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USMS Open Water Safety Guidelines

Introduction

The aquatic environment, especially open water, holds a potentially wide range of challenges to swimmer safety. These can range from mild to wild including: anxiety attacks, physical contact between swimmers, fatigue, marine life, hypothermia, cramping, heart attacks, strokes and drowning.

As conditions and courses vary, it is the responsibility of each swimmer to know and follow the safety standards necessary for protection from foreseeable dangers. The safety coordinator can assist this endeavor by planning for a safe event including:

- A. Obtaining necessary permits/approvals from the U.S. Coast Guard, park authorities, lifeguard associations, etc.
- B. Providing accurate maps with course descriptions, course markings, and other pertinent information, including but not limited to anticipated water temperature and general water conditions, with entry forms and meet information packets.
- C. Planning for possible medical evacuations.
- D. Assigning rescue/aid personnel and craft.
- E. Planning for escort paddlers or craft. Personal escorts should be considered for open water swims.
- F. Making provisions for controlling escort craft and access of non-race craft into the race area.
- G. Briefing all contestants, coaches, managers, trainers and meet officials.
- H. Planning for possible cancellation, postponement and/or modification of the meet.
- I. Considering use of fluorescent or brightly colored caps to assist in identification and visibility of swimmers in open water events.
- J. Informing swimmers of the anticipated water temperature, specific weather and water conditions, and known hazards.

The remainder of this document is intended to provide education, reference and requirements for safety planning for USMS open water events.

Licensing/Sanctioning

- A. USMS sanctioning processes may impose safety requirements as a condition of sanction. Those requirements are contained in this document. **A written safety plan, based on the requirements and recommendations in this document, shall be prepared as part of the sanction process.**
- B. It may be necessary to obtain permits/approvals from the U.S. Coast Guard, park authorities, lifeguard associations, private lake owners, etc. These agencies may impose additional safety requirements as a condition of using the venue.

Course Design

- A. Swim Course—**The swim course shall be clearly defined as to its start, middle and finish.** The swim course is defined by:

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1. The start line.
 2. Turn markers with explicit directions as to which side of the marker the swimmer must pass. All other markers are for directions only and do not define the limits of the course.
 3. The finish line.
- B. Course Design—**The course shall be designed so that swimmers can navigate without unnecessary contact among swimmers.** The course of the swim should be designed so as to minimize confusion of the swimmers. Courses should avoid head-on traffic patterns where swimmers could pass close to each other in opposing directions. Course design should also eliminate changes in course direction until the field of contestants has spread out from starting line congestion. A 500-yard minimum is recommended.
- C. Turn/Course Markers—**The course shall be marked in a way that the path to follow is clear to the swimmers.** Fixed or anchored course markers should be used as follows:
1. The turn/course markers may be used for various purposes such as: defining the limits of the course; swimmer directions; marking distances; other communication with swimmers while in the water. Natural or man-made landmarks may augment on-course markers but should be easily seen and identified by swimmers.
 2. Provide course markers at 200-yard points or closer.
 3. **Markers shall be brightly colored.** Turn markers should be easily distinguished from course markers.
 4. Markers should have a visible surface area of at least four square feet.
 5. Markers should be high above the water, three feet minimum. Six feet is recommended.
 6. Hazards or danger areas on or close to the course should be marked with a marker different than course markers or turn markers.
- D. Start—**The start shall be safe for the swimmers and the starting officials and starting signals easy to see and hear.**
1. Bottom should be firm, clean, and free from hazards (rocks, algae, glass, etc.)
 2. Starting line should be as wide as possible to minimize multiple row starting. The course design should provide a starting line which is as perpendicular as possible to the first leg of the course whereby all contestants along the starting line have equal advantage.
 5. The starter must be clearly identified, visible by all persons on the starting line, and in front of the starting line.
 6. A public address system with sufficient amplified strength capable of reaching the majority of the beach or staging area should be considered a requirement.

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3. The starting area and course should be controlled so as to keep non-participants clear.
 4. A gun or horn or siren start should be used with simultaneous waving of a large green flag which should stand out from surroundings. A three minute red flag warning and one minute yellow flag warning should be given.
- E. Finish—The finish shall be safe for the swimmers, easy to navigate, conducted to ensure sportsmanship and staffed for the purposes of aiding swimmers exiting the water.**
1. A chute finish is recommended with the finish line at the entrance to the chute and close to the water line.
 2. The chute should be long enough and wide enough to accommodate the number of swimmers expected to finish at about the same time.
 3. The ground surface leading up to the water line as well as through the finish chute should be free of rough or slippery areas and objects that could injure swimmers' bare feet.
 4. The finish line should be clearly marked and visible from the water from at least 1/4 mile away.
 5. The finish area should be controlled so as to keep non-participants clear.
 6. Finish monitors should be provided for safety purposes to aid swimmers standing up and exiting the water, and to ensure sportsmanlike conduct.
- F. Maps/Diagrams—Detailed maps and diagrams shall be available for swimmers and event officials to use.**
1. *Detailed Maps/Diagrams*—The maps/diagram of the proposed course included in the sanction application must show the start, finish, course distances, course marker locations, medical evacuation points, emergency evacuation points, anticipated water temperature and general water conditions. (Medical evacuation points are shoreline locations to which swimmers will be transported for emergency medical aid.) (NOTE: For accurate description of course, please use at least 8.5 inches by 11 inches paper and diagram as close to scale as possible.) A detailed diagram of the start and finish line configurations should be created if the map above does not allow for sufficient detail.
 2. *Large Map*—A large map of the course must be available for the viewing of the contestants at the race site. Minimum size of the map should be 24 inches by 36 inches. For events with large numbers of swimmers, multiple maps are recommended.

Event Safety Personnel

Sufficient safety personnel shall be present, trained and able to communicate with each other to ensure the safety of swimmers and officials alike.

- A. **There shall be a sufficient number of safety personnel to support the size and conditions of the meet.**

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- B. **All event personnel shall be informed of the emergency provisions for the event.** It is recommended that the event director and safety coordinator hold a meeting including all event personnel just prior to the event to make them all aware of these safety provisions.
- C. **It is recommended that a “Safety Coordinator”, be designated who shall report to the Event Director.** All safety issues should be assigned to the coordinator, and the coordinator should have sufficient authority to ensure safety directives are observed or enforced.
- D. The Safety Coordinator should prepare a written safety plan ahead of time to be followed by all event officials.
- E. The Safety Coordinator should have a copy of emergency contacts for all swimmers.
- F. A system of communication between event officials, boats and emergency services should be set up at the venue.
- G. **Safety officials and workers shall have meet training requirements that are consistent with their job and the size and conditions of the meet.**

Medical

There shall be appropriate medical equipment and licensed personnel, qualified to use the medical equipment, at the meet site during warm-up and competition. In addition, there shall be a medical evacuation plan.

- A. .A primary responding agency, either from the lifeguard agency or an outside provider such as an ambulance company or the Red Cross, is recommended as emergency medical services for the meet.
- B. A well-supplied medical tent managed by the event host is recommended as back-up to the professional services.
- C. A sufficient supply of blankets, drinking fluids (cold for hot days and hot for cold days) and other necessities should be at the venue in quantities to support the size and conditions of the meet.
- D. The medical evacuation plan(s) must outline detailed procedures and methods of transport for swimmers needing emergency medical aid from water pickup to land-based medical services.
 - 1. The plan should take into consideration the course configuration. If the start and finish are at the same location or less than 1/4mile apart, one plan can be used. If the start and finish are not in the same location, two plans would be recommended. Multiple plans may be required for extended open water swims.
 - 2. The safety coordinator should provide emergency evacuation boats sufficient in number to insure transport to land-based medical assistance in less than ten (10) minutes.
 - 3. Arrangements should be made for communication between safety stations and emergency evacuation boats.

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4. **The host club shall provide mechanisms/procedures sufficient to transport swimmers to shore-based medical assistance in less than ten minutes.**
5. A printed map and directions to the nearest medical care facility must be available at the event. Several copies should be available to give to individuals in need of non-emergency medical attention who wish to transport themselves.

Event Cancellation

A written event cancellation plan shall be included in the overall safety plan. The plan shall include evacuation while swimmers are on course, before and after the event.

- A. **All open water swims shall have a general evacuation plan to be implemented in case of event cancellation while swimmers are on course.**
 1. The plan should take into consideration the course configuration. Exit points should be designated on course maps and marked on the shoreline if swimmers are exiting at points other than the start and finish lines.
 2. Plans should be made to pick up swimmers at evacuation points and transport them to locations where they can reach safety.
- B. A detailed plan must be available for event cancellation during the event due to safety considerations arising before or after the competition has started.
 1. The plan should take into consideration the course configuration. Exit points should be designated on course maps and marked on the shoreline if swimmers are exiting at points other than the start and finish lines.
 2. Plans should be made to pick up swimmers at evacuation points and transport them to locations where they can reach safety.
- C. Dangers may occur before the start of an event so plans should be made for cancellation or postponement. The plan should take into consideration the safety of swimmers while waiting for the danger to pass.

On-water Craft

Sufficient on-water craft, including monitor stations, escorts/pilots and evacuation boats shall be available to ensure the safety of the swimmers. The plan shall ensure that the full field of swimmers be covered at all times during the swim.

- A. Definitions
 1. Monitor stations—Monitor stations are boats of various types that are positioned on the course to guard swimmers while swimming.
 2. Escorts/Pilots—Escorts and pilots are boats that escort swimmers around the course.
 3. Evacuation boats—Evacuation boats that move swimmers off the course when necessary and bring them either to land or to motorized emergency evacuation boats.

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4. It may be necessary to assign multiple tasks to a single boat (ex. monitor and evacuation). The safety of swimmers should not be compromised by a boat performing multiple tasks.
- B. General Information
1. On-water craft should be assigned and distributed so the entire field of swimmers is covered at all times during the race.
 2. All boats used in conjunction with the event must meet U.S. Coast Guard and local standards for equipment and loading capacity.
 3. Provisions for non-event boat traffic control must be provided. It is strongly suggested that control be arranged through a law enforcement agency.
 4. A sweeper or clean-up boat must be used.
- C. Monitor Craft— **Safety monitor stations shall be equipped with first aid supplies and an emergency signaling device to summon a medical evacuation boat (signals may be day flares, smoke flares, radio, or flags).**
1. It is strongly recommended that safety monitor stations (i.e. row boats, canoes, paddle boards, rafts) be positioned on the course in a minimum ratio of one station per thirty (30) (25?) entrants or minimum one station for every 1/4 (1/8?) mile of course length, whichever number of stations is greater. There should be coverage of the complete field at all times. Pilots are considered safety stations. Emergency evacuation boats cannot be counted as safety stations.
- D. Escort and Pilot Craft— **The use of individual escorts shall be the option of the host club.**
1. Paddleboards, kayaks, and canoes are recommended for individual escorts and/or safety monitors.
 2. Power boats may not normally be used as pilot or escort boats for individuals in a non-relay event.
 3. Individual paddlers should be discouraged unless the length and design of the course can adequately support them. Too many paddlers aggressively working to support their swimmers can be dangerous. Instead, safety personnel should be placed at strategic locations along the course.
 4. Individual escorts are highly desirable for longer swims (over 2 miles?) and it is recommended that each contestant be allowed to supply an escort capable of maintaining their pace. In addition to being the eyes and ears for the swimmer and providing a measure of safety, the escort is responsible for detecting signs of hypothermia or other conditions of the swimmer.
 5. Escorts' attendance should be mandatory at a pre-race meeting. As the escort will need to be in the water and ready to go prior to the start of the race, a separate escort meeting may be held prior to the swimmers' meeting
 6. All rules applying to swimmers apply to escort personnel as well. They should be capable of completing the distance and maintaining the speed necessary to keep up with their swimmers.

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7. If desired, the escort can be assigned the same number as the swimmer and marked accordingly.
 8. The escorts must know the course and any special rules. All escort craft should be of sufficient size to hold at least two people afloat—the paddler(s) plus one swimmer.
 9. When personal escorts are required, in addition to providing all the services mentioned above, they are responsible for feeding the swimmer and providing the mental stimulation necessary for the swimmer's wellbeing throughout the race.
 10. Escorts should remain at the side of the swimmers to prevent possible drafting. Swimmers should not hold on to or hang from the support craft.
 11. Escort boats should display a fluorescent orange "skier down" flag at all times.
 12. Power boats should not be used as pilot or escort boats for individuals in non-relay events.
- E. Evacuation Boats
1. **Emergency evacuation boats (i.e., power boats) shall not approach the race course at any time.** Persons in trouble should be brought to the evacuation boat by a safety monitor using non-motorized transportation.

Swimmer Management

- A. A procedure must be developed to account for each participant.
- B. **The host club shall establish and announce a cut-off time for the event, at which time all contestants still on the course must be picked up by the sweeper or clean-up boat.** Swimmers failing to finish under the designated time must be disqualified and picked up.
 1. A public briefing of all swimmers must be held prior to the start of the event. Attempts should be made to involve all the contestants in the briefing and ensure that instructions can be heard and understood. A good public address system is essential. The briefing must include the following:
 - a. Description of general conditions (i.e. water temperature, depth, unusual hazards, weather conditions...).
 - b. Opportunity for withdrawal if any swimmer has apprehensions as to their ability or desire to participate.
 - c. Participants obligations if they drop out/quit.
 - d. Procedure for getting aid while swimming.
 - e. Finish procedures/cut off time.
 - f. Encourage the contestants to position themselves at the start with the faster swimmers in front. Swimmers should be courteous and pay attention to others' safety. (Applies to events using mass starts.)
 - g. Course directions/markers/rules.

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- h. Starting procedure/signals.

Individual Swimmer Safety

As conditions and courses vary, it is the responsibility of each swimmer to know and follow the safety standards necessary for protection from foreseeable dangers. The swimmer and event host can contribute to individual swimmer safety as follows.

- A. A warning statement should be included on all event information which cautions the swimmers about special hazards of the event (e.g., water temperature, distance or surface conditions) and advises medical examination and training under race conditions prior to participation. Swimmers are responsible for reading and understanding this information.
- B. Swimmers should be provided with and required to wear fluorescent orange and other brightly colored caps to assist in identification and visibility of swimmers in open water events.
- C. Swimmers are required to wear their race number or any other identifying information on their person.
- D. Swimmers should know their limitations, medical needs, etc. before entering into an open water swim.
- E. Event safety should include planning for the safety of special needs swimmers (swimmers with disabilities).

Qualifying standards

Qualifying standards are at the discretion of the event host and may be used in longer events to ensure that swimmers are capable of completing the distance required within a reasonable time. Setting a qualifying standard will depend on the conditions of your swim including, distance, water conditions, altitude, air/water temperature, or any other goal of the event, such as an elite competition.

- A. Entry qualifications may be used to prevent swimmers from gaining entry into the event by providing for:
 - 1. A qualifying time based on a well-know event with quality swimmers.
 - 2. A qualifying time based on a check-out swim.
 - 3. A qualifying time based on a pool event.
- B. Limits may be set that enable event hosts to remove swimmers from the water after a specific point in time by providing for:
 - 1. Time limits for completion of the race.
 - 2. Time check points during your swim, such as everyone needs to get to spot X by this time, spot Y by this time, etc. Otherwise they will be pulled from the race.
 - 3. Time limits that begin after the first finisher completes the course. Everyone must complete the course within X minutes after the winner finishes.

Missing Information

- Assessing Your Event's Safety Needs

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- Problem Solving Tips
- Open Water Clinic Safety
- Open Water Practice Safety
- Resources
- Training Requirements for Safety Officials & Guards
- Swimmer Capability Requirements for Longer Swims
- Water Quality Issues
- Boat tours of a difficult course the night before
- Preparation for mass evacuation