddies
- Water quality
- Hidden, overhanging or underwater hazards
- Other water users
- Minimum depth of not less than 1 metre at any point, excluding start and finish
- Conditions underfoot at start and exit

The organisers should consult with regular users of the chosen water – fishermen, lifeguards, canoeists, recreational boaters, windsurfers, etc.

Access to the area is very important as this will not only determine how each event should take place but also, in the event of an emergency, how emergency services would gain access to the start and finish areas and to the course.

Course design should allow for minimal congestion at the race start.

The start and finish areas should be clearly defined. The start should be wide enough so the proposed number of competitors can make a safe start free from interference from others. The finish area should be marked so that there is no confusion as to exactly when the course is completed.

The actual swim course should be marked with buoys that are clearly visible when in the water. Turn buoys should be at least 1.5 - 2 metres high in the water. All markers should be fixed so they will not move in prevailing water conditions or tide turns. A lead boat or canoe may be required for the leading swimmer. Swimmers must wear numbered, brightly coloured swim caps.

### Safety Management

Safety craft and/or canoes must be provided. Personnel assigned to water safety should be to the ratio of 1 to 20 competitors. Emergency exit points should be marked for swimmers to leave the water.

Consider what is the safe number of swimmers to have in the water at any one time.

In addition to canoes, motorised safety craft should be employed with full warning, first aid and warming facilities.

Even when the water temperature and air conditions are good it is advisable to have additional resources at the swim exit. Hypothermia can occur in relatively warm water, particularly to weaker swimmers. A cut off time for the swim should be agreed with the race official/referee prior to the

event. If any competitor fails to complete the course by the cut off time they should be removed from the water. The cut off time will be dependent on water conditions, weather conditions, air temperature and the length of the swim.

### **Environmental Conditions**

The **SAFETY OFFICER** will shorten or cancel the swim if the water temperature falls below 16 degrees Celsius. Excessive water flow or wave conditions will also affect any decision as well as a deterioration of weather and light conditions. The temperature should be taken as specified in the FINA rules or as specified at the start. For all open water swims alternative plans should be made, in case environmental factors make the swim unsafe forcing it to be cancelled or curtailed.

### **Water Quality**

Water quality is of prime importance. The local Environment Agency should be contacted before the event for advice on the area of water to be used. Water testing should be arranged and the results displayed for competitors to view prior to entry to the water.

### **RACE JUDGE AND SAFETY OFFICER PRE-EVENT CHECKLIST**

Reference is made to the pre-event checklists that are included in the appendices. However, in addition, it is recommended that the Race Judge and the Safety Officer have their own simplified version to facilitate rapid decision making as to whether an event should run, be postponed, altered or cancelled.

- Has permission been obtained from the Local Authority, Water and Landowners?
- Have you informed local authorities, coastguard, environmental health, local hospital as appropriate?
- Have risk assessments been completed, recorded and control measures implemented?
- Are medical response and other safety critical arrangements in place?
- Have Competitors and Safety Officials been briefed?
- Have communications been checked?
- Do you have sufficient marshals and safety boats?
- Have you checked the course arrangements?
- Can Emergency Services access the course?
- Domestic arrangements, catering, showers etc
- Water quality
- Arrangements for shortening or stopping the event
- Alternative course
- Water Temperature: what is the minimum for the event to go ahead?
- Administration – is it robust enough to run the event?

## **MEDICAL ISSUES**

### **Introduction**

The diversity of open water swimming (OWS) venues demands a broad overview of the requirements for swimmer health and safety. A close relationship between the event organisers and the FINA Technical Open Water Swimming Committee is as critical for medical reasons as it is for the integrity of the course and compliance with FINA minimum competitive criteria.

*\*These guidelines should be read in conjunction with the Open Water Swimming Rules, OWS 1 to 7 as they appear in the FINA Handbook 2005-2009.*

Briefly there are two main areas of medical concern:

- 1) Environmental conditions
- 2) Swimmer health and safety

The appointment of a Medical Officer (OWS 2) is mandatory and liaison with the Safety Officer is critical (OWS 3.35). The duties of the Medical Officer must be carried out judiciously in accordance with OWS 3.36 in liaison with the Safety Officer and the local Organising Committee. All international events under FINA jurisdiction will carry requirements for doping control. However these are secondary to the concerns for swimmer safety and health and will not be included here. Minimum guidelines for doping control are the responsibility of the FINA Doping Control Review Board (DCRB) and should be considered as an appendix to these Medical Guidelines.

#### **1) Environmental conditions**

In accordance with OWS 5.2, 5.3, 5.4 and 5.5 the venue and course is subject to the issue of a certificate of suitability issued by the appropriate local health and safety authority. This must be made available to the FINA OWS Technical Officials and Medical Officer before the event can proceed. Local organizers are encouraged to arrange this authority well in advance of the event and to ensure that the certificate has been issued no sooner than 10 days prior to the event.

Any relevant report compiled by the Medical Officer and Safety Officer must be received by the Assistant Referee prior to the start of the event (OWS 3.8).

FINA regulations demand a minimum depth of 1.40m (OWS 5.4) and a water temperature of no less than 16 degrees Celsius, checked at specified times and depths by a designated Commission (OWS 5.5). The results of these measurements must be verified by the Medical Officer in accordance with FINA rule OWS 5.3.

It is recommended that the Safety Officer and Medical Officer ensure the absence of other course hazards including aquatic flora and fauna or the potential for any form of pollution from industrial, biochemical or bacteriological sources (OWS 3.32 and OWS 3.38).

Where applicable, swimmers should be encouraged to apply UVL protection and the organizers should ensure adequate protection from natural elements at the conclusion of the event.

#### **2) Swimmer health and safety**

If in the opinion of the Safety Officer and Medical Officer conditions are unsuitable for the staging of an OWS event, the Referee must be informed and recommended modifications must be satisfied to protect the health and safety of all competitors (OWS 3.35).

During the event, the surveillance of swimmers by accompanying craft is mandatory for safety reasons but must comply with race regulations (OWS 6).

Swimmers in obvious distress and those deemed to be incapable of continuing for a variety of reasons should be removed expeditiously from the water and assessed with appropriate urgency by a doctor.

Rendering assistance to swimmers in such situations should always supersede official rules of disqualification through "...intentional contact..." with a swimmer (OWS 6.3.1).

Adequate sustenance should be available to swimmers during the event in accordance with OWS 6.13. Swimmers are encouraged to hydrate well, prior to and following the event.

A member of the medical staff should be positioned to observe all competitors at the completion of the event and administer medical support as indicated (OWS 7.6).

The provision of an appropriately equipped first aid post and medical centre is mandatory and must be part of the obligations of the Organising Committee (OWS 3.49).

In the event of a medical emergency there must be an adequate system of rapid transfer to secondary or tertiary medical services. This will demand access for motorised ambulance service and clear communication with a receiving hospital (OWS 3.37). A clear protocol of emergency evacuation must be made available to the FINA Medical Officer.

### **Nutrition and Fluid Balance:**

Competing in open water swimming events is a major physical effort, for which all competitors should have adequately trained. Swimmers can expect to be in the water for 2 - 4 hours for events up to 8km and 6 - 8 hours for an event over 25km. It is therefore important to recognise that the body has a finite reserve of carbohydrate and liquid and that the frequent intake of nutritional substances is essential.

It is not appropriate for swimmers to wait until they feel their energy levels decreasing before stopping for nutrition. Rather, swimmers should aim to complete the event with "half a tank full" of energy. This will require frequent stops over the longer events exceeding 25km even though they may feel their energy reserves are adequate.

It is recommended that approximately 200 - 400mls of a balanced carbohydrate/electrolyte solution is ingested every half hour. This will also help in reducing cramps that are due to electrolyte depletion. Food may also be ingested but it will be difficult to chew with a fast heart rate. Chopped up banana, peach or fruit salad are recommended. Ingested substances should not be icy cold.

It is important to limit the duration of each break to less than 30 seconds in order to reduce the risks of hypothermia (getting too cold) and muscle stiffness.

### **Hypothermia (Lowered Body Temperature):**

Prevention of hypothermia is essential. Wool fat (anhydrous lanolin) should be applied and will also help to lubricate the skin, especially around the neck, groin and armpit. Double bathing caps should be worn because a large amount of body heat is lost through the head. As body temperature is reduced, the blood vessels in the skin constrict and a disproportionately larger amount of heat is lost through the head and neck rather than through the rest of the body.

Nutrition stops should be brief because exercise increases the amount of blood flow through the skin, thereby increasing heat loss. Whilst active exertion is taking place, this is balanced by the increased muscle activity but when the swimmer stops, the increased flow through the skin results in further heat loss whilst muscular heat production is reduced. Prolonged stops are an easy formula for the development of hypothermia.

Swimmers who begin to feel cold should ingest more food by taking more stops of short duration. Food increases the body temperature because heat is produced by digestion and because the muscles require high levels of nutritional substances for maximum efficiency including heat production.

Escort crews should always be on the look out for the development of hypothermia in their swimmers. Early symptoms consist of uncoordinated swimming movements and continual veering off course. When the swimmer stops, their mental processes may be dulled and they may appear vague. If a swimmer is unable to raise his/her arms above the head, obey other commands or to answer questions appropriately, then he/she should be retrieved from the water.

Hypothermia casualties should be handled gently. They should be dried thoroughly and wrapped on all sides with thick blankets. Towels etc. may be wrapped around the scalp and the sides of the neck. They should be protected from the wind with either windproof jackets or large green plastic bags. Food and fluids should be encouraged frequently in small amounts but alcohol is strictly to be avoided.

The Medical Officer for the event should see the patient retrieved from the water on account of hypothermia.

### **Exhaustion:**

Exhaustion occurs because of lack of energy from inadequate nutritional intake and from the effects of hypothermia. Its recognition and management are similar to hypothermia.

### **Pain:**

Approximately 15km into a swim, many swimmers develop pain, especially in the shoulders. They may become abusive but can obey commands and answer questions. Support crews will require considerable tolerance in this situation but should encourage their swimmer to continue.

### **Sunburn:**

This is a real risk despite the water. As a minimum, Sports Blockout 15+ should be applied 15 minutes prior to wool fat. It is important to include the area behind the ears, the back, the back of the legs and the bottom of the feet. Fair skinned persons should reapply sunblock every two hours to any area of their body not covered by wool fat.

### **Jellyfish stings:**

These could be a problem for those people susceptible to stings. Wool fat will help to prevent them but vaseline is far less effective because it melts off. The main problem with jellyfish stings is pain, although if there are multiple contacts, the pain may be severe and systemic symptoms such as nausea and vomiting may develop.

Pain is often soothed by the coolness of the water. Persistent severe pain should be reported to the Medical Officers.

### **Swallowed salt water:**

Salt water is approximately 3% sodium chloride that is three times more concentrated than the body's internal fluids. Ingestion often results in vomiting. Treatment includes reassurance in the first instance, but persistent vomiting may require withdrawal.

### **Trauma:**

Shark attack is unlikely. A significant risk however exists from escort boat propellers and extreme care must be taken when manoeuvring near swimmers.

## **SUGGESTIONS FOR THE SWIMMERS**

It is essential that swimmers prepare and train well in advance for any open water swimming event they choose to enter.

It is suggested swimmers swim the race distance for shorter races without stopping and 85 per cent of the distance for races 15 kilometres and longer one month to two weeks prior to the race. This is in order to gain the necessary self-confidence and to determine feeding times, food items and support personnel needed.

No one should undertake any competitive open water event unless physically fit, in excellent health, and fully expected to finish. It is advisable for any person undertaking any athletic event to be checked by a qualified medical expert. This is especially important in distance swimming.

**The swimmer is responsible for all personal support needs.**

### **COACHING**

*Coaches having a basic knowledge of 'pool' training programs will need to apply additional training techniques to prepare swimmers for open water swimming. There are also specific health and safety concerns associated with open water training and competition of which the coach must be aware.*

#### **Training Considerations**

Swimmers preparing for open water events usually combine pool workouts with open water swimming training sessions. While pool training includes a number of elements not required in open water (i.e. such as turns and rest intervals), it's still necessary as a means to closely monitor speed over set distances. Open water training is necessary as a specific means of race preparation; the primary skills acquired during this phase of training are:

- navigational skill,
- ongoing feeding and fluid replenishment,
- acclimatisation to rough water conditions, and
- co-ordination with race support staff (i.e. handlers and escort craft).

The proportion of work done in the pool and open water may vary from one swimmer to another. Available training time and conditions usually dictate the mixture.

Pool training will usually concentrate on aerobic base, aerobic endurance, or critical velocity training outcomes. High lactate-producing training sets are generally not required; however, some maximum speed training is advised. Speed over a short distance is often useful in open water so that the swimmer is able to break away from, or pass, a swimmer. Naturally, training volume must be high to prepare the swimmer for long competitive distances. Therefore, the recovery skills used by pool swimmers are even more important for open water swimmers. Coaches must carefully co-ordinate the application of long endurance training sets (and critical speed sets) with long aerobic base training sets, to allow sufficient recovery from session to session.

The mechanics of freestyle swimming are basically the same for open water swimming specialists; however, because water conditions may be rough the swimmer may need to modify his/her technique. The swimmer may need to turn the head and breathe under the armpit to shield the mouth, and recover the arms higher over the water. A two beat kick is commonly used to conserve energy. Open water swimmers generally have a higher stroke rate (i.e. strokes per minute) than pool swimmers because of a slightly shorter stroke length (i.e. distance travelled per stroke cycle).

Open water swimming training sessions usually employ total swimming time and stroke rate as the major determinants. Since it's difficult to measure swimming velocity, stroke rate is used to define the level of intensity. The coach should plan training sessions using the tempo that will be used under

race conditions. Rather than planning interval swims (as done for pool training) the coach should plan tempo swims. For example: 30 minutes of swimming at 66 strokes per minute, followed by 15 minutes at 76 strokes per minute, etc. Training sets are then constructed on the basis of stroke rate and time swum. If a group of swimmers are being trained in open water, the lead position should be rotated regularly.

### Navigational Skills

These are essential for open water swimmers. An escort craft should be positioned at least 2-3m from, and directly opposite or slightly to the rear of, the swimmer. The swimmer will be able to maintain position by lifting the head regularly (i.e. about 2-4 times per minute) and sighting the escort craft. If shore markers are used, the swimmer may need to lift the head forward and sight objects; the swimmer must also be able to breathe to either the right or left side. Whenever possible the swimmers should be positioned between the escort craft and the shoreline (note: swimmers are not allowed to position themselves behind the escort craft, as this is drafting). The escort should carry a whistle to signal the swimmer if required. Different wind and water conditions must also be taken into consideration. In a heavy crosswind the swimmer may need to swim at an angle to stay even with the escort craft.

Long swims will require feeding and/or fluid replacement every 30 minutes; approximately 200-400ml of a liquid carbohydrate/electrolyte solution. Food requirements will depend upon body temperature (swimming in cold water requires more heat energy) and the duration and intensity of the swim. Solid food will be difficult to chew when the heart rate is elevated; therefore a glucose solution mixed with mashed fruit is usually taken. Don't wait until the body is depleted of muscle and liver glycogen before starting a replenishment schedule.

There are several health/injury concerns associated with open water swimming training:

**Hypothermia** is a condition in which the body's core temperature drops too low. The body can be protected from excess heat loss by wearing a swim cap to insulate the head, ear plugs, and covering the body with wool fat (or similar non-soluble substance). Body parts that may become irritated, as a result of repeated rubbing (i.e. the neck, armpit, groin) also should be covered with a lubricant. The symptoms of hypothermia are:

- uncoordinated swimming movements;
- disorientation when stopping to feed; and
- failure to respond to commands from handlers.

The coach should be aware of these signs and be prepared to end training sessions when hypothermia is suspected.

Training in warm water or in bright sunlight also presents problems. The risk of sunburn is a real danger that must be addressed, and a maximum protection sunscreen should be applied before training. Training in warm water may require more frequent breaks to replenish fluid.

The risk of jellyfish stings is greater in warm water areas and knowledge of the local conditions and emergency treatment procedures are essential.

A final health concern is the exposure to infectious diseases. Open water swimming in lakes or rivers may carry with it some risk of exposure to pollutants in the water. The swimmer should keep immunisations up-to-date (i.e. hepatitis and tetanus in particular, a gamma globulin injection may be required). The coach should consult with the local health authority to obtain information on water quality.

### Racing Considerations

The coach should obtain a copy of open water swimming rules from the race organiser. Differences may exist between 'training' conditions and race conditions, the swimmer and coach should be aware of all rules and pay particular attention to the following:

- care must be taken at the start, any turns and at the finish, as swimmers are not permitted to impede other swimmers;
- “unsportsmanlike behaviour”, including where applicable, drafting off escort craft, is not allowed during the race;
- obstructing or interfering with the progress of other swimmers (note: obstruction by a swimmer's escort craft is also deemed unacceptable) may lead to a disqualification;
- the swimmer may not receive support (i.e. to hold the swimmer up) from any fixed or floating objects, as well as their escort craft or crew. The swimmer may not rest against the escort craft or crew when feeding.

Both swimmer and coach should be aware of any specific safety requirements to be implemented during the race. As a general rule, open water swimmers will approach race day in a similar way to pool swimmers. These additional points may be useful:

- pre-race meal and fluids should be about 2 hours before competition;
- review signals to be used between support crew and swimmer;
- have adequate food and fluids in the support craft (keep them in water-tight containers prior to use);
- have adequate first aid supplies, including blankets (i.e. if the race is terminated due to hypothermia) in the support craft;
- be aware of any course hazards; and
- take precautions against the loss of body heat and protect against sunburn.

It is often helpful for the handler in the support craft to have a large plastic board and waterproof markers for writing messages (i.e. stroke rate, split times, etc.) to relay to the swimmer. Feeding stops should be well rehearsed. Allow the boat to approach the swimmer when feeding is signalled (don't take the swimmer off course by making him/her swim to the boat). Prior to the race, decide on a strategy for the start; it may be impossible for the support craft to move into a parallel position with the swimmer until the pack of swimmers thins out.

In large races there may be general escort craft on the racecourse (usually surf skis, canoes or kayaks) to guide swimmers. It's usually required that each swimmer has a support craft. The handler is the person who must make all race decisions. It's the handler's responsibility to signal feeding stops, keep the swimmer on course, assess race conditions (i.e. weather) and evaluate the condition of the swimmer throughout the race. The handler must maintain visual contact with the swimmer at all times and be aware of any problems. The handler should provide verbal encouragement and information to the swimmer throughout the race.

### HANDLERS' RESPONSIBILITIES

In the past many swimmers have not relied to a great extent on their handlers. These swimmers have been successful in their efforts due to their ability to organise and understand their own requirements. However, events with stronger competition, longer distances and more open water bring added need for the best support for the swimmer.

The following are guidelines for requirements of the handler; they are not necessarily pertinent to every swimmer. These requirements are:

- Knowledge of open water swimming is paramount. Experience in some form of open water or even surf swimming is an advantage.
- An understanding of the swimmer, his/her dislikes, his/her true ability along with the expertise to be everything the swimmer needs in the course of the event.
- The ability to organise all food, grease, blankets, seasickness tablets, sunscreens, caps, goggles. To prepare all with the least interference for the swimmer prior to the event. The swimmer's confidence in knowing that you have everything organised is important.

- An understanding of the ocean, lake or river waters, coupled with the ability to read tidal charts and to understand the effects of currents, winds and waves.
- Understanding the swimmer's bad times, and being able to bring them through these periods. A tolerance to nurse when needed and be cruel when necessary. Being able to adjust and change whatever is required to lift the swimmer. This understanding can be developed during workouts and events – swimmers' reactions will, of course, differ under different environmental conditions.
- Probably the most important method of knowing a swimmer's own handling of a swim is his/her **stroke rating**. All swimmers must, before undertaking an open water swim, know their comfort zone in relation to stroke rating. During training all swimmers should have swum in open water. From these swims stroke per minute readings should have been taken. During a race, the prime requisite to the swimmer is to know their stroke rating. As a reference point, between 76 and 88 strokes seems to be the comfort zone, depending on the size of the swimmer. Hypothetically, from your training, 83 strokes per minute would have a swimmer holding 5 minutes for 400 metres, 80/81 is down a bit to a possible 5 minutes 5 seconds, and 85/86 is too fast at around 4 minutes 55 seconds and must be slightly pulled back. Just those few strokes too early can be paid for dearly later on. However, coaches need to be aware that technique and stroke ratings depend very heavily on environmental conditions.
- Most importantly, a handler must protect the swimmer from swimming through water tainted by outboard motor fumes. Keep the swimmer away from fumes blowing across the water, and have the exhaust switched off on larger vessels where the exhaust protrudes on the side of the swimmer.
- Be aware of the advantage that can be gained by hiding a swimmer with the escort boat from other swimmers. A change in direction by one or the other can be the time that a break is made from another swimmer locked on to staying with your swimmer.
- Never follow the main tender boat when shore points can be sighted. Remember the ocean is a big place. A boat going ahead and being followed by the swimmer will have a zigzag course. The idea with land points is to keep the swimmer straight. Sight a tower, building, or hill and aim for that point. You should make adjustments for tide and note the direction of the flow. Every twenty minutes adjustments can be made.
- To check movement, look for anchored craft or buoys between you and the shore on either side of your swimmer, not ahead. By sighting just ahead of the fixed object you will be able to see your progress. Hopefully you will see a steady movement of the terrain behind the anchored object.
- If the progress is slow you must ascertain water movement due to the tide or river current. Water always moves fastest in the middle of the river. Shift to the shore if slow; if fast, find the best centre run to the next point, go well past any point to keep in the flow, hug the point, as there is a chance of being swung into the eddy.
- In the ocean you must find your best position. Hug the shore if possible. If not, check your tide chart for where the flow changes. You must also remember that the full thrust of a tide whether flood or ebb lasts around 2 to 2½ hours; the rest of a six hour tide time is made of building up or slowing down to the slack water period. There is no point in pushing your swimmer too far. Controlled swimming is most important at this stage. Tides, although charted etc., do not always go as written – storms a hundred kilometres away can make tides run much longer than normal. By sighting etc. you should be able to see the tide change, and this is the time for encouragement for the swimmer.
- In open water, anchored boats will always, in still conditions, point into the water flow. The bow will point into the flow. In windy conditions an anchored boat will show similar wind direction. In wind and tide conditions you should ascertain the direction of tidal flow along with an expected variance caused by the wind. Always allow a little more up wind so that if you miss on the calculations your swimmer is not swimming directly into both tide and wind.

- If bad weather hits, protect your swimmer with the boat. Place the escort boat between the side the wind is coming from and your swimmer. You will be amazed how much difference it will make. It will protect from waves and swell.
- If weather comes from ahead, adjust your swimmer's style. Breathe further back and higher, throw hands high and over the waves, bring in a good two beat kick to keep high and for getting over the waves, increase swimmer's body rotation. Most swimmers should have trained in similar conditions and understand the different style requirements in these conditions.
- Know your swimmer's feeding requirements and stick rigidly to their wishes. Never allow or listen to new products or whatever someone recommends on the day. If it hasn't been tried, don't change. By all means try all you like in future training sessions. The tried formula is the accepted, change should never be allowed on the day of the race.
- Have a communication understanding with your swimmer, e.g. halfway through the next feed, turn a peak cap around on your head, 5 minutes to feed switch the cap back around the right way. Just watch the swimmer looking for the food being prepared. Chalkboard or pad messages should always be clear and to the point. Any message must be written so that it is immediately understood. Watch that the sun is not reflecting off the board and that it can be read.
- Feeding. A good handler will have a calm relaxed swimmer taking food as quickly as possible. The swimmer should not need to talk. As they are eating they are listening and a good handler is telling them everything they need to know. Should the swimmer have any questions it can be answered on a chalkboard soon after if a reply cannot be immediately given.
- A good handler never leaves their swimmer. It is total commitment for the whole period. You are part of the team. The handler's eye contact is absolutely continuous. Understanding the eyes is most important. If a swimmer is going to pass out, the first indication will be from the eyes. It is known for persons to be still swimming in an unconscious state.
- Cold water swims call for the use of grease. Swimmers should have tried some form, whether only on a thigh or somewhere prior to racing. There are different formulas and you should find which one suits. The base is lanolin (wool fat) and is obtained from your local chemist shop. Some may have to order it in so make sure you allow the extra time. Sometimes it is very thick and to stop the lumping during a swim, it can be thoroughly mixed with a little liquid paraffin to a buttery like substance. Vaseline or petroleum jelly can also be mixed, or in the not-so-cold swims, used on their own.
- When applying grease there are rules.
  - Have two pairs of rubber gloves, one pair is for the swimmer.
  - If a crowd is around or modesty prevails, large towels or sheets can be used to screen the swimmer. With the swimmer assisting, grease should initially be applied in a downward stroking application.
  - Put it on thick and force it thinner as you apply it down the body. The emphasis with grease is not the thickness but the sealing of the pores of the skin. This stops the body's heat escaping, thus allowing you to stay warmer.
  - The swimmer can apply it under costumes and the groin area. Once satisfied with the hidden parts, the swimmer should leave the grease with the handler, keeping it still and upright. Swimmers are normally very nervous at this stage and all attention should be towards greasing properly, relaxing the swimmer with the job done well.
  - Do not leave lumps anywhere, keep it smooth and tight with special attention to the kidney area and the back of the neck.
  - Do not grease under the arms below the elbows and keep well away from the eyes. Make sure the swimmer's hands are clean and grease free.
- Make sure you have old towels and blankets for cleaning up and wrapping the swimmer in when the event is finished. Be prepared with a longer towel or blanket that can be rolled into a

sling in the event of the swimmer having difficulties in the water. The retrieval of a semi- or unconscious swimmer covered in grease can be almost impossible and made worse in rough or choppy water conditions.

- Be aware of what you clean up best with. Solvents etc. can work on grease but an old favourite is a very strong detergent or dish washing liquid. Rubbing is also a good way of getting warmth back into the body. If the swimmer is really cold just wrap in blankets and towels until they get warm, wrap and rub the feet, stroke upwards towards the heart leaving grease on until the swimmer is comfortable. If conditions are rugged, leave the swimmer wrapped up until calmer conditions can be found. Relax your swimmer on the journey back to port, feed warm drink and food and, if possible, on a longer trip home suggest a sleep.
- Be considerate, if you are on a boat that is obviously a pride and joy of the owner be careful with the grease. Pilots do not take kindly to having grease all over their boats and if they have problems are reluctant to make their boats available again.
- Swimmers when accompanied by IRB should be aware that these boats need to shoot away from the swimmer for short periods every hour or so. This is necessary to burn the oil off the plugs and stop the outboard motor breaking down. Either a pre-determined signal or writing on the chalkboard or chart can warn swimmers of this. Swimmers then adjust to swimming beside the main tender for a short period until their return.
- Swimmers should wear bright coloured swim caps, preferably not white. Yellow or orange is considered ideal. In bad weather keeping a swimmer in sight is mandatory, and having a contrasting swim cap colour to the sea and the waves helps. A good torch with fresh batteries is essential with the onset of night. Diving glow sticks both on the side of the boat and out on the swimmer's costume should be available.
- Should a motor failure occur, keeping the swimmer in sight is the main concern. Often the swimmer is unaware of problems and keeps swimming. At this stage you should, if possible, stand at the highest vantage point holding one arm up and pointing in the direction of the swimmer. You must keep the swimmer in sight of the line of your arm, do not take your arm away, or more importantly, do not look away. In the ocean and large lakes a swimmer can disappear from sight simply from the boat drifting. Observers thinking they were looking in the direction of the swimmer may end up looking in a completely different direction.
- A good handler will satisfy him/herself with all facilities etc. of any boat to be used in a swim before the event. Knowledge of where all the supplies taken on the boat will be during the swim is important. Should the need be to call for something urgently you must be able to say where it is. Rummaging through supplies by others can lead to the losing of important equipment. Keep food in a cool box, goggles, costumes etc. in a green bag, aspirin and anti-fog in a red bag etc.
- When the race begins you know where everything is and now the only worry you have is your swimmer. This isn't a pleasure cruise. For as long as the race/swim goes you stay with the swimmer the whole time. The swimmer is relying on you for every possible assistance. You must be in sight at all times providing the support to the swimmer.
- If on a boat or paddling a board or ski, remember that you're the eyes. You're up higher than the swimmer and he/she must follow you. Do not follow the swimmer, if the swimmer drifts off it's up to you to bring him/her back to you, do not go after the swimmer, make him/her aware that he/she must keep his/her direction on you. Imagine a swimmer keeps pulling to the left and the crossing is ten kilometres. By the time you are almost at the finishing point your swimmer will be heading for a right hand direction, not taking into account extra you may have covered by the handler continuing to follow the swimmer.

## **THE ORGANISATION OF FINA WORLD CHAMPIONSHIPS**

Bids to stage a FINA WORLD CHAMPIONSHIP shall be submitted to the FINA Office.

Information is outlined in the FINA Aquatics magazine regularly. Before bids are made the would-be host federation shall clearly establish the following points:

- A suitable course is available.
- Safety requirements can be met.
- Temperature limits will not be exceeded.
- Sufficient funding can be provided to cover all organisational requirements.
- Sufficient numbers of qualified open water technical officials are available to officiate during the championships.

In order to allow FINA to make a fair appraisal of a bid, submitting Federations should ensure that the fullest details are given of the course, organising committee, funding and media coverage.

Upon being awarded a Championship the Host Federation shall notify all member Federations of FINA details of the date, venue and course. Course details shall include type of water (salt or fresh), temperature range, tidal/current parameters, type of escort craft, medical service, safety and details of any competitions taking place on or over parts of the World Championship course prior to the event.

Application to compete will only be accepted from member Federations of FINA. Individual entries from swimmers will not be accepted.

The Host Federation shall appoint a liaison officer to work with, and keep informed, through the FINA Office the Technical Open Water Swimming Committee (TOWSC).

### **THE ORGANISING COMMITTEE**

The Organising Committee appointed by the Host Federation shall be responsible for providing the items or facilities given below, and for checking, correcting and/or maintaining the various requirements before and throughout the competition. The details given in the FINA Handbook concerning Open Water Swimming should be carefully consulted well in advance.

### **THE TECHNICAL OPEN WATER SWIMMING COMMITTEE**

The FINA Bureau as the Management Committee conducts Open Water Swimming competitions at the World Championships and other FINA events through the appointed TOWSC Commission, which consists of the Bureau Liaison to the TOWSC, the Chairman and the Secretary, with the other members of TOWSC acting as the assisting body.

### **THE TOWSC RESPONSIBILITIES**

- **Co-ordinate** with the Host Federation on all details for the conduct of the open water swimming competitions at the FINA World Championships and on other FINA events.
- **Conduct a final inspection** of facilities prior to the start of competitions, including any automatic timing equipment to be used.

- **Seek applications** from National Federations (including the Host Federation) for appointment of suitably qualified technical officials to officiate at the World Championships, and make appropriate recommendations to the FINA Bureau.
- **Conduct meetings** for the briefings of Delegates and Team Managers of participating member Federations **two days** before the start of the competition.
- **Conduct briefings** for Technical Meet Officials who will participate in the control of the competition.
- **Prepare a report** for the FINA Bureau.

### THE TOWSC DUTIES

For World Championships and other FINA Open Water Swimming events, the allocation of tasks for the TOWSC will require the participation of all members of the Committee in the preparation and conduct of the competition.

In particular:

- **ENTRIES** To review all applications and start lists.
- **OFFICIALS** To check all officials are accounted for.
- **PROTOCOL** To assist and ensure proper protocol is observed.
- **MEDIA** To assist the national officer appointed on matters related to FINA.
- **RESULTS** To review and approve the ratified results list.
- **MEDICAL** To receive the report of the medical officer on pre-event medicals and to review the drug testing arrangements and implementation thereof.
- **SAFETY** To ensure that all safety precautions are in place for the event.
- **COMPETITION** To supervise all other arrangements.

### THE COURSE

**Certification** of the length of the course (preferably by GPS) and suitability of the water must be provided to the TOWSC and the Championships Safety Officer.

**Course identification.** The course is to be clearly marked with distance markers, where practical, every 1km along the course and all alterations/turns to be clearly marked and manned by a Turn Judge. A chart clearly showing the course and any/all turns is to be provided for each swimmer and each Race Judge. For events 10 km and above, where escort safety craft are utilised, a distinctive marker is to be placed to indicate, at both start and finish areas, the point at which escort safety craft may join or must leave their swimmers.

The following **facilities/equipment** are to be provided in addition to those given for the Start and Finish areas:

- Suitable boats for the Race Referee and Assistant Referees to be used and directed entirely at the Referee's discretion.
- Transport to take all Turn Judges to their allocated positions and to retrieve them immediately after the last swimmer has passed, or upon the Referee declaring the event complete.
- A suitable boat to allow the TOWSC Commission and VIPs to view the competition.
- Safety boats as required, having regard to the course.
- For events 10 km and above, where escort safety craft are utilised, a suitable escort boat for each swimmer. The boat to have sufficient capacity to carry the minimum crew required to work the boat efficiently, plus the Race Judge and the Swimmer's Representative.

- A suitable lead boat that will maintain a position approximately 50 metres ahead of the leading swimmer.
- Landing points along the course at which withdrawn swimmers can be landed.
- Points along the course at which patients can receive immediate treatment.
- Spare escort boats able to substitute should one in service become inoperable.
- A supply boat able to provide food and refreshments to all boat occupants throughout the race.
- The start line marking apparatus to be secure, safe and in proper working order.
- Where automatic officiating equipment is used, it must be installed and maintained as approved by the TOWSC, including:
  - Automatic timing system, using touchpad at finish, video facilities and microchip transponder technology.
  - Audio-Visual System for Starter.
  - Public Address System.
  - Provision of backup hand timing equipment.
- The finishing point to be checked as securely fixed, safe and in proper working order.
- Turn Judges' positions to be checked and secure.
- Turn or alteration points to be clearly marked.
- Necessary chairs, weatherproof clothing and recording books to be issued to all appropriate Officials.
- Suitable containers for swimmers' equipment, their safe storage and transportation to the finish point to be arranged.
- Equipment to be distributed to all safety craft and personnel including spare towelling material and blankets.

### PRE-RACE FACILITIES

The following facilities are to be provided prior to the race day.

- Medical inspection room.
- Briefing meeting room.
- Officials briefing room.
- Course inspection by Swimmers, Team Officials and Race Officials.

### START AREA

The following facilities are to be provided in the start area:

- Changing rooms for Swimmers and their Representatives.
- Changing rooms for Officials.
- Room or covered/windproof area for greasing/awaiting start.
- Receptacles for waste material.
- Medical receiving facilities.
- Seating.
- Suitable containers for swimmers' equipment which is not going on a boat.
- Secure stowage and transportation of items above.
- Toilet facilities and clean drinking water.
- Facilities for providing hot water for flasks.
- Waterproof marking pens for marking swimmers with their numbers.
- A suitable area for warm-up.
- Area for final Race Officials' briefing.
- Area for Boat Crew briefing.
- Suitable crowd control personnel and equipment to keep the water entry point clear.
- Spectator accommodation with clear view of start.
- VIP seating with clear view of start.
- Flagstaff for Host Nation's National flag, Host Association's flag and the FINA flag.
- Display of National flags for all Nations competing.
- Public Address System and Timing Display Equipment.
- Refreshment room for VIPs.

### FINISH AREA

The following facilities are to be provided in the vicinity of the finish point:

- A dais for honouring Swimmers.
- National flags of all Nations competing.
- The Host Nation's National flag, the Host Association's flag and the FINA flag.
- Sufficient crowd control personnel and equipment.
- Medical treatment area.
- Media interview area.
- Drug testing rooms.
- Seating arrangements for VIPs and officials.
- Information board giving current race data.
- Facilities for spectators giving clear view of finish.
- Landing facilities for personal equipment.
- Provision of swimmers' equipment that had been left in start area.
- Showers and changing facilities.
- Public Address system and Timing Display Equipment.
- Supply of drinks and refreshments for Swimmers, Coaches and Boat Crews and Race Officials.
- Provision of refreshments for officials and VIPs on site.

- Results publication facilities.
- Transport to take swimmers back to accommodation.

### COMMUNICATIONS

#### General and Specific

All Swimmers and Officials are to be given accurate **information in verbal and written form** clearly indicating any tidal/current flows that will in any way affect the course during the championships. In tidal waters the time of tide change and rate of water movement are to be given.

For events 10 km and above, where escort safety craft are utilised, the **pick up point** when escort boats can get alongside their swimmers clear of the congested start area is to be clearly marked as should be the designated point, at the finish, at which boats must leave the swimmer.

The public address system is to give a **time check** as authorised by the Chief Timekeeper **prior to** the start to allow all officials and spectators or interested persons to synchronise their watches.

A **communications plan** is to be established. The "**Primary**" net shall include the Referee, the Safety Officer, and the Medical Officer plus a member of the Management Committee at the finish area. This net is to be used for the communications of urgent information only.

The "**Secondary Working**" net is to include Safety Personnel and secondary Race Officials and is to be used as the main linking system between all areas of the championships and back-up facilities.

The "**Secondary Working**" net can be used for passing up-to-date positions to the Announcer and Information Board Operator at the finish point. All communications are to be conducted in English and the national or designated language of the Host Federation.

All those concerned with the event are to be provided with **detailed maps** which clearly show the accommodation, briefing, medical inspection, start, finish and presentation venues together with an appropriate timetable.

Full **press facilities** are to be provided including access to telephone, fax, email and other such means of communications as necessary.

**Visual media requirements** should be provided to enable film or television teams to have access to all stages as appropriate.

**Printing and photocopying facilities** shall be provided to enable a rapid results list to be produced immediately after the championships are declared closed. All Swimmers and Team Officials shall be issued with a ratified results list prior to the presentation ceremony.

**CHAMPIONSHIP OFFICIAL  
EXPLANATORY NOTES**

The following is intended to give guidance to Championship Officials on the interpretation and manner of execution of the Championship Rules.

The following officials shall be appointed at Open Water Swimming events:

A Referee  
Assistant Referees  
Chief Timekeeper plus 3 timekeepers  
Chief Finish Judge plus 2 finish judges  
Safety Officer  
Course Officer  
Medical Officer  
Clerk of the Course  
Race Judges (one per competitor) except for events of 10 km or less  
Turn Judges (one per alteration of course)  
Starter  
Announcer  
Recorder

**DUTIES OF OFFICIALS**

**THE REFEREE shall:**

- have full control and authority over all officials and shall approve their assignments and instruct them regarding all special features or regulations related to the competition. The Referee shall enforce all the rules and decisions of FINA, and shall decide all questions relating to the actual conduct of the meet, the event or competition, the final settlement of which is not otherwise covered by these Rules.
- have authority to intervene in the competition at any stage to ensure that FINA rules are observed.
- adjudicate on all protests related to the competition in progress.
- give a decision in cases where the Judges' decision and time recorded do not agree.
- signal to swimmers, by raised flag and short blasts on a whistle, that the start is imminent and when satisfied, indicate by pointing a flag at the Starter that the competition may commence.
- disqualify any swimmer for any violation of the Rules that he personally observes or which is reported to him by other authorised officials.

**THE ASSISTANT REFEREE shall:**

- ensure that all necessary officials for the conduct of the event or competition are at their respective posts. He may, with the approval of the Referee, appoint substitutes for any who are absent, incapable of acting or found to be inefficient. He may appoint additional officials if considered necessary.
- receive all reports prior to the start of the race from the Clerk of the Course, and Safety and Course Officer and inform the Referee of their contents 15 minutes before the scheduled start of the race.
- approve the draw for Race Judges and allocate them to their respective safety craft

**THE STARTER shall:**

- be stationed in such a position as to be clearly visible to all swimmers.
- on the signal of the Referee raise a distinctive flag to the vertical position.

- simultaneously bring the flag-holding arm down, with arm kept straight, and activate an audible signal.

**THE CHIEF TIMEKEEPER shall:**

- assign at least three timekeepers to their positions for the start and finish.
- ensure that a time check is made to allow all persons to synchronise their watches with the official running clocks 15 minutes before start time.
- collect from each timekeeper a card showing the time recorded for each swimmer and, if necessary, inspect their watches.
- record or examine the official time on the card for each swimmer.

**TIMEKEEPERS shall:**

- take the time of each swimmer assigned. The watches must have memory and print out capability and shall be certified correct to the satisfaction of the Management Committee.
- start their watches at the starting signal, and only stop their watches when instructed by the Chief Timekeeper.
- promptly after each finish record the time and swimmer's number on the timecard and turn it over to the Chief Timekeeper.

**Note:** when Automatic Officiating Equipment is used, the same complement of hand timers is to be used.

Timekeepers need to ensure they have means of travelling to the finish area if this is a separate location to the start.

**THE CHIEF FINISH JUDGE shall:**

- assign each Judge to a position.
- collect after the race signed results sheets from each Judge and establish the result and placing which shall be sent directly to the Referee.

**FINISH JUDGES (three, one of whom shall be the Chief Finish Judge) shall:**

- be positioned in line with the finish where they shall have, at all times, a clear view of the finish.
- record after each finish the placing of the swimmers according to the assignment given.

**Note:** Finish Judges shall not act as Timekeepers in the same event.

**THE RACE JUDGES**

The Referee will brief the Race Judges on their assignments. The instructions will cover, but not be limited to the following:

- Rules and their interpretation
- Course
- Safety
- Protocol
- Special instructions.

Each Race Judge shall:

- be positioned in an escort boat, assigned by random draw immediately prior to the start, so as to be able to observe at all times, his appointed swimmer.
- ensure at all times that the Rules of the competition are complied with, violations being recorded in writing and reported to the Referee at the earliest opportunity.
- have the power to order a swimmer from the water upon expiry of any time limit so ordered by the Referee.

- ensure that his appointed swimmer does not take unfair advantage or commit unsporting impediment on another swimmer and if the situation requires, instruct a swimmer to maintain clearance from any other swimmer.

### Some more explanations:

The Race Judges will be assigned to an escort craft by draw immediately prior to the launching of the craft. Once assigned, the Race Judge shall immediately load and board the designated craft. No contact with the swimmer or swimmer's representative shall take place prior to boarding.

The Race Judge shall report all technical violation to the Chief Judge in the manner prescribed in the pre-race briefing.

The Race Judge shall refrain from offering advice on the best routes to follow, but shall ensure (except on grounds of safety) that the crew follow such directions as the swimmer's representative may give.

The Race Judge shall keep a log on all matters pertaining to the swim. This log shall include violations of rules, time/distance information, stroke rate, times of feeding and any other incidents. This information shall be kept in a clear manner to enable inspection by a Medical Officer should the ability of the swimmer to continue be in any doubt.

Race Judges shall, at all times, bear in mind that they are the Referee's representative, their primary role being to uphold the rules of the competition and to ensure that the swimmer and Swimmer's Representative are competing within the spirit of the sport.

In a small boat for some eight hours it is important that a cordial relationship is established and maintained and that the swimmers are given every opportunity to swim the course to the best of their ability.

At all times from the start until the assigned swimmer leaves the water, the Race Judge shall be in such a position as to maintain close observation of their swimmer. With the obvious problems that arise in being on a small craft for this length of time, care should be taken to ensure the Race Judge is fully prepared for personal comfort and sustenance.

### **TURN JUDGES shall:**

- be positioned so as to ensure all swimmers execute the alterations in course as indicated in the competition information documents and as given at the pre-race briefing.
- record any infringement of the turn procedures on the record sheets provided and indicate the infringement at the time of the infringement by blasts on a whistle.
- promptly on completion of the event deliver the signed sheet to the Referee.

### **THE SAFETY OFFICER shall:**

- be responsible to the Referee for all aspects of safety related to the conduct of the competition.
- check that the entire course, with special regard to the Start and Finish areas, is safe, suitable and free of any obstruction.
- be responsible for ensuring that sufficient powered safety craft are available during the competition so as to provide full safety back-up to the escort boats.
- provide prior to the event to all swimmers a tide/current chart indicating the time of tide changes on the course and showing the effect of tides or current on a swimmer's progress along the course.
- in conjunction with the Medical Officer, advise the Referee if, in their opinion, conditions are unsuitable for staging the competition and make recommendations for the modification of the course or the manner in which the competition is conducted.

In addition to the Rules, please note that the Safety Officer:

Co-ordinates with the Course Officer on all aspects of the course. Checks the tidal conditions/rates of water flow and be satisfied that the course is safe for the conduct of the Championship.

Checks with the Course Officer that suitable warnings of the Championship have been passed to all other craft using, or likely to use, any portion of the course.

Briefs swimmers, handlers, Race Judges and boat crews on all or any potential safety hazards and the action to be taken should any happen.

Checks, prior to the start, evacuation procedures and sites of Medical Teams.

15 minutes prior to the start confirms to the Referee that, in their opinion, all safety requirements have been met.

Inspects the swimmers' escort craft as being suitable for the purpose intended. Depending upon conditions appertaining to a particular course, the type of boat used will vary. In general terms the following criteria should apply.

- The boat should be of sufficient size to be able to contain the crew, the Race Judge and a Swimmer's Representative.
- During any 25km championships the swimmer will need to receive refreshment at regular intervals. Therefore, it is essential that the Swimmer's Representative can get close enough to transfer the required refreshment without impairment or delay to the swimmer.
- If propulsion of the escort boat is achieved by human effort, it must be remembered that the swimmers will be travelling at up to 4km and if there would be a head wind during the championships, staying with the swimmer could be very difficult.
- When an escort boat with mechanical propulsion is used, the following points should be considered:
  - Exhaust fumes. Vertical or inboard exhausts present little problem; however, waterline exhausts can cause severe problems for the swimmer.
  - At surface speeds of 3 knots or less a standard inboard, or outboard, engine will be liable to 'oiling up' and require periods of high revolution bursts to keep the engine clean. These should always be conducted with the engine in neutral.
  - When a large engine is used and there is a problem with staying alongside a swimmer 'Drogues' can be used. One or two buckets attached to secure lines can be streamed behind the boat to give additional drag. Care must be exercised that the lines cannot become tangled in the propellers.
  - Toilet arrangements. Consideration should be given to the personal requirements of those persons who may be in the boat for up to eight or nine hours.

Inflatables should only be used as a last resort due to their inability to keep a constant track in windy conditions and their unsuitability to be rowed at the required pace.

Canoes/surfboards can be of use as close-in escort in open stretches of rough water but must always be backed up by a suitable larger craft.

### **THE MEDICAL OFFICER shall:**

- be responsible to the Referee for all medical aspects related to the nature of the competition and competitors.
- inform the local medical facilities of the nature of the competition and ensure that any casualties can be evacuated to medical facilities at the earliest opportunity.

- in conjunction with the Safety Officer advise the Referee if, in their opinion, conditions are unsuitable for staging the competition and make recommendations for the modification of the course or the manner in which the competition is conducted.

In addition to the Rules:

The Medical Officer is responsible to the Organising Committee for the provision of adequate medical safety cover to ensure the well-being of all swimmers and provide such facilities as are required under the rules and recommendations of FINA. During the actual event the Medical Officer's primary responsibility is to the Referee and will also act in conjunction with, and liaise with, the Safety Officer.

The Medical Officer's duties shall include:

Checking that the water quality for the designated course is safe and suitable for staging the event and to confirm that there are no other factors (such as shark, crocodile or jellyfish) which would render the venue undesirable.

To compile such data on the status of the swimmers as may be requested by the FINA Medical Committee.

Provide for officials, boat crews and swimmers' representatives an explanation of the race medical plan. This plan should include swimmer recovery/casualty evacuation procedures.

Provide for Medical, First Aid and Paramedic Teams a detailed explanation of the medical plan together with relevant procedures required for its activation.

Ensure that all swimmers, at the time of finishing or in the case of withdraw, at the point of landing are not requiring further medical supervision.

Providing advice and assistance regarding suitable intake of refreshment or sustenance to aid recovery from the event.

Submitting a detailed report on all medical aspects of the Championships together with any recommendations for the planning and execution of medical plans in future events.

**The Medical Officer shall also provide a Medical Plan.**

The detailed medical plan for any given championship will be unique when the vast range of variables are taken into consideration, especially the variations in temperatures and climatic conditions.

The medical plan should include but not be limited to the following:

- Sufficient personnel and equipment to execute the plan.
- A timetable and personnel roster for the pre-race inspection of all swimmers.
- A main medical receiving site at which there should be sufficient medical equipment and trained personnel to ensure the basic medical needs of a swimmer until onward transportation or evacuation can be accomplished.
- Detailed plan for onward evacuation of serious urgent medical cases to prepared designated hospitals or medical centres.
- Sufficient means of communication to establish and maintain contact between the Medical Officer and their Medical Teams.
- Detailed planning for the treatment of either hypothermic or hypothermic symptoms.
- Details of the provisions made to supply the equipment and personnel required to conform to the rules and recommendations regarding the testing of swimmers for banned substances.
- Sufficient land, water or airborne transportation to ensure the rapid movement of any casualties from the water or escort boat to a medical team.

**THE COURSE OFFICER shall:**

- be responsible to the Management Committee for the correct survey of the course.

- ensure the Start and Finish areas are correctly marked and all equipment has been correctly installed and, where applicable, is in working order.
- ensure all course alteration points are correctly marked and manned prior to the commencement of the event.
- with the Referee and Safety Officer, inspect the course and markings prior to the commencement of the competition.
- ensure that Turn Judges are in position prior to the start of the competition and report this to the Assistant Referee.

Some additional points:

- Prior to the first briefing meeting ensure that all aspects of the course are such as to conform to the initial safety clearance given at time of application.
- Ensure prior to the first briefing that no obstructions exist on the course other than those already allowed for.
- Confer with, and keep fully briefed, the Safety Officer.
- At the briefing meeting ensure that large scale maps of the course, clearly showing start, finish and all turns, are available for swimmers' representatives, Race Judges, all Officials and the media.
- Brief all Turn Judges and allocate positions, ensuring sufficient markers and flags are available.
- Check that sufficient transport is available to ensure that Turn Judges will be on station in time to carry out their duties and that sufficient arrangements have been made to ensure their collection after the last swimmer has passed their post.

**THE CLERK OF THE COURSE shall:**

- assemble and prepare swimmers prior to each event and ensure proper reception facilities at the finish are available for all swimmers.
- ensure each swimmer is identified correctly with their race number and that all swimmers have trimmed fingernails and are not wearing any jewellery, including watches.
- be certain all swimmers are present, in the assembly area, at the required time prior to the start.
- keep swimmers and officials informed of the time remaining before the start at suitable intervals, until the last five minutes, during which one minute warnings shall be given.
- be responsible for ensuring that all clothing and equipment left in the start area is transported to the finish area and kept in safekeeping.
- ensure that all competitors leaving the water at the finish have the basic equipment required for their well-being, should their own attendants not be present at that time.

**THE RECORDER shall:**

- record withdrawals from the competition, enter results on Official Forms and maintain records for the FINA Team Trophy as appropriate.

**THE ANNOUNCER shall:**

- Welcome swimmers and spectators.
- Introduce them to Open Water Swimming.
- Introduce Principals: Race Officials, Organisers, Sponsors, Elected Officials, etc.
- Describe the course, the event, when to start day's other events, conditions.
- Explain safety measures:
  - head count,
  - paddlers,
  - escorts,
  - lifeguards,
  - doctor,
  - retirement procedures.
- Announce notables present:
  - Olympic Swimmers,
  - World Record Holders etc.
- Keep an eye on the finish area and announce accordingly.
- Announce race progress and final results and advise where they are posted.

**IMPORTANT FINA RULES ABOUT THE START, THE VENUE AND THE RACE**

**THE START**

All Open Water competitions shall start with all swimmers standing or treading water in a depth sufficient for them to commence swimming on the start signal.

The Clerk of the Course shall keep swimmers and officials informed of the time before start at suitable intervals and at one-minute intervals for the last 5 minutes.

When the number of entries dictate, the start shall be segregated in the men's and women's competitions. The Men's event shall always start before the women's event.

The start line shall be clearly defined by either overhead apparatus or by removable equipment at water level.

The Referee shall indicate by a flag held upright and short blasts on a whistle when the start is imminent and indicate that the competition is under Starter's orders by pointing the flag at the starter.

The Starter shall be positioned so as to be clearly visible to all swimmers.

The start signal shall be both audible and visual.

If in the opinion of the Referee unfair advantage has been gained at the start, the competition shall be stopped and restarted.

For events 10 km and above, where escort safety craft are utilised, all escort safety craft shall be stationed prior to the start so as not to interfere with any swimmer, and if picking up their swimmer from behind, shall navigate in such a way as not to manoeuvre through the field of swimmers.

Although they may start together, in all other respects the men's and women's competitions shall be treated as separate events.

**THE VENUE**

World Championships and FINA competitions shall be for Open Water distances 25km, 10km or 5km conducted at a venue and course approved by FINA.

The course shall be in water that is subject to only minor currents or tide and may be salt or fresh water.

The appropriate local health and safety authorities shall issue a certificate of suitability for use of the venue. In general terms the certification must relate to water purity and to physical safety from other considerations.

The minimum depth of water at any point on the course shall be 1.40 metre.

The water temperature should be a minimum of 16 degrees Celsius. It should be checked the day of the race, 2 hours before the start, in the middle of the course at a depth of 40 cm. This control should be done in the presence of a Commission made up of the following persons present: a Referee, a member of the Organising Committee; and one coach from the teams designated during the Technical Meeting.

All turns / alterations of course shall be clearly indicated.

A clearly-marked craft or platform, containing a Turn Judge, shall be positioned at all alterations of course in such a manner as not to obstruct a swimmer's visibility of the turn.

All turning apparatus and Turn Judges' craft/platform shall be securely fixed in position and not be subject to tidal, wind or other movements.

The final approach to the finish shall be clearly defined with markers of a distinctive colour.

The finish shall be clearly defined and marked by a vertical face.

## **THE RACE**

All Open Water Competitions shall be Freestyle events.

For events 10 km and above, where escort safety craft are utilised, Race Judges shall instruct any swimmer who is, in their opinion, taking unfair advantage by pace or slip streaming with the escort craft to move clear.

### **Disqualification Procedure**

If in the Opinion of the Referee or an Assistant Referee, any swimmer, or escort safety craft takes advantage by interfering with any swimmer, by making intentional contact with any swimmer, by pacing or by slipstreaming, the following proceeding shall apply:

#### **1<sup>st</sup> Infringement:**

A yellow flag and a card bearing the swimmer's number shall be raised to indicate and to inform the swimmer that he is in violation of the Rules.

#### **2<sup>nd</sup> Infringement:**

A red flag and a card bearing the swimmer's number shall be raised by the Referee to indicate and to inform the swimmer that he is for the second time in violation of the Rules. The swimmer shall be disqualified. He must leave the water immediately and be placed in an escort craft, and take no further part in the race.

If in the opinion of the Referee, an action of a swimmer or an escort craft is deemed to be 'Unsporting', the Referee shall disqualify the swimmer concerned immediately according to the FINA Rule.

For events 10 km and above, where escort safety craft are utilised, craft shall manoeuvre so as not to obstruct or place themselves directly ahead of another swimmer.

For events 10 km and above, where escort safety craft are utilised, craft shall attempt to maintain a constant position so as to station the swimmer at, or forward of, the mid-point of the craft.

Standing on the bottom during a race shall not disqualify a swimmer but they may not walk or jump.

With the exception mentioned above, swimmers shall not receive support from any fixed or floating object and shall not intentionally touch or be touched by their escort craft (when used) or crew therein.

For events 10 km and above, where escort safety craft are utilised, each escort craft shall contain a Race Judge, a person of the swimmer's choice, and the minimum crew required to operate the escort boat.

No swimmer shall be permitted to use or wear any device that may be an aid to their speed, endurance or buoyancy. Goggles, a maximum of two (2) caps, nose clip and earplugs may be used.

Swimmers shall be allowed to use grease or other such substances providing these are not, in the opinion of the Referee, excessive.

The pacing of a swimmer by another person entering the water is not permitted.

For events 10 km and above, where escort safety craft are utilised, coaching and the giving of instructions by the swimmer's representative in the escort boat are permitted.

In events of 10 km and under it is mandatory for the head or cap to display on each side the 'international three-letter country code' and may display the swimmer's national flag. The country code shall be a minimum of 0.04 metres in height.

All swimmers shall have their competition number clearly displayed in waterproof ink on their shoulders, upper arms and backs of their hands.

For events 10 km and above, where escort safety craft are utilised, each escort safety craft shall display the swimmer's competition number so as to be easily seen from either side of the escort safety craft and the national flag of the swimmer's federation.

In all events, time limits shall apply as follows from the finish time of the first swimmers:

- Events under 25 km                      30 minutes
- Events of 25 km                            60 minutes
- Events over 25 km                        120 minutes

Competitors who do not finish the course within the time limits shall be removed from the water except that the referee may allow a competitor outside the time limit to complete the course but not participate in any points or prizes awarded.

### THE FINISH OF THE RACE

The area leading to the finish apparatus should be clearly marked by rows of buoys that narrow, as they get closer to the finish wall. Security boats should be stationed at the approach to and entrance of the finish lane to ensure that only the boats authorised to do so enter or cross this entrance.

The finish apparatus should, where possible, be a vertical wall at least 5 metres wide fixed if necessary to flotation devices, securely fastened in place as not to be moved by wind, tide or the force of a swimmer striking the wall. The finish should be filmed and recorded by video system with slow motion and recall facilities including timing equipment.

**When automatic timing equipment is used for timing of competitions in accordance with FINA Rule SW 11, microchip transponder technology should be added to the equipment.** Use of microchip transponder technology is mandatory for competitions at the World Championships. It is mandatory for all competitors to wear a microchip transponder on each wrist throughout the race. If a competitor loses a transponder the Boat Judge will immediately inform the Referee who will instruct the responsible official on the water to issue a replacement transponder. Any competitor who finishes the race without a transponder will be disqualified.

The Finish Judges and Timekeepers shall be placed so as to be able to observe the finish at all times. The area in which they are stationed should be for their exclusive use.

Every effort should be made to ensure that the swimmer's representative can get from the escort boat to meet the swimmer as they leave the water.

Upon leaving the water some swimmers may require assistance. Swimmers should only be touched or handled if they clearly display a need, or ask for assistance.

A member of the Medical Team should inspect the swimmers as they leave the water. A chair, in which the swimmer can sit while an assessment is made, should be provided.

Once cleared by the Medical Member, swimmers should be given access to refreshment immediately.

**CONCLUSION**

**The FINA TECHNICAL OPEN WATER SWIMMING COMMITTEE believes that this Manual will be of help to swimmers, coaches and other persons who may be involved in Open Water Swimming. We hope that this Manual will assist to organise and encourage the development of Open Water Swimming Competitions all around the world.**

**ACKNOWLEDGMENTS**

FINA Open Water Swimming Guidelines, 1995  
FINA Long Distance and Marathon Swimming Manual 1999  
FINA HANDBOOK 2005 – 2009  
British Swimming – Open Water Event Organisers' Guidelines 2003  
USA Swimming – Open Water Meet Managers' Guide  
Swimming Australia – Open Water Swimming Rules  
Sid Cassidy, FINA TOWSC  
Sam Greetham, LEN TOWSC  
Dr Paul Mark, Perth, Western Australia  
David Gerrard, FINA Medical Commission