WORLD AQUATICS

COMPETITION REGULATIONS

In force as from 25 June 2025

UNITED BY WATER

WORLD AQUATICS

OPEN WATER SWIMMING

COMPETITION REGULATIONS

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OPEN WATER SWIMMING RULES

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1 WORLD AQUATICS CHAMPIONSHIPS AND OLYMPIC GAMES

1.1 Open Water Swimming is defined as any competition that takes place in rivers, lakes, oceans or water channels or any other body of open water.

1.2 **Program of the Olympic Games**

Men	Women
10 kilometres	10 kilometres

1.3 **Program of the World Aquatics Championships**

Men	Women	Mixed Team Event
10 kilometres	10 kilometres	N/A
5 kilometres	5 kilometres	N/A
		4x1500 m Relay
*3km Knockout Sprint	*3km Knockout Sprint	

*3km Knockout Sprint event may be included in the World Aquatics Championships Programme subject to agreement between World Aquatics and the Organising Committee.

1.3.1 Description of the Mixed Team Race

1. Two (2) female and two (2) male competitors from the same country
2. Each competitor shall complete a lap of 1.5 km.
3. competitors may swim in any sequence, but may only swim once.
4. All teams will start together.
5. Starting order on the platform will be by random draw.
6. There shall be a change-over zone of a minimum of 5 m in length of sufficient size for the teams competing.
7. Changeovers shall be made with the following competitor in the water in their starting position holding the platform, except where a relay change platform is used.
8. Contact on the relay changeover must be visible. The touch, between the competitors making the changeover, should be made above the water anywhere between the elbow and the hand when the changeover is in the water. Where a relay change platform is used, the following competitor may start with a dive from the opposite side of the platform immediately after the arriving competitor touches the platform.
9. Competitors may enter the change-over zone when the previous competitor is approaching the zone and leave the water immediately at the conclusion of their lap.
10. Departing competitors must dive from the start position allocated to their team.
11. All competitors from the same team shall all wear the same team caps of the same colour and style, in accordance with Part One, Article 8.6 of the World Aquatics Competition Regulations.
12. Relay Changeover platforms shall be used for all World Aquatics events.

1.3.2 Description of the 3km Knockout Sprint Race:

1. Male and Female races will be swum seperately.
2. Each Federation may enter a maximum of two (2) Male, and two (2) female competitors.
3. For Round one (1) the entry list will be published in advance of the Team Leaders Meeting. - The number of heats to be swum in Rounds one (1) and two (2) will be determined after all the entries have been received and processed and will be announced at the Team Leaders Meeting. For Round two (2) the maximum number of heats would be two (2). - Random draw for heats will be published in advance of Registrations opening.
4. In Round One (1) each competitor will swim 1500m, competitors advancing to Round two (2) will swim 1000m, and competitors advancing to Round three (3) will swim 500m.

5. The top ten (10) finishes from each heat in Round one (1) will advance to Round two (2) or two (2) heats with the allocation process announced at the Team Leaders Meeting.
6. If there is one (1) heat in Round two (2) the top 10 from Round two (2) will advance to the Round three (3) final. If there are two (2) heats in Round two (2) the top 10 finishes from each heat will advance to the Round three (3) final.
7. If any competitor receives a 1st infringement during Rounds one (1) or two (2) then this penalty would remain in place if the competitor advances forward in any Rounds of the event.
8. In the event of disqualification or withdrawal from Rounds two (2) or three (3) the position competitor would have had shall be awarded to the competitor who finished next, and all the lower placing competitors shall be advanced one place in the semi-final (s) or final.
9. Medals will be awarded for 1st, 2nd and 3rd places for each gender Male (M) and Female (F) as per Part One, Article.12.1.2.1.

1.4 The **minimum age** for swimmers competing in the Olympic Games and World Aquatics Championships shall be the same as the minimum age for the World Aquatics Junior Open Water Swimming Championships: Girls and Boys, at least 14 years of age, on 31st December in the year of competition.

1.5 World Aquatics Junior Open Water Swimming Championships

1.5.1 Age Groups

The Age Groups as of 31st December of the year of the competition are:

- 14-15 years Boys and Girls
- 16-17 years Boys and Girls
- 18-19 years Boys and Girls

1.5.2 Individual Events

- 14-15 years 5 km Boys and Girls
- 16-17 years 7.5 km Boys and Girls
- 18-19 years 10 km Boys and Girls
- *Open 3km Knockout Sprint Boys and Girls

* Open 3km Knockout Sprint event shall be included in the World Aquatics Championships Programme subject to agreement between World Aquatics and the Organising Committee.

1.5.3 Mixed Team Relays

1.5.3.1 The distance

Mixed 4 x 1500m

1.5.3.2 Description of the Race

As per Part Three, Article 1.3.1

1.5.4 Competition Program Proposal

	Day 1	Day 2	Day 3
Morning	14-15 years 5 km	18-19 years 10 km	14-16 years Relay Event
Afternoon	16-17 years 7.5 km	Open 3km Knockout Sprint	Open Relay Event

2 OFFICIALS

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

- Chief Referee (one per race)
- Referees (2 minimum, additional Referees proportional to race entries)
- Chief Timekeeper plus 2 Timekeepers
- Chief Finish Judge plus 2 Finish Judges
- Safety Officer
- Medical Officer
- Course Officer

- Clerk of the Course
- Race Judges (one per competitor) except for events with a course of 10 km or less
- Turn Judges (one per alteration of Course)
- Feeding Platform Judge (when feeding platforms are used)
- Relay Judge
- Starter
- Announcer
- Recorder
- Video Review Judge

NOTE: No official can act in more than one role simultaneously. They may only undertake a new role after all of the obligations of their previous role have been fulfilled.

3 DUTIES OF OFFICIALS

3.1 Chief Referee

The Chief Referee shall:

3.1.1 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 Chief Referee shall enforce all the Rules and decisions of World Aquatics and shall decide all questions relating to the actual conduct of the competition, the final settlement of which is not otherwise covered by these Rules.

3.1.2 ensure that all necessary officials for the conduct of the competition are at their respective posts. The Chief Referee may appoint substitutes for any who are absent, incapable of acting or found to be inefficient and may appoint additional officials if considered necessary.

3.1.3 have authority to intervene in the competition at any stage to ensure that World Aquatics Rules are observed.

3.1.3.1 In case of hazardous conditions that jeopardize the safety of the competitors and the officials, in conjunction with the Safety Officer she/he can stop the race.

3.1.4 adjudicate on all protests related to the competition in progress.

3.1.5 signal to competitors, by raised flag and short blasts on a whistle, that the start is imminent and when satisfied indicate by pointing the flag at the Starter that the competition may commence.

3.1.6 disqualify any competitor for any violation of the Rules that she/he personally observes, or which is reported to her/him by other authorised officials. Notwithstanding the provisions of Part Three, Article 5.3 hereof, the Chief Referee may decide to enforce the disqualification at the end of the race.

3.1.7 receive all reports prior to the start of the race and at the conclusion of the race from the Clerk of the Course, Recorder, Course Officer and Safety Officer to ensure all competitors are accounted for.

3.1.8 give a decision in cases where the Finish Judges' decisions and times recorded do not agree.

3.2 Referees

The Referees shall:

3.2.1 have authority to intervene in competition at any stage to ensure that World Aquatics Rules are observed.

3.2.2 disqualify any competitor for any violation of the Rules that they personally observe.

3.3 Starter

3.3.1 The Starter shall start the race in accordance with Part Three, Article 4 following the signal by the Chief Referee.

3.4 Chief Timekeeper

The Chief Timekeeper shall:

3.4.1 assign at least two (2) Timekeepers to their positions for the start and finish.

3.4.2 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.

3.4.3 collect from each Timekeeper the time recorded for each competitor, and, if necessary, inspect their watches.

3.4.4 record or examine the official time for each competitor.

3.5 Timekeepers

Timekeepers shall:

3.5.1 take the time of each competitor/s assigned. The watches must have memory and printout capability and shall be certified correct to the satisfaction of the Management Committee.

3.5.2 start their watches at the starting signal, and only stop their watches when instructed by the Chief Timekeeper.

3.5.3 promptly after each finish record the time of each competitor 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.

3.6 Chief Finish Judge

The Chief Finish Judge shall:

3.6.1 assign each Judge to a position.

3.6.2 record and communicate any decision received from the Referees during the competition.

3.6.3 record and report to the Chief Referee any violation of the Rules within the Finish Funnel observed personally, or reported by appointed Finish Judges.

3.6.4 collect after the race, signed results sheets from each Finish Judge and establish the result and placing which shall be sent directly to the Recorder.

3.6.5 confirm to each race judge their escort boat and instruct them in their duties.

3.7 Finish Judges

Finish Judges (two) shall:

3.7.1 be positioned in line with the finish where they shall have at all times a clear view of the finish.

3.7.2 record after each finish the placing of the competitors according to the assignment given.

3.7.3 record any violation of the Rules personally observed within the Finish Funnel on the record sheets provided, then communicate the violation to the Chief Finish Judge.

NOTE: Finish Judges shall not act as Timekeepers in the same event

3.8 Race Judge

Each Race Judge shall

3.8.1 be positioned in an escort safety craft (where applicable), assigned by random draw prior to the start, so as to be able to observe, at all times, their appointed competitor.

3.8.2 ensure at all times that the Rules of competition are complied with, violations being recorded in writing and reported to the Chief Referee at the earliest opportunity.

3.8.3 have the power to order a competitor from the water upon expiry of any time limit so ordered by the Chief Referee.

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

3.9 Turn Judges

Turn Judges shall:

3.9.1 be positioned so as to ensure all competitors execute the alterations in course as indicated in the competition information documents and as given at the pre-race briefing.

3.9.2 record any infringement of the turn procedures on the record sheets provided, then immediately communicate the infringement to the Chief Referee.

3.9.3 promptly upon completion of the event deliver the signed record sheet to the Recorder.

3.10 Feeding Platform Judge

Each Feeding Platform Judge shall be responsible for the management of the activity and the competitors authorised representatives present on the platform, in accordance with World Aquatics rules.

3.10.1 Feeding Platform Judges will be responsible for checking that all authorised representatives are complying with the use of supplied World Aquatics biodegradable bottles as per Part Three, Section 5.13.5.

3.11 Relay Judge

The Relay Judge/s shall manage the activity on the Relay platform or change-over zone to ensure all changeovers occur in accordance with the rules whereby the arriving competitor completes their lap before the departure of the next competitor.

3.12 Safety Officer

The Safety Officer shall:

3.12.1 be responsible to the Chief Referee for all aspects of safety related to the conduct of the competition.

3.12.2 check that the entire course, with special regard to the start and finish areas, is safe, suitable, and free of any obstruction.

3.12.3 be responsible for ensuring that sufficient powered safety craft are available during the competition so as to provide full safety backup to the escort safety craft.

3.12.4 provide prior to the competitions to all competitors a tide/current chart clearly indicating the time of tide changes on the course and showing the effect of tides or current on a competitor's progress along the course.

3.12.5 in conjunction with the Medical Officer advise the Chief 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.

3.12.6 monitor temperature conditions periodically during the race.

3.13 Medical Officer

The Medical Officer shall:

3.13.1 be responsible to the Chief Referee for all medical aspects related to the competition and competitors.

3.13.2 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.

3.13.3 in conjunction with the Safety Officer, advise the Chief 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.

3.14 Course Officer

The Course Officer shall:

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

3.14.2 ensure the start and finish areas are correctly marked and all equipment has been correctly installed and, where applicable, is in working order.

3.14.3 ensure all course alteration points are correctly marked and manned prior to the commencement of the competition.

3.14.4 with the Referee and Safety Officer inspect the course and markings prior to the commencement of competition.

3.14.5 ensure that Turn Judges are in position prior to the start of the competition and report this to the Chief Referee.

3.15 Clerk of the Course

The Clerk of the Course shall:

3.15.1 assemble and prepare competitors prior to each event and ensure proper reception facilities at the finish are available for all competitors.

3.15.2 ensure each competitor is identified correctly with their race number and that all competitors have trimmed fingernails and toenails and are not wearing any jewellery, including watches.

3.15.3 record all approved wearables declared in the First Call room.

3.15.4 be certain all competitors are present, in the assembly area, at the required time prior to the start.

3.15.5 keep competitors 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.

3.15.6 be responsible for ensuring that all clothing and equipment left in the start area is transported to the finish area and kept in safekeeping.

3.15.7 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.

3.15.8 The Clerk of the Course shall notify the Chief Referee and Recorder of any withdrawals and DNF's (Did-Not-Finish).

3.16 **Recorder**

The recorder shall record withdrawals from the competition, enter results on official forms, and maintain records for team awards as appropriate.

3.17 **Video Review Judge (VRJ)**

3.17.1 At World Aquatics events where there is a Decision Review System (DRS) in use a Video Review Judge (VRJ) is to be appointed.

3.17.2 The DRS system will be used to assist the Chief Referee to make any decisions to enforce any violation of the Competition Regulations.

3.17.3 The Video Review Judge (VRJ) shall review all finishes of the Race from the entry of the Finish Funnel to the Finish Plate, and record and report any violation of the Rules to the Chief Referee.

3.17.4 For the 3km Knockout Sprint races the Video Review Judge (VRJ) shall enforce any violations of the Rules that they personally observe using the Decision Review System (DRS) if in use, and report these to the Chief Referee.

3.17.5 The Chief Referee will review and consider any violations reported by the Video Review Judge (VRJ) after the competition has finished.

4 THE START

4.1 All Open Water competitions shall start with all competitors wearing an approved swim cap and standing on a fixed platform or in water depth sufficient for them to commence swimming on the start signal.

4.1.1 When starting from a fixed platform competitors shall be assigned a position on the platform, as determined by random draw.

4.1.2 For Olympic Games, World Aquatics Championships, and other World Aquatics competitions, the start shall be from a fixed platform.

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

4.3 When the numbers of entries dictate the start shall be segregated into Men's and Women's competitions.

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

4.5 The Chief 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.

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

4.6.1 On the Starter's command "take your marks" all competitors shall take up a starting position immediately in line with the start line where a platform is not used, or with at least one foot at the front of the platform.

4.6.2 The Starter will give the starting signal when he/she considers all competitors are ready.

4.7 The start signal shall be both audible and visual.

4.8 If in the opinion of the Chief Referee an unfair advantage has been gained at the start the offending competitor will be given a yellow or red flag in accordance with Part Three, Article 5.3.

4.9 All escort safety craft shall be stationed prior to the start so as not to interfere with any competitor, and if picking up their competitor from behind shall navigate in such a way as not to manoeuvre through the field of competitors.

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

5 THE RACE

5.1 All Open Water Swimming competitions shall be Freestyle events and competitors are required to complete the whole course, respecting all designated turn buoys and course boundaries.

5.2 Race Judges shall instruct any competitor who is, in their opinion, taking unfair advantage by pacing or slip streaming with the escort craft to move clear.

5.3 **Disqualification Procedure**

5.3.1 If in the opinion of the Chief Referee or Referees, any competitor, or competitor's approved representative, or escort safety craft, takes advantage by committing any violation of the rules or by making intentional contact with any competitor, the following procedure shall apply:

5.3.1.1 **1st Infringement:**

A yellow flag and a card bearing the competitor's number shall be raised to indicate and to inform the competitor that they are in violation of the Rules.

5.3.1.2 **2nd Infringement:**

A red flag and a card bearing the competitor's number shall be raised by the Referee (Part Three, Article 3.1.6) to indicate and to inform the competitor that they are for the second time in violation of the Rules. The competitor shall be disqualified.

5.3.2 If in the opinion of a Referee, an action of a competitor or an escort safety craft, or a competitor's approved representative is deemed to be 'unsporting' the Referee shall disqualify the competitor concerned immediately. The competitor must leave the water immediately and be placed in an escort craft and take no further part in the race.

5.4 Escort safety craft shall manoeuvre so as not to obstruct or place them directly ahead of any competitor and not take unfair advantage by pacing or slip streaming.

5.5 Escort safety craft shall attempt to maintain a constant position so as to station the competitor at, or forward of, the mid-point of the escort safety craft.

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

5.7 With the exception of Part Three, Article 5.6 the competitor shall not receive support from any fixed or floating object and shall not intentionally touch or be touched by their escort safety craft or crew therein.

5.7.1 Rendering assistance by an official medical officer to a competitor in apparent distress should always supersede official rules of disqualification through "intentional contact" with a competitor (Part Three, Article 5.3.1).

5.8 For races where escort boats are used, each escort safety craft shall contain: a Race Judge, a person of the competitor's choice, and the minimum crew required to operate the escort safety craft.

5.8.1 Each escort safety craft shall display the competitor's competition number so as to be easily seen from either side of the escort safety craft and the national flag of the competitor's Federation.

5.9 Each safety craft shall contain appropriately qualified safety personnel and the minimum crew required to operate the safety craft.

5.10 No competitor shall be permitted to use or wear any device which may be an aid to their speed, endurance, or buoyancy. Approved swimsuit, goggles, a maximum of two (2) caps, nose clip and earplugs may be used.

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

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

5.13 **Feeding**

5.13.1 Feeding poles are not to exceed 5m in length when extended. No objects, rope or wire may hang off the end of feeding poles except national flags. National flags are allowed to be attached to the feeding pole but may not exceed the size of 30cm x 20 cm. Flags shall be of fabric material with no hard edges and without any weight or other items added.

5.13.2 Coaching and the giving of instructions by the approved competitor's representative on the feeding platform or in the escort safety craft is permitted. No whistle shall be allowed.

5.13.3 When taking sustenance, competitors may use Rule under Part Three, Article 5.6 provided that Rule under Article 5.7 is not infringed.

5.13.4 No objects can be thrown from the feeding platform to the competitors, including sustenance. The competitors shall receive their feeding in biodegradable containers directly from their representative by a feeding pole or by hand.

5.13.5 For World Aquatics events, it is mandatory that World Aquatics biodegradable bottles are used. Each athlete will be given 6 bottles (distributed via National Federation).. Feeding Judges shall check all feeders are complying with this rule.

5.14 Time Limits

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

- 15 minutes per 5km (or part thereof) up to a maximum time limit of 120 minutes.

5.14.1 Competitors who do not finish the course within the time limit shall be removed from the water except that the Chief Referee may allow a competitor outside the time limit to complete the course but not be eligible for any points or prizes.

5.15 **Emergency Abandonment**

5.15.1 In cases of emergency abandonment of races of 10 km or less, the race will be restarted from the beginning at the earliest possible moment.

5.15.1.1 Where a competitor/s has completed the race prior to abandonment, the final ranking will be as reported by the Chief Referee having regard to those competitor(s) who have already finished.

5.15.2 In cases of emergency abandonment for any race longer than 10km, the final ranking will be as reported by the Chief Referee. If 2 hours of the race have not been completed, it will be restarted from the beginning at the earliest moment possible.

6 THE FINISH OF THE RACE

6.1 Escort safety craft should be stationed at the approach to and entrance of the finish funnel to ensure that only the escort safety craft authorised to do so enter or cross this entrance.

6.2 The final places will be determined by the Chief Referee based upon the Finish Judges' report and the finish video tape.

6.3 All competitors must start the race with a microchip transponder on each wrist. If a competitor loses a transponder the Race Judge or other authorised Official, will immediately inform the Chief Referee who will instruct the responsible Official on the water to issue a replacement transponder. All competitors need to finish with at least one transponder on their wrist. Any competitor who finishes the race without at least one transponder will be disqualified.

6.4 When, at the finish of an Open Water Swimming competition, a finish plate is available, competitors must touch the finish plate to finish the race. Any competitor who does not touch the finish plate will be disqualified.

6.5 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.

6.6 Every effort should be made to ensure that the competitor's representative can get from the escort safety craft to meet the competitor as they leave the water.

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

6.8 A member of the medical team should inspect the competitors as they leave the water. A chair, in which the competitor can sit while an assessment is made, should be provided.

6.9 Once cleared by the medical member, competitors should be given access to refreshment.

7 SWIMWEAR & TECHNOLOGY

7.1 For Open Water Swimming competitions with water temperature from 18°C and above, swimsuits (men and women) shall not cover the neck, nor extend past the shoulder, nor extend below the ankle. Subject to these specific shape specifications, swimsuits for open water swimming competitions shall further comply with all other requirements applicable to swimsuits for swimming-pool competition.

7.2 For Open Water Swimming competitions in water with temperature below 18°C, the use of wetsuits is compulsory. Wetsuits are not permitted in Open Water Swimming competitions in water with temperature 18.0°C and above, except when conditions are hazardous for the competitors, the Chief Referee may, upon recommendation from the Safety Officer & Medical Officer declare wetsuits as mandatory in temperatures up to 20.0°C.

7.3 **Wetsuits**

Wetsuits shall completely cover torso, back, and thighs. They shall not extend beyond the neck, wrists and ankles.

The body parts, after the shoulder and/or below the thigh do not necessarily need to be covered.

7.4 **Team Event**

All competitors from the same team must wear the same team caps which shall also comply with these Regualations, Part One, Article 8.6

7.5 **Technology**

Technology such as drones, GPS tracking, bio-medical sensors or devices that record blood pressure, body temperature, stroke rate, breathing rate etc. via the transponder are permitted when approved by World Aquatics.

The technology may transmit such information but not act as a receiver giving information and advantage to the competitor such as "smart goggles", hearing devices, and the like.

An approved list of Wearables for World Aquatics competitions is available (HERE).

Competitors must declare all Wearables when reporting to the First Call Room. Failure to declare may result in disqualification from the event.

8 IDENTIFICATION OF COMPETITORS DURING THE RACE

8.1 **Numbering of competitors**

The numbering of Competitors is to appear on the arms, upper backs and hands of competitors. On the arms the numbers shall be arranged vertically. On the upper backs and hands the numbering is horizontally. Numbering of the arms and backs shall be 100 mm high x 60 mm wide. The numbering of the hands of competitors is allowed by marking pens. For Competitors with darker skin and full body wet suits a white marker pen will be required.

9 OPEN WATER SWIMMING FACILITIES AND EQUIPMENT

9.1 **Open Water Swimming Facilities**

9.1.1 **Start Platforms**

Start Platforms shall be of sufficient size to allow 60cm space per competitor plus an additional 5m. Each competitor space should be identified and numbered with number 1 farthest from the entry to the platform. They shall be of sufficient width to allow for the necessary activities prior to the start and to support the weight of the competitors and officials at the start.

9.1.2 Finish

9.1.2.1 The final approach to the finish shall be clearly defined with markers of a distinctive colour and shall comprise the boundary of the course.

9.1.2.2 The area leading to the finish apparatus should be clearly marked by rows of buoys which narrow as they get closer to the finish wall. For World Aquatic events these buoys shall be inflatable tubes.

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

9.1.2.4 The finish apparatus should, where possible, be a finish plate at least 5 metres wide fixed if necessary to floatation devices, securely fastened in place so as not to be moved by wind, tide or the force of a competitor striking the wall. The finish should be filmed and recorded from each side and above by a video system with slow motion and recall facilities including timing equipment. For Olympic Games, World Aquatics Championships and other World Aquatics competitions this is mandatory.

9.1.2.5 Additional cameras on each side of the finish plate are required for the Decision Review System (DRS) described in Part 3, 9.4. these cameras shall cover the breadth of the finish funnel continuously from the entrance until overlapping the coverage provided by the finish cameras described in 9.1.2.4

9.1.3 Turns / Alterations

9.1.3.1 All turns/alterations of the course shall be clearly indicated. Turn Buoys which are alterations of the course shall be of a different colour to guidance buoys. Wherever possible there shall be a long distance (to be approved by World Aquatics) from the start to the first turning buoy to ease congestion at the turn.

9.1.3.2 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 competitor's visibility of the turn.

9.1.4 Feeding Platforms

Feeding platforms shall be of sufficient size and buoyancy for the safe operation of the platform and the feeders and officials operating thereon. A minimum of 60cm of linear space per feeder plus 5m shall be required and of sufficient width to allow storage a preparation for competitor feeding. There needs to be sufficient space on one or more platforms to accommodate all feeders. Access to the platform shall be outside of the course wherever possible.

9.1.5 All Platforms

All Starting Platforms, Feeding Platforms, Relay Platforms, turning apparatus and Turn Judges craft/platforms shall be securely fixed in position and not be subject to tidal, wind or other movements.

9.1.6 Water Conditions

9.1.6.1 A certificate of suitability for use of the venue shall be issued by the appropriate local health and safety authorities. In general terms the certification must relate to water purity and to physical safety from other considerations.

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

9.1.6.3 The water temperature should be a minimum of 16.0°C and a maximum of 31.0°C. It should be checked the day of the race, 2 hours before the start, at three points around the course at a depth of 40 cm. The agreed temperature will be the average of the three taken. 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 present designated during the Technical Meeting.

9.2 Automatic officiating equipment for open water swimming

The operation of Automatic Officiating Equipment shall be under the supervision of appointed officials. Results recorded by Automatic Equipment shall be used to determine the winner, all placings and the time applicable to each competitor, The placing and times so determined shall have precedence over the decisions of Finish Judges & Timekeepers. In the event that a break-down of the Automatic Equipment occurs or that it is clearly indicated that there has been a failure of the Equipment, or that a competitor has failed to activate the Equipment, the recordings of the judges & timekeepers shall be official.

9.2.1 **Microchip Transponders**

When Automatic Officiating Equipment is used for timing of competitions in accordance with these Regulations microchip transponder technology capable of providing split times is mandatory and should be added to the Equipment. Use of microchip transponder technology is mandatory for World Aquatics competitions, at the World Aquatics Championships and Olympic Games. Microchip transponder timing technology will be recorded officially in tenths of seconds.

9.2.2 **Intermediate Timing Gate**

Where an intermediate timing gate is used it shall be placed such that it becomes part of the overall course within the swimming line of the course without deviation for the competitors. It shall be a minimum width of 6m wide at the swimming waterline.

9.3 **Automatic Officiating procedure for Open Water Swimming**

9.3.1 Any timing device that is terminated by an official shall be considered a watch. Such manual times must be taken by three timekeepers appointed or approved by the Member in the country concerned. All watches shall be certified as accurate to the satisfaction of the governing body concerned. Manual timing shall be registered to 1/10 of a second. Where no Automatic Equipment is used, official manual times shall be determined as follows:

9.3.1.1 If two (2) of the three (3) watches record the same time and the third disagrees, the two identical times shall be the official time.

9.3.1.2 If all three (3) watches disagree, the watch recording the intermediate time shall be the official time.

9.3.1.3 With only two (2) out of three (3) watches working the average time shall be the official time. When this calculation results in a value that is expressed in hundredths of a second, the final digit shall be dropped without rounding.

9.3.2 When the Automatic Officiating Equipment fails to record the place and/or time of one or more competitors in a given race:

9.3.2.1 Record all available Automatic Officiating Equipment times and places,

9.3.2.2 Record all human times and places.

9.3.2.3 The official place will be determined as follows:

- A competitor with an Automatic Officiating Equipment time and/or place must retain his/her relative order when compared with the other competitors having an Automatic Officiating Equipment time and/or place within that race.
- A competitor not having an Automatic Officiating Equipment place shall have their place established by the Chief Referee from the video recording of the finish of the race.
- A swimmer having neither an Automatic Officiating Equipment place nor an Automatic Officiating Equipment time shall establish their relative order by the place recorded by the Finish Judges.

9.4 **Decision Review System (DRS)**

9.4.1 Decision Review System (DRS) is a system for collecting and reviewing images to be analysed at the end of the race by the Chief Referee as a means of decision support for an infraction that has been reported to the Chief Referee by any authorised Official.

9.4.2 At World Aquatics competitions where there is a Decision Review System (DRS) in use there will be a Video Review Judge (VRJ) appointed to review available images.

10 WATER QUALITY GUIDELINES FOR OPEN WATER

10.1 **Water Quality Guidelines for Open Water Swimming**

10.1.1 **Aims**

The intention of these Regulations is to provide guidance to the Organising Committee (OC) of any World Aquatics Open Water Swimming event on matters relating to water quality at a proposed competition or training venue.

In adherence with WHO Guidelines on Recreational Water Quality (2021), these World Aquatics Guidelines provide the following details:

- Identification of significant water contaminants;
- Levels of specified microorganisms;
- A model for sanitary inspection; and
- A combined classification matrix to determine suitability of a competition venue.

10.1.2 Background Narrative

World Aquatics hosts Open Water Swimming events in the open sea, lakes, rivers and other inland waterways, commonly over distances of 5km or more. The Technical Open Water Swimming Committee (TOWSC) in collaboration with the Sports Medicine Committee (SMC) works to ensure athlete safety as their priority.

While Open Water Swimming Rules address a number of health and safety factors including water temperature, water quality and other forms of contamination or water hazard, these Guidelines specifically address water quality, with particular focus on the bacterial indicator organisms, intestinal Enterococci and Escherichia Coli (E.coli). These are reliable indicators of faecal contamination from animals, human sewage, or effluent and present the likeliest risk to athlete welfare.

Open-water swimmers may be exposed to contamination from waterborne agents through inhalation, ingestion (swallowing) and by direct skin contact. Sensitive mucosal linings of the eyes, ears, nose, mouth and upper respiratory tract are potential infection entry points during prolonged immersion.

Swallowing a significant volume of contaminated water will challenge the gastrointestinal system and may cause diarrhoea and vomiting. However, these effects are determined primarily by the strain and concentration of a specific microorganism, the period of exposure and the immune status or susceptibility of the host (the swimmer).

Consequences may range from mild to moderate gastrointestinal symptoms, ear, nose and eye infections, and in some susceptible individuals, respiratory illness. In most cases however, symptoms are transient and respond to conservative medical management. However, more serious medical consequences may arise and therefore a competition venue meeting accepted safety standards will clearly minimise risks to the athlete.

The suitability of a potential venue for training or competition is determined by a combined microbial water quality assessment and survey of sanitation. The former quantifies identified bacteria while the latter involves visual inspection, identifying other pollution sources such as runoff from stormwater drains or industrial outflows. The sanitary survey also considers the influence of weather patterns, particularly rainfall, and potential effect on a venue.

10.1.3 Assessment of Bacterial Contaminants

Universal agreement has determined intestinal Enterococci and E. coli as the most reliable indicators of faecal contamination in water. Acceptable levels of these organisms for safe swimming are in accordance with limits proposed by the WHO (2021), the United States Environmental Protection Agency (2017), the European Environmental Agency (2020), the New Zealand Ministry of Health (2021) and the Australian National Health and Research Council (2017).

Therefore, World Aquatics applies the following standards at Open Water Swimming venues with a distinction between tidal waters and inland waterways that account for variabilities such as salinity, tidal influence, and distribution of organisms:

cfu = colony forming unit

	Excellent water quality	Good water quality	Unacceptable water quality
Enterococci (cfu/100mL)	<100	<200	>200
E. coli (cfu/100mL)	<250	<500	>500

Table 1. Bacterial levels for sea and transitional (tidal) waters

	Excellent water quality	Good water quality	Unacceptable water quality
Enterococci (cfu/100mL)	<200	<400	>400
E. coli (cfu/100mL)	<500	<1000	>1000

Table 2. Bacterial levels for inland waterways

10.1.4 Frequency of water analysis

To be awarded an Open Water Swimming event, the Organising Committee (OC) is obligated to provide the World Aquatics Office with an authorised water quality analysis report from venue samples collected at the site and then again at the following intervals:

- Two (2) months from competition
- Seven (7) days prior to start of competition
- No more than 48hrs prior to competition
- Day of competition*

Water samples must be collected from three (3) different locations on the course and analysed at an authorised laboratory. The poorest result should determine the overall water quality with the following tolerance levels for respective venues.

**NOTE: Day of competition sampling, notwithstanding delayed reporting, will only be used when a change in water quality, caused by storms or other unpredictable factors, needs to be considered in the advent of illness amongst participants. Data from water analysis will guide appropriate treatment.*

10.1.4.1 For ocean and transitional (tidal) waters

- pH between 6 - 9
- Enterococci not more than 100cfu/100mL
- E. coli not more than 250cfu/100mL
- Absence of algal bloom

10.1.4.2 For inland waterways

- pH between 6 – 9
- Enterococci not more than 200cfu/100mL
- E. coli not more than 500cfu/100mL
- Presence of algal bloom and scum formation in inland waterways will necessitate a test for cyanobacteria with results to be confirmed by the appropriate local health authority. A tolerance of less than 100,000 cells/mL is required by World Aquatics.

(Reference: World Triathlon Water Quality Statement 2019)

10.1.5 Sanitary Inspections

A venue sanitary inspection is primarily a “subjective” visual survey, best undertaken by qualified personnel.

This inspection indicates whether the competition venue is potentially susceptible to faecal contamination from other sources. These include inflow identified by local health authorities, from nearby factories, farms, or hotels, as well as the influence of stormwater overflow after periods of heavy rainfall.

In addition, a visual inspection should record areas of stagnation, water clarity, odour, evidence of algal bloom, surface “scum” or visible pollutants such as oil film or “slick.” These constitute a “checklist” of sanitary factors to be included by the potential host organisation in their bid document to World Aquatics.

Where there is demonstrable impact from weather events such as heavy rainfall, the bid document should provide clear, documented evidence of water “clearance time” to return the venue to acceptable levels of indicator organisms.

In addition, a visual survey of every venue must also identify potential hazards such tides, currents, general debris, floating logs or rocky outcrops that could affect the laying of a course or impede or injure a swimmer. These matters overlap the brief of the World Aquatics Safety Officer, whose inspection takes place at the time of competition.

Sanitary Inspection Factors	Excellent Sanitation	Good Sanitation	Poor Sanitation
Algal bloom	absent	absent	present
Surface contaminants (e.g. oil)	absent	absent	present
Water clarity	Visibility to 50 cm	cloudy	cloudy
Odour	absent	moderate	present
Weather effects	nil	present but reducing	present
Active aquatic life	present	present	absent

Table 3. Sanitary Inspection Checklist

10.1.6 Regulations for an Open Water Swimming Venue Suitability

10.1.6.1 Classification Matrix for Venue Suitability

In meeting obligations to athlete health and safety, the suitability of every World Aquatics Open Water Swimming venue must be determined by considering three data sets, namely:

1. Results of water quality analysis
2. Report from sanitary inspection
3. Knowledge of local weather impact

Consequently, a matrix of classification, modelled on the World Triathlon Water Quality Statement (2019), is used by World Aquatics to assist in determining the suitability of all OWS competition venues.

10.1.6.2 Water Quality Decision Matrix for Sea/Ocean and Transitional (tidal) Waters

	Sanitary Category		
	Excellent	**Good**	**Poor**
2 past results E. coli <250 Enterococci <100	1	1	2
Last result E. coli 250- 500 Enterococci 100-200	2	2	3
2 past results E. coli 250 -500 Enterococci 100-200	2	3	3
Last result E. coli >500 Enterococci >200	4	4	4

Table 4. Water Quality Decision Matrix for Sea/Ocean and Transitional (tidal) Waters

10.1.6.3 Key for Venue Suitability in Transitional Waters

1	**Excellent water quality:** E. coli <250cfu/100mL or Enterococci <100cfu/100mL with excellent/good sanitary inspection and no forecasted heavy rainfall.
2	**Good water quality:** E. coli <250cfu/100mL or Enterococci <100cfu/mL with some deficiencies in sanitary inspection or forecasted heavy rainfall. OR E. coli 250-500cfu/100mL or Enterococci 100-200cfu/mL with no deficiencies in sanitary inspection or no forecasted heavy rainfall.
3	**Fair water quality:** E. coli 250-500cfu/100mL, Enterococci 100-200cfu/100mL with poor sanitary inspection and/or forecasted heavy rainfall.
4	**Poor water quality:** E. coli >500cfu/100mL, Enterococci >200cfu/100mL with poor sanitary inspection and/or forecasted heavy rainfall.

Table 5. Key for Venue Suitability in Transitional Waters

10.1.6.4 Water Quality Decision Matrix for Inland Waterways

	Sanitary Category		
	Excellent	**Good**	**Poor**
2 past results E. coli <500 Enterococci <200	1	1	2
Last result E. coli 500-1000 Enterococci 200-400	2	2	3
2 past results E. coli 500 - 1000 Enterococci 200-400	2	3	3
last result E. coli >1000 Enterococci >400	4	4	4

Table 6. Water Quality Decision Matrix for Inland Waterways

10.1.6.5 Key for Venue Suitability for Inland Waterways

1	**Excellent water quality:** E. coli <500cfu/100mL or Enterococci <200cfu/100mL with excellent/good sanitary inspection and no forecasted heavy rainfall.
2	**Good water quality:** E. coli <500cfu/100mL or Enterococci <200cfu/mL with some deficiencies in sanitary inspection or forecasted heavy rainfall. OR E. coli 500-1000cfu/100mL or Enterococci 200-400cfu/mL with no deficiencies in sanitary inspection or no forecasted heavy rainfall.
3	**Fair water quality:** E. coli 500-1000cfu/100mL, Enterococci 200-400cfu/100mL with poor sanitary inspection and/or forecasted heavy rainfall.
4	**Poor water quality:** E. coli >1000cfu/100mL, Enterococci >400cfu/100mL with poor sanitary inspection and/or forecasted heavy rainfall.

Table 7. Key for Venue Suitability for Inland Waterways

10.1.7 Open Water Swimming Water Quality Regulations for Venue Suitability Summary

From the above Water Quality Decision Matrices, World Aquatics expects all Open Water Swimming competition venues to meet the criteria outlined in **Level 1, as Excellent water quality**.

However, there will be circumstances where **Level 2 (Good water quality)** may also be considered acceptably safe for competition. As examples, a venue may be considered unsuitable only after heavy rainfall and reclassified satisfactory after water "clearance" or where deficiencies in sanitation such as the presence of debris, hazards or surface contaminants are physically cleared.

All decisions on venue reclassification reside with the joint Commissions of the TOWSC and SMC, or their appointee, in collaboration with the OC Medical Officer.

NOTE: Water Levels 3 and 4 are unacceptable to World Aquatics for safe competition or training.

ACKNOWLEDGEMENT: Special acknowledgement is made of the World Triathlon Water Quality Statement (2019) and the contributions of Sergio Migliorini and Thanos Nikopoulos to their Water Quality Matrix upon which the World Aquatics Water Quality Decision Matrices are based.

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11 OPEN WATER SAFETY REGULATIONS

11.1 General Concept

11.1.1 These Regulations shall apply to all open water events of a distance of 5km or greater organized by World Aquatics, sanctioned by World Aquatics, or over which World Aquatics has technical control ("Covered Competitions"). These Regulations shall augment and supersede as applicable, the existing regulations established for specific events.

11.1.2 Critical elements of these Regulations include:

- Submission of a site-specific Safety Plan compliant with these regulations as part of the event approval process;
- Approval of the Safety Plan by the World Aquatics Safety Delegate and by the World Aquatics Medical Delegate as a condition of event approval;
- The World Aquatics Safety Delegate and the Medical Delegate should see both plans in advance and work together to ensure both plans mesh where required.
- Appointment of an World Aquatics Safety Delegate who is independent of the Host Member Federation and Organizing Committee ("HMF/OC") to ensure that the approved safety plan and the requirements of these regulations are implemented on race day;
- Authority vested in anyone of the World Aquatics Safety Delegate, the HMF/OC Safety Officer, Medical Officer, or the Chief Referee to postpone, cancel, or modify an event where safety conditions warrant;

- Careful accounting for all competitors before, during and after the race to ensure that all competitors starting the race are accounted for at the time they withdraw or finish the race;
- All competitors must be observed during the race so that there is immediate recognition when a competitor is struggling or loses consciousness.
- There must be immediate rescue available when a competitor is in distress; and
- There must be immediate resuscitation available to address medical emergencies.

11.2 Submission of a safety plan to World Aquatics

11.2.1 For all Covered Competitions, the HMF/OC for the competition shall submit a site-specific safety plan to World Aquatics for World Aquatics' approval. That safety plan shall comply with all requirements of these regulations.

11.2.2 Each safety plan shall be reviewed by the World Aquatics TOWSC Safety Delegate, who shall approve, modify, or reject the submitted safety plan.

11.2.3 No Covered Competition subject to these regulations shall be sanctioned or approved by World Aquatics without an approved safety plan in place.

11.2.4 Any change to an approved safety plan requested up until five days before the race must be approved by the World Aquatics TOWSC Safety Delegate as provided in Part Three, Article 10.2.2 above. Changes to an approved safety plan necessitated by circumstances beyond the control of the HMF/OC requested within five days of the race, or otherwise required to protect participant safety, may be approved by the World Aquatics Safety Delegate appointed by World Aquatics for the race.

11.3 Implementation of the Safety Plan at the Event

11.3.1 Concurrently with the awarding of an event, World Aquatics shall appoint an World Aquatics Safety Delegate for each Covered Competition. The World Aquatics Safety Delegate shall be independent of the HMF/OC. The World Aquatics Safety Delegate shall be generally responsible for all matters pertaining to the safety of the competition participants and shall be specifically responsible for ensuring that the approved safety plan and these regulations are followed during the competition.

11.3.2 The HMF/OC shall appoint an HMF/OC Safety Officer with experience in open water safety and an HMF/OC Safety Crew responsible for organizing and implementing all safety aspects of the competition. The HMF/OC Safety Crew shall include certified local lifeguards with experience in open bodies of water who shall be involved in safety during the competition.

11.3.3 The World Aquatics Safety Delegate shall inspect the competition venue and meet with the HMF/OC Safety Officer and Safety Crew at least three days prior to the scheduled start of the competition to ensure that the safety plan remains adequate to address the conditions at the competition venue and that all actions necessary to implement the approved safety plan have been taken.

11.3.4 The World Aquatics Safety Delegate shall have authority to modify, postpone, or cancel the competition whenever the approved safety plan is not being implemented or as otherwise required to protect the safety of participants. The HMF/OC Safety Officer, Medical Officer and the Chief Referee of the race may advise the World Aquatics Safety Delegate on the modification, postponement or cancellation of the competition.

11.4 Safety Plans and Race Safety Implementation Requirements

Each safety plan required by these regulations shall include the following minimum requirements. The implementation of these requirements is mandatory for each Covered Competition.

11.4.1 Team Leaders' Meeting

a) Team representatives must attend the Team Leaders' Meeting. If a Team Leader or Team's/competitor's representative is unable to attend the Team Leaders' Meeting, the competitor must attend a special safety briefing in order to participate in the race.

b) Safety topics that shall be included in the Technical Meeting include:

- explanation of the course layout and hazards
- tides, currents or other water conditions
- marine life
- weather conditions
- water temperature
- water quality conditions

- description of the method by which the Safety Committee will monitor swimmers
- location of safety craft
- description of medical support onsite and availability of hospital care
- signal for help-float on back and raise hand for assistance
- evacuation plan for clearing the racecourse, including description of related visual and audible signals

c) A short pre-race safety briefing, mandatory for all competitors, shall be held immediately prior to the race.

11.4.2 Monitoring And Rescue Of Swimmers

a) Each competitor shall be under the direct observation of at least one HMF/OC Safety Crew member or Referee at all times during the race. The configuration of the course will determine where Safety Crew observers are positioned to observe competitors. For example, in an open course with no physical restraints, and depending on the size of the field, it is ideal to have an escort craft with a designated observer assigned to assure that each competitor is monitored. However, in a competition conducted in a narrow rowing basin, it would be impractical to have individual escort craft on the course, rather, HMF/OC Safety Crew observers may be able to follow the competitors by walking along the shore. In other circumstances, it may be desirable to organise the HMF/OC Safety Crew observers by zone.

Whenever possible, given the layout of the course, HMF/OC Safety Crew observer craft (boats or kayaks) should guarantee that all competitors separated from the lead group or lead competitor can be followed directly by a safety boat or kayak. The safety craft must follow the competitor or group of competitors at a reasonable distance so as to allow immediate intervention if a safety action is required.

a) There must be sufficient safety craft or escort craft located on the course to immediately recognize when a competitor is in distress and to initiate an immediate rescue response after observation or notification that a competitor's rescue is required. In most course configurations, there should also be stationary safety craft located every 400 meters along the course, with a CPR- and life support- trained responder on board. To accomplish this, there must be sufficient designated rescue landing points along the course and sufficient CPR- and life support-trained personnel in proximity to each competitor or group of competitors.

11.4.3 Safety Communication

a) The World Aquatics Safety Delegate and the HMF/OC Safety Officer must have instant two- way communication access with: each other; all members of the HMF/OC Safety Crew assigned to observe competitors; all safety craft; personnel on each feeding platform; the HMF/OC Chief Medical Officer; the Chief Referee; and other course officials. The line of command shall be as follows: the World Aquatics Safety Delegate deals directly with the HMF/OC Safety Officer and the HMF/OC Safety Officer deals directly and shall have the absolute power to mobilize all lifeguards and medical personnel when required.

b) Safety Crew members assigned to monitor competitors must also be able to instantly communicate with all safety craft.

c) Two-way radios or other communication equipment with one channel or number reserved for emergencies are required, and a backup system shall also be available.

11.4.4 Accounting for Swimmers

a) Each competitor shall have his or her race number marked clearly on his or her body. The Clerk of the Course is responsible for the accountability of all competitors from the start of the race until the last competitor has safely completed the race. As competitors withdraw from or finish the race, the Clerk of the Course shall check off each competitor from the list of competitors who started the race.

b) No competitor shall exit the race through withdrawal, disqualification, completion, or otherwise-without checking in with the Clerk of the Course.

c) All competitors should wear when available whatever electronic tracking technology may be required as part of the approved safety plan.

11.4.5 Feeding Stations

a) For Covered Competitions greater than five kilometers, a floating or stationary feeding station should be available at least every 2.5 kilometers.

11.4.6 Local Suitability Certificate, Including Water Quality

a) The course shall be in water that is subject to only minor currents or tides and shall be free of hazardous obstacles, pollutants, and dangerous marine life.

b) A certificate of suitability for the use of the venue shall be issued as per Part Three, Article 8.1.6.1 above. The certificate provided in connection with plan approval shall be updated within seventy-two hours of the day of the race.

11.4.7 Water Temperature

a) The water temperature shall be measured before the race as per Part Three, Article 8.1.6.3 above.

b) The water temperature shall be monitored as provided above at one-hour intervals during the race. If the water temperature drops below 16°C or exceeds 31°C at any of the measuring intervals, the water temperature shall be measured again in 30 minutes and if that measurement is also below 16°C or exceeds 31°C, the race must be stopped until such time as the water temperature complies with this rule.

11.4.8 Medical Service

a) The HMF/OC shall appoint as its Chief Medical Officer a physician with experience in providing medical care during endurance events. Other members of the HMF/OC medical team shall include sufficient individuals with emergency medical training (basic life support and CPR) to staff the stationary safety boats and venue medical facility.

a) The onsite medical facility shall include basic emergency and trauma equipment, AED, and any heating or cooling facilities required by the approved safety plan.

b) An ambulance shall be available onsite or on call within five minutes of the venue. It is recommended that a back-up ambulance shall also be available onsite or on call within 15 minutes of the venue.

c) Where the travel time by ambulance between the venue and the nearest hospital with emergency room facilities is longer than one hour, then the safety plan shall require provision for helicopter transport.

11.4.9 Safety During Training. Pre-Race Warm Up And Post-Race Warm Down

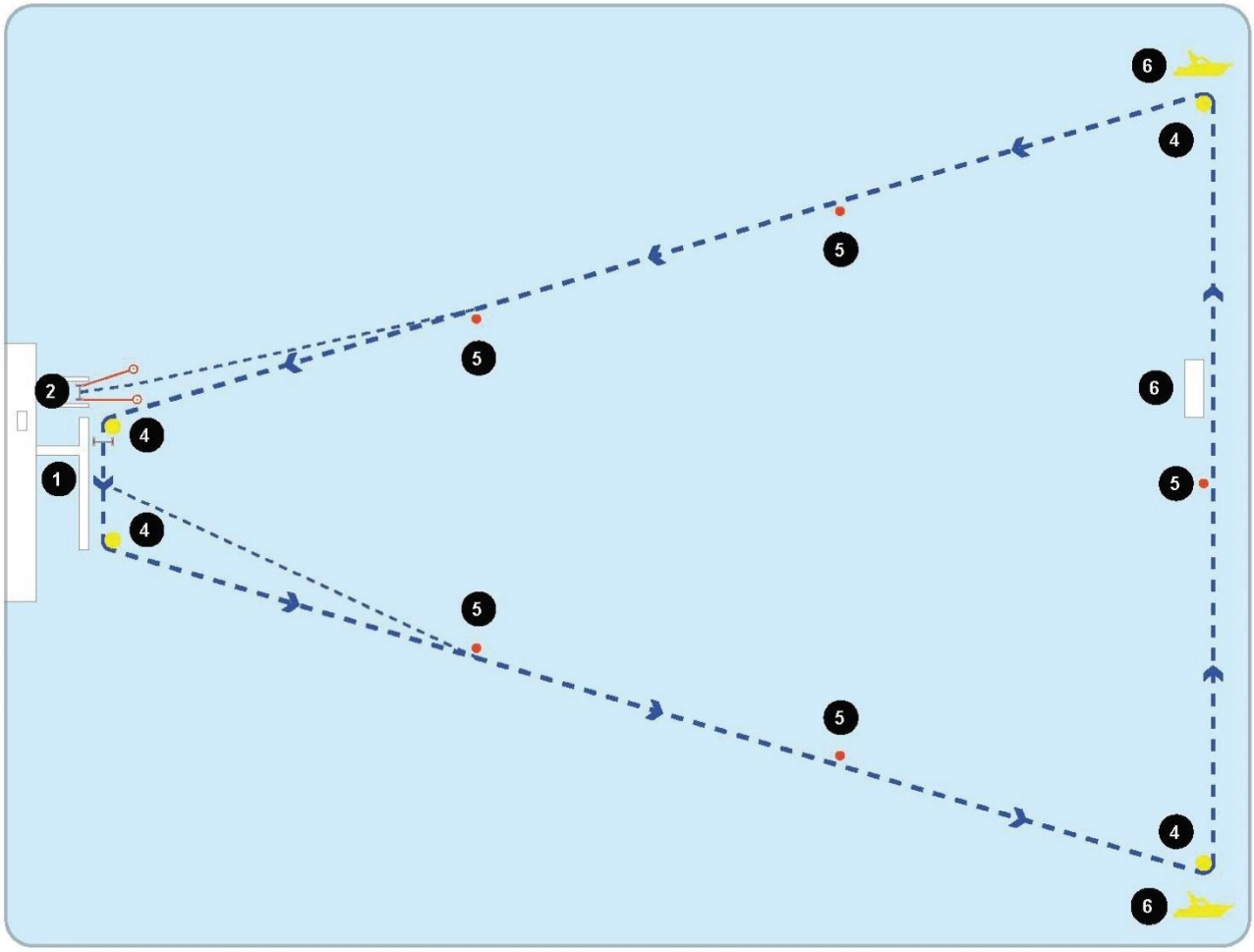
a) The HMF/OC must provide safety monitoring on the course during established training hours. No competitor shall be allowed to enter the racecourse during training without an escort craft. Monitoring of competitors by HMF/OC Safety Crew observers should also occur during pre-race warmups and post-race warm downs.

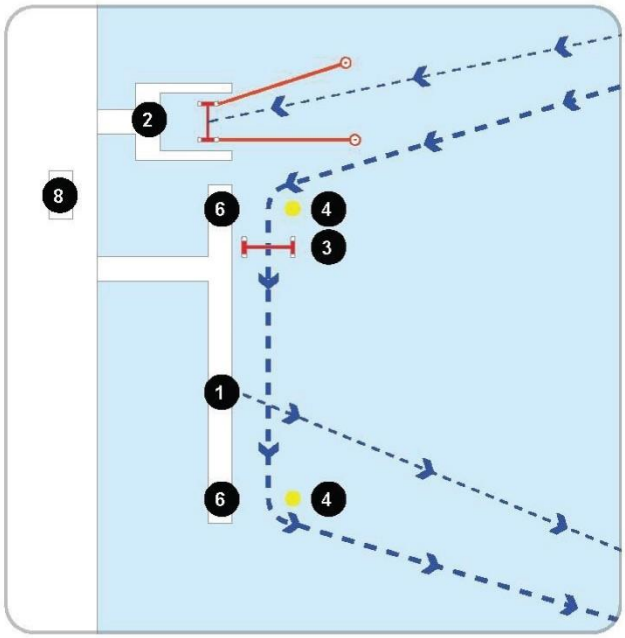
11.4.10 Course Evacuation Plan

a) Each safety plan must include a course evacuation plan to expeditiously get all competitors and race personnel off the water and to safety in emergency situations.

12 APPENDICES

12.1 APPENDIX 1 - Diagram – Field of Play



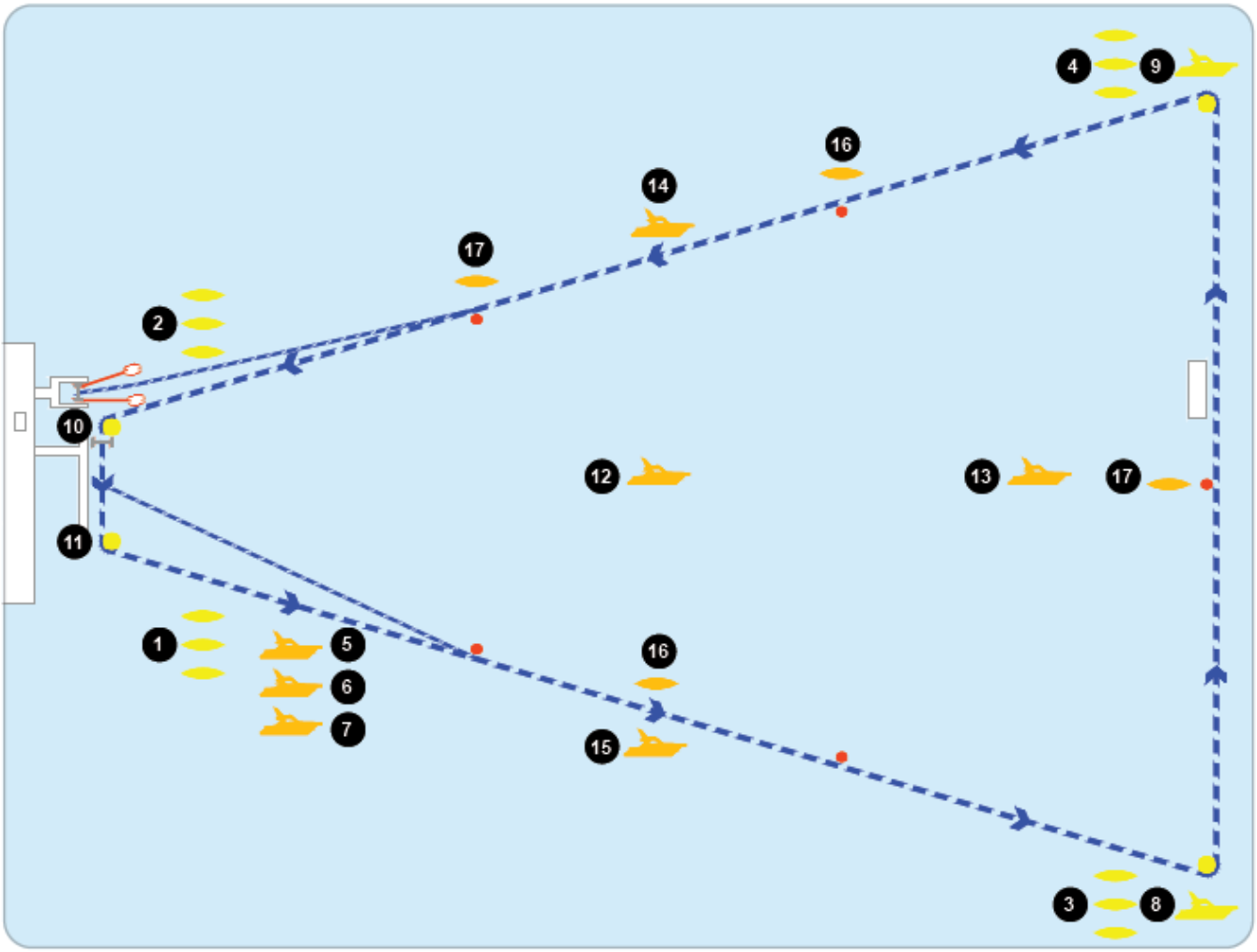


1. Start Platform
2. Finish Gate
3. Intermediate Gate
4. Turn Buoy
5. Guidance Buoy
6. Turn Judge platform or craft
7. Feeding Platform
8. Timing Room

Water Conditions

- The course shall be in water that is subject to only minor currents or tide and may be salt or fresh water.
- The minimum depth of water at any point on the course shall be 1.40 meter
- The water temperature should be a minimum of 16°C and a maximum of 31°C. 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.

12.2 APPENDIX 2 - Diagram – Crafts Position

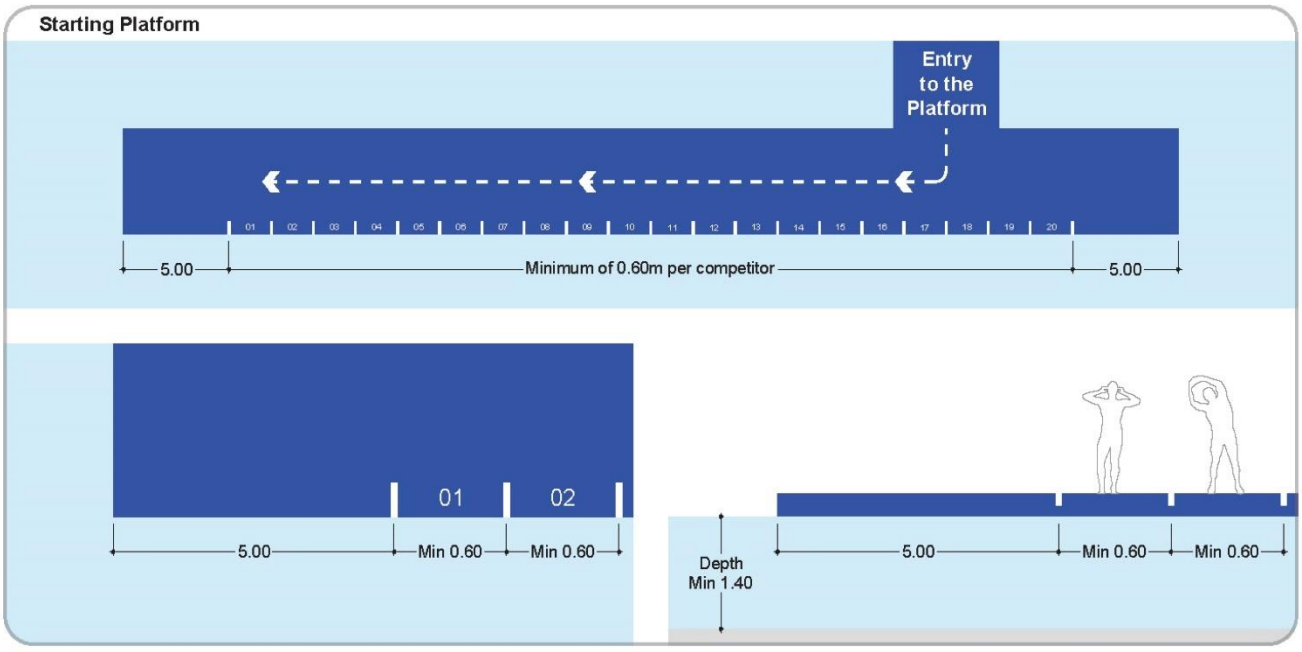


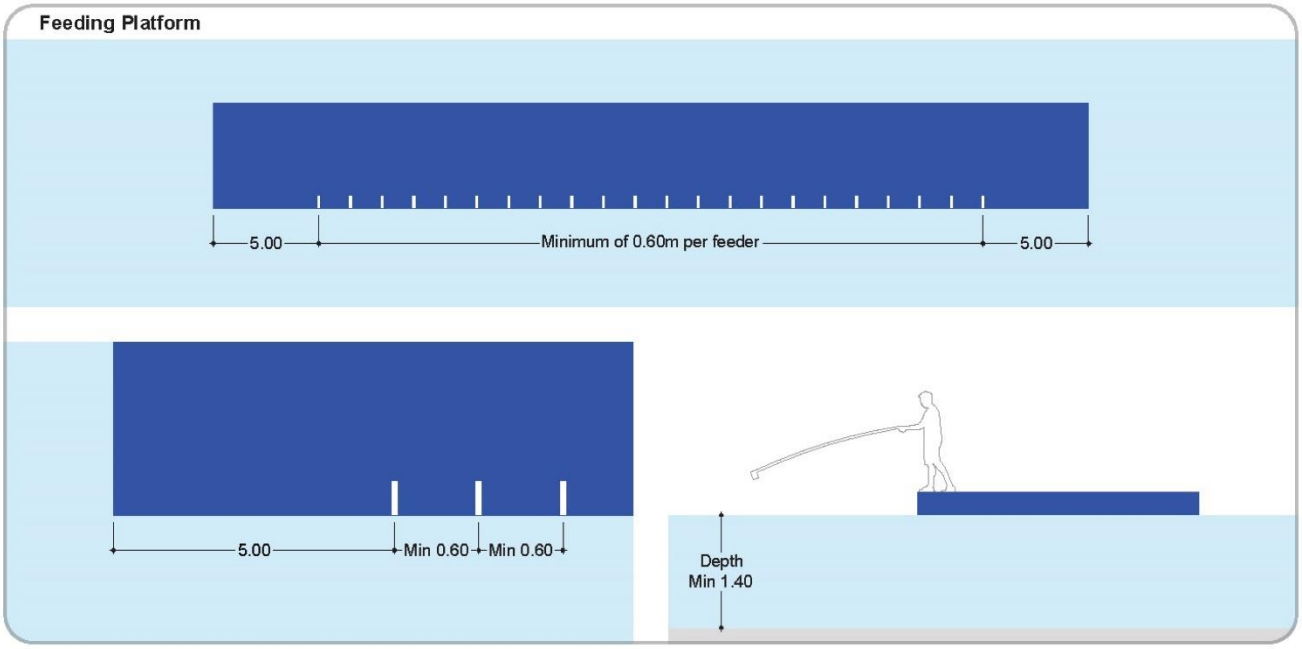
Operational Plan - Crafts position

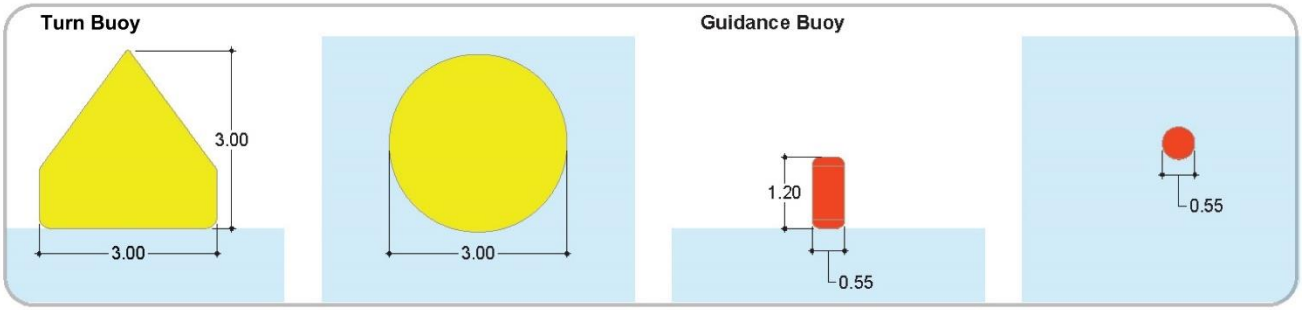
1. Kayak - Left side of the pontoon
2. Kayak - Right side of the pontoon
3. Kayak - Right side of Turn 1
4. Kayak - Left side of Turn 2
5. Boat - Chief referee 1 + 1 Driver
6. Boat - Referee 1 + 1 Driver
7. Boat - Referee 2 + 1 Driver
8. Platform or Craft* - Turn Judge 1
9. Platform or Craft* - Turn Judge 2
10. Platform or Craft* - Turn Judge 3
11. Platform or Craft* - Turn Judge 4
12. Boat - Course Officer
13. Boat - Medical Officer + 1 Driver + 1 Lifeguard
14. Boat - Safety Officer + 1 Driver + 1 Lifeguard
15. Boat - Media + 1 Driver
16. Jetski - 1 Paramedic + 1 Driver
17. Jetski - 1 Parademic + 1 Driver

**Craft requires a driver*

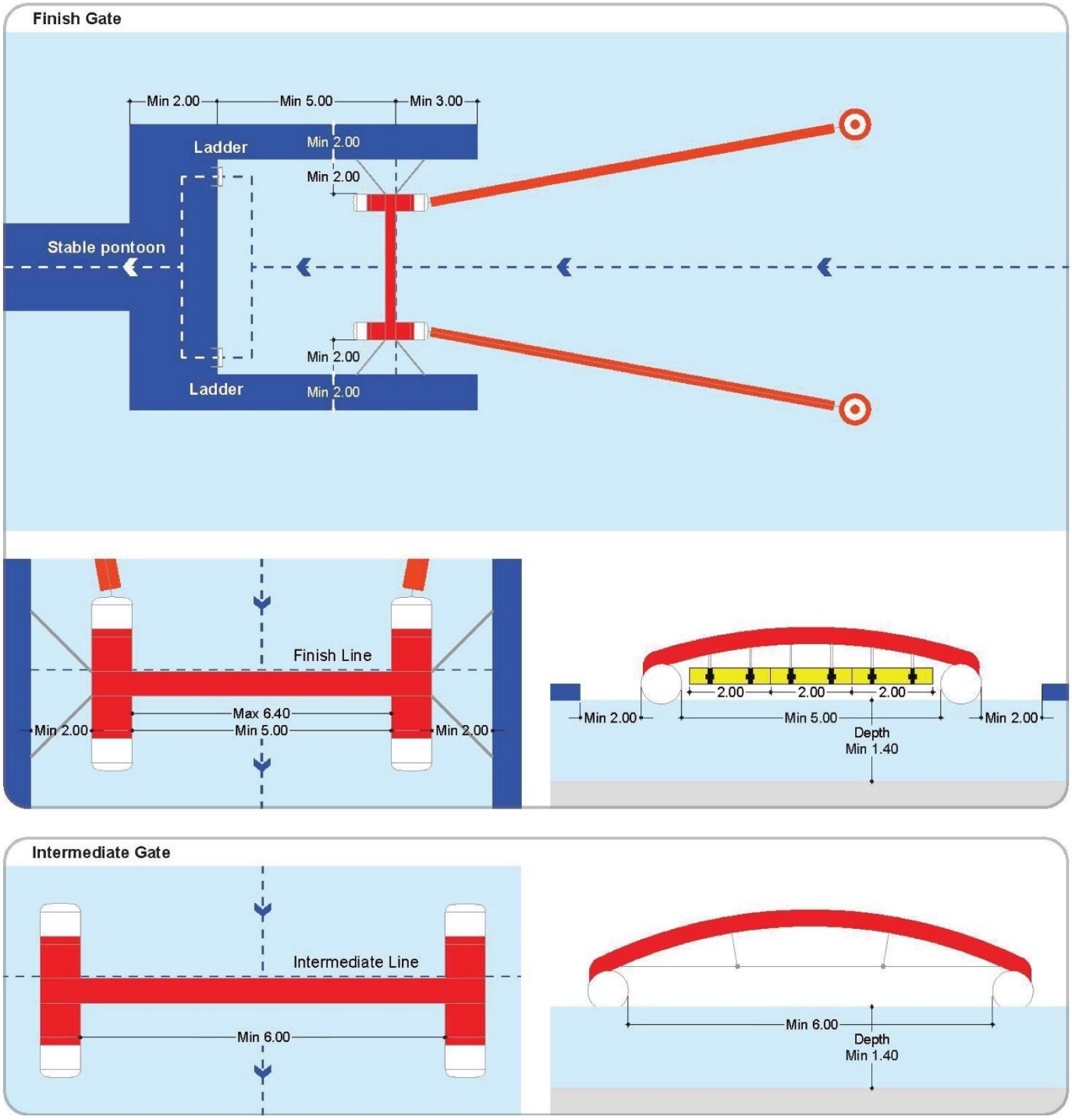
12.3 APPENDIX 3 - Diagram – Platforms and Buoys





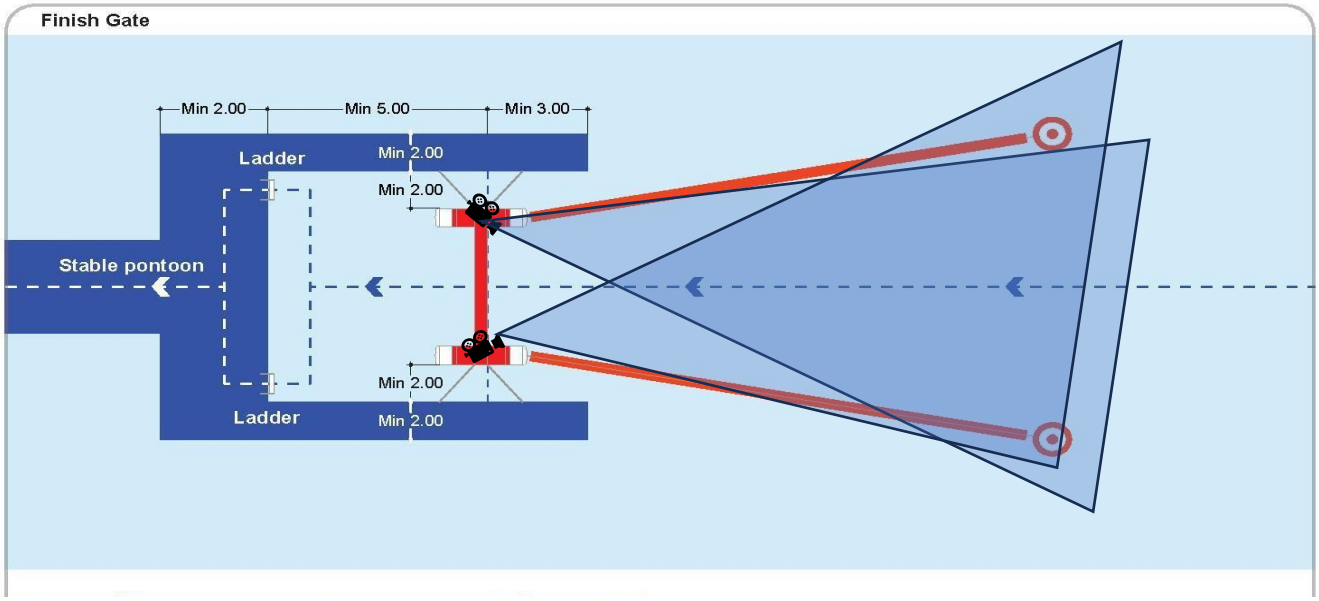


12.4 APPENDIX 4 - Diagram – Gates



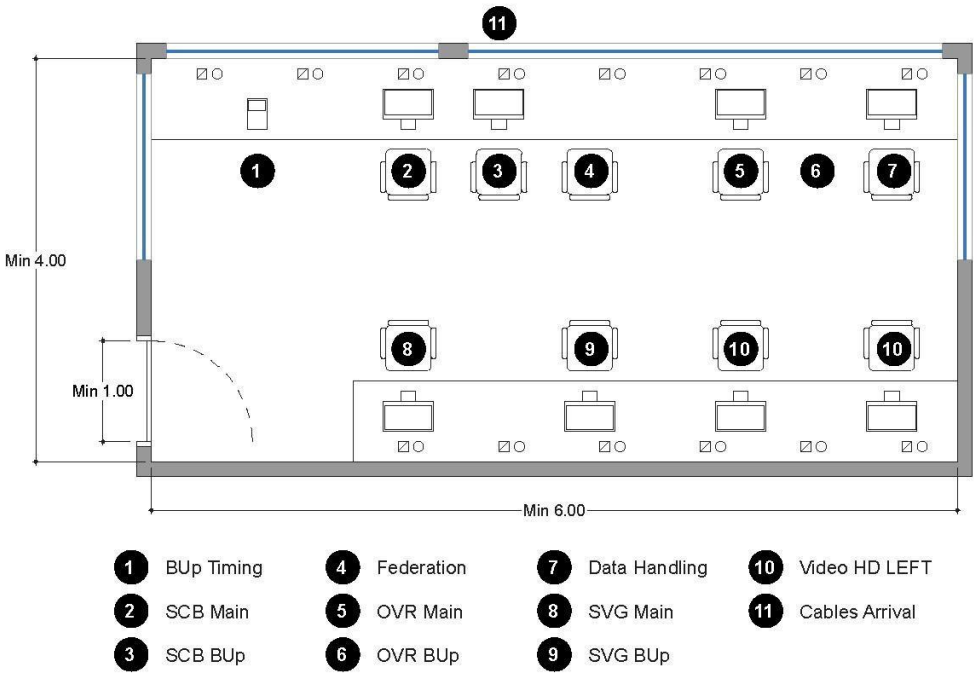
12.5 APPENDIX 5 - Diagram – Gates – Decision Review System (DRS)

DRS Video Camera coverage



12.6 APPENDIX 6 – DIAGRAM – TIMING ROOM

Timing Room



General Requirements

- Wireless transmitting devices that are not part of Timing/ Judging equipment are not allowed around the finish area.
- The athletes must wear the microchip with the provided wristband. No modification on the wristband is allowed.
- At the finish, the Chief Referee must go to the Timing room for video judging as soon as possible.
- Timing room must have good visibility on the finish gate. The maximum distance between the finish and the Timing Room shall be 40m.

Requirements to be provided by OC

- Rainproof room
- Air Conditioning 18-20ºC. Air Conditioning must be adjusted for about 10 people and the equipment.
- Minimum room area: 25m2
- Minimum room height: 2.20m
- Power: Each socket 208-240V / 50-60Hz / 2kVA
- View to the FOP
- High speed internet connection
- TV Monitor
- Cables arrival hole
- Tables (Height: Min 70cm, Width: Min 80cm)
- Chairs

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