**1. INTRODUCTION**

This plan outlines safety procedures for the Jim McDonnell Lake Swims (JMLS) and clinic, and is based on the *USMS Open Water Guide to Operations* document posted on the *USMS Guide to Operations,* Long Distance / Open Water: http://www.usms.org/gto/gto\_longdist.

**Duties of the Safety Director**

* Meeting with Reston Association at the beginning of the year to submit a safety plan for review and request approval.
* Providing Reston Association Aquatics Department with a list of lifeguards and other water-safety personnel one week prior to event date. The safety roster will include phone number.
* Providing accurate maps with course markings, and other pertinent information such as anticipated water temperature and general water conditions. This information is accessed on the JMLS link on the Reston Masters web site ([www.restonmasters.com/jmls-lake-swim](http://www.restonmasters./)), included in swimmer event information packets, and posted at the event location.
* Emergency medical evacuation services. Coordinate and schedule on-water and land Fire and Rescue personnel.
* Coverage of the 1-mile course, including water-craft, barges, kayakers, canoeists, lifeguards, pilots, and additional safety staff.
* Two-way radio equipment for communications with all water-craft and crew. Ensuring that the course, starting and finish areas are clear of obstacles and non-participants.
* Required Briefing for water safety staff and competitors.
* Notifying swimmers of cancellation procedures during the competition.
* Information about the races and requirements for competition is publicized on the web site and covers anticipated water temperature, specific weather, water conditions, and known hazards.
* Incident communication: Follow up on accidents, injuries incurred by swimmers or safety staff, and final outcome of the event by contacting Reston Association Aquatics Office.
* Completion of Safety Director’s Checklist

**2. LICENSING/SANCTIONING**

* RMST shall submit a meet safety plan for review by USMS as a condition for sanctioning.
* USMS may require documentation certifying insurance coverage for all privately owned motorized watercraft.
* USMS sanctioning processes may impose additional safety requirements as a condition of sanction. RMST expects to be in full compliance with the Op*en Water Guide to Operations Article 201: Safety Guidelines for Sanctioned Events*.
* Reston Association establishes conditions of use of recreational facilities and the course site and grants final authorization for the event.

**3. COURSE DESIGN**

**Swim Course**

* An in-the-water start on a line between the pole at the left corner of the start/finish area and the bow of the starting kayak.
* Course markers clearly set at regular intervals so that the swimmer, swimming the course counter-clockwise and always to the right of each marker, can easily determine the course by sighting on the next marker.
* The finish area at the water’s edge is defined by a clearly marked pole at the left corner of the boat ramp. To direct swimmers away from the shore near the finish area, a lane rope is attached one end to land and the other to the finish area pole.
* The finish line - a roped-off chute with an electronic timing pad.

**Course Layout**

* Overall layout – a long 1 mile oval, with a short dog-leg near the beginning of the course. The course is laid out in such a way as to keep swimmers free of all shore-line obstructions as long as they follow and stay close to the sight lines of the course markers. Overall length of the course is calculated by Global Positioning accurate to +/- .05 mile, from marker to marker and end of course.
* The course is designed as a one-way circuit to avoid head-on collisions. Further, by starting in small waves seeded by entry times, fastest to slowest, overrun is minimized. The course can be easily adjusted for longer or different distances by extending the marker at the dog-leg or the far end of the lake.
* While the distance between the start and the first turn is short (approx. 25 yards), swimmer waves are small (approx. 25 swimmers), to limit collisions.

**Course Markers**

* Large bright day-glo orange spherical buoys and yellow cylindrical buoys anchored to the lake bottom delimit the inner line of the course and are placed at regular yard intervals.
* Large yellow tetrahedron markers are used for turn-around points, smaller ones for the course.
* Ends of the course are marked by a two large markers at the far end of the lake and day-glo orange parking cones on the concrete drainage structure at the near end of the course, and about 25 yards from the start and finish area.

**Start & Finish Area**

* The start and finish area is patrolled by lifeguards, kayakers, and event officials to keep non‑participants clear and the area hazard-free.
* No warming up is allowed on the course or starting and finishing areas during the conduct of a swim.
* Starting is in the water.
* Swimmers are grouped into waves of approximately 25. Each wave lines up on a line extending from the left corner of the start/finish line and the bow of the starting kayaker. The starting kayaker signals the starter that swimmers are aligned and ready, the starter sounds a bull horn, and the official event timer registers the start of the wave on the run clock.
* Waves enter the water at 30 to 60 second intervals, and start when all swimmers in the wave are ready and the starter gives the signal.
* Assistance to swimmers entering or exiting the lake is granted at the discretion of the Safety Director, Event Director and referee (e.g. swimmers with disabilities or who are in distress).
* The starter is clearly identified and visible to all swimmers at the starting line.
* A public address system is used for all other communications with contestants, spectators, and officials. Requests for a sign-language interpreter are granted at the discretion of the Event Director.

**Finishes**

* Race finishes are completed safely in a chute roped off in the ramp finish area, staffed with finish monitors to assist finishers if needed.
* The finish chute is wide enough to accommodate three to five swimmers at a time who exit the lake onto a ramp, over a timing mat which registers the swimmer’s RFID anklet and finish time.
* The surface of the ramp under water leading up to the water line, up the ramp, and over the timing mat is prepared before the competition and kept free of rough or slippery areas and objects that could injure swimmers’ bare feet.
* The finish area is clearly marked by an in-water lane line attached to a brightly marked pole at the near edge of the finish area, visible from the last turn-around, 25 yards distant.
* Finish Monitors keep the starting and finish area clear of hazards, water-craft, and spectators.
* Finish monitors ensure sportsmanlike conduct and may aid swimmers having difficulty standing up and exiting the water.

**Course Maps/Diagrams**

* Maps are posted on the race web site and on location at the event showing the start, finish, marker, and water craft locations.
* Medical tents, toilets, and location of facilities for food and water, etc. are clearly designated by signage at the event site.

**Large Maps/Diagrams**

* One large map of the course is posted at the event site and is clearly visible at the briefings.
* Other smaller maps are placed at various locations on site.

**4. EVENT SAFETY PERSONNEL**

* An Event Director oversees the overall conduct of the event and event officials, applies USMS open-water rules, and is responsible for resolving disputes.
* A Safety Director is appointed by the Event Director to plan, coordinate, and oversee all aspects of event safety.
* The Safety Director develops and distributes an event safety plan to event officials and is responsible for hiring event safety staff and acquiring and maintaining safety equipment.
* The Safety Director is assisted by a Deputy Safety Director and all support staff needed to ensure safe conduct of event operations, including start and finish monitors, watercraft, paddlers, lifeguards, and emergency personnel.
* The Safety Director is required to brief support staff prior to each event on areas of coverage, safety of the start and finish areas, rescue and emergency evacuation procedures. During events, the Safety Director is in constant communication with the Deputy Safety Director and with the safety crew by two-way radio and makes sure all areas of the course are covered. All members of the support staff and safety crews are required to attend the briefing.
* The Safety Director or Deputy Safety Director must also take part in the general pre-race briefings to inform swimmers of guidelines for requesting assistance, dropping out, and emergencies. The briefing will also describe the course layout and conditions, position of safety staff, start/finish procedures, hazards and emergency procedures
* The Deputy Safety Director monitors and coordinates water activity from a central position on the lake.
* Lifeguards must have current Red Cross Water Safety certification.
* Copies of emergency contacts for all competitors are held by the Meet Registrar.
* Medical Staff and Equipment
* Fairfax County Fire Department provides a fully staffed EMT team with an ambulance and Zodiac boat for all events.
* A physician or paramedic manages a medical tent serving as back-up to the EMT staff for minor emergencies on site or distressed swimmers not requiring emergency evacuation.
* The medical tent has adequate supplies of blankets, drinking fluids, cold and hot, and other necessities.

**5. EMERGENCY PLANNING**

**Medical Evacuation Plan**

* Fairfax County Fire Department provides Emergency Services on race days to handle all major emergencies, by providing a fully staffed Zodiac crew, Ambulance (EMT staff), and Fire Engine.
* The Safety Director and Deputy Safety Director communicate with the Zodiac Crew and lifeguards, and other safety craft via two-way radio on the same frequency.
* Swimmers in distress are allowed to swim to nearby water craft and request evacuation.
* Lifeguards in canoes or on paddle boards (SUP) are allowed to approach incapacitated swimmers to take whatever action necessary to secure the swimmer until arrival of the Zodiac rescue crew.
* Lifeguards are instructed to follow the general safety protocol of avoiding in-water rescues unless absolutely necessary.
* Lifeguards use a bright orange flag to signal a swimmer emergency, to direct Zodiac by pointing to the swimmer’s location or by raising the flag at the swimmer’s location.
* Lifeguards communicate with the Zodiac crew to request an evacuation and stay in close contact with swimmers in distress until arrival of the Zodiac crew.
* At the conclusion of a race, lifeguards will be directed to follow swimmers in. The last swimmers will be followed and handed off to the next lifeguard station. The Safety Director will release all guards when satisfied that all swimmers have been accounted for.
* A printed map and directions to the Reston Hospital Center and other off-site local medical facilities are posted on site and in the registration area. Medical facilities are within 5 to 10 minutes by car.

**Event Cancellation or Postponement Plans**

* The Safety Director may cancel an event in progress and postpone competition until further notice.
* Depending on race conditions, the Safety Director will halt the competition and communicate with all safety craft to order the following types of evacuation:
	+ normal – swimmers in the water are allowed to finish or directed to swim to the finish line; all new waves are halted until resumption of competition;
	+ interrupted – swimmers nearing the finish line are allowed to finish; all others are directed by safety craft to evacuate at the nearest dock or barge, and wait for final evacuation by barges or EMT crews and return to the finish;
	+ emergency – all swimmers are directed by safety craft to go to the nearest dock or barge and wait for final evacuation by barges and EMT crews; other safety craft are also to go directly to the closest exit points.
* **Note:** Water evacuation may not be possible because of the greater danger to people in safety craft. All swimmers and safety crew will be informed at the pre-race briefings of emergency procedures.
* To ensure an accurate final tally, all swimmers are required to exit the lake by crossing the finish line or otherwise confirming with the officials at the finish line.
* Safety craft will be requested to dock near their area of coverage until released and asked to return to the finish area.
* The Event Director determines if the competition may continue and if swimmers interrupted can re-enter.

**6. ON-WATER CRAFT**

* Motorized pontoon boats shall remain stationary during races, are used as critical observation posts, positioned at critical points outside or inside the course. During races they also serve as rest stations for swimmers who want to drop out. At the conclusion of races, they may be used to pick up stragglers and others unable to finish by cutoff time. (Usually 2 are provided as observation points, one for each end of the course, with a required crew of captain and lifeguard.)
* Zodiac boats (1-2), staffed with an EMT crew, perform rescues. Distressed swimmers are handed off by lifeguards to the Zodiac crew for evacuation to land emergency facilities. Zodiac boats are mobile and are not expected or required to remain stationary during the race.
* Canoes (10-12), manned by a paddler and lifeguard, monitor swimmers and race conditions. A minimum of 10 canoes are provided as monitors.
* SUP (stand-up paddle board) craft, and lifeguard, are stationed near a canoe or other signaling platform, offering the advantages of greater visual coverage of the course and the ability to deploy rapidly and assist swimmers in distress or fatigued.
* Kayaks (4–6), manned by one or more paddlers, keep swimmers on course and away from obstacles.

**General Information**

* On-water craft are positioned by the Safety Director to provide complete coverage of the course at all times.
* By agreement with the Reston Association, the lake course is cleared of all non-competitors and craft prior to and during competitions.
* Reston Association has the water quality tested 1 week before the event for bacteria; this information is available for all swimmers and submitted to the race evaluator. The RA collects three samples from various locations in the lake which are sent to a third party laboratory in Maryland.
* The water temperature has been between 68-78 degrees Fahrenheit over the past 20 years of the race. On average the water is between 72-74 degrees. If water temperature falls below 60 degrees or lower, swimmers will be required to wear wet-suits and warned of the dangers of hypothermia. Wet suits can only be worn at temperatures below 78; above 78 degrees, no wetsuits are allowed.

**Monitor Craft**

* Pontoon boats and canoes are equipped with an emergency breathing mask, a safety rope and buoy, a whistle, and a two-way radio for communicating with the other craft, the Safety Director, and EMT crew. Orange flags are also provided to signal swimmers in distress and to point to their location.
* Canoes are positioned with responsibility for adequate coverage of the course, at a minimum of 8 stations per 1 mile course.
* Canoes and pontoon boats moving out of position to assist distressed swimmers are required to contact the Safety Director by radio to ensure coverage of their position.

**Evacuation Boats**

By agreement with Fairfax County Emergency Services, a motorized Zodiac boat serves for emergency evacuations. The Zodiac boat is allowed to approach distressed swimmers for evacuation at any time. Lifeguards are required to hold distressed swimmers and hand them off to the Zodiac crew unless otherwise instructed. At all times, all water-safety craft defer to the authority of the EMT crew.

**7. SWIMMER MANAGEMENT**

**Accounting for swimmers**

* All registered swimmers are provided with a brightly colored cap, bib tag, Bib number, and RFID-enabled timing chip all corresponding to each swimmer’s specific database record. Swimmers place the bib tag under their caps, have the Bib number marked on their arms, and wear an anklet with their timing chip.
* The electronic timing system automatically records starts and finishes by registering the swimmers timing chips as the cross the starting and finish line. Timing system staff operate a backup timing system to record finishes as swimmers cross the finish line.
* RMST workers operate a manual back-up system. Swimmers are manually checked in at the starting line. Presence or absence of a swimmer is marked on pre-printed check-in sheets. A finish-line staffer records the race number of each finisher exiting the water.
* Swimmers who complete the race are required to cross the finish pads to register their finish time. They then surrender their bib tags and ankle bands.
* Swimmers who do not complete the race must surrender their bib tags and ankle bands to an RMST staffer in the finish area without crossing the timing pads. After the race is over, their timing chips are fed into the electronic system, so these swimmers can be digitally accounted for.
* At the end of each race, the status of swimmers is determined using a combination of the timing and swimmer tracking system described.
* The Safety Director and Deputy Safety Director determine the close of each race when reconciliation is complete and all competitors have been accounted for. Status of swimmers is reported to the Fire Department personnel before the next event or event cleanup begins, as appropriate.
* Occasionally, swimmers report that their finish time has not registered in the system. This may happen on or after race-day. All efforts will be made to find these swimmers in the back-up systems to provide them an official time.

**Cut-off times**

* Swimmers failing to complete their event will be allowed to exit the course early and required to return to the finish area without crossing the timing mat. Instead they are required to surrender their timing chips and Bib tags to an RMST finish line staffer to register their finish.
	+ 1-mile race/1-mile practice swim: 50 minutes after start of last wave
	+ 2-mile race: 1 hour 30 minutes after start of last wave
	+ 5-km race: 2 hours 15 minutes after start of last wave; in addition, swimmers will be blocked if starting final leg 1 hour and 30 minutes after start of the last wave
* As each event nears the cut-off time, the Safety Director signals the nearest canoes to follow the last swimmers to the finish. All other safety craft are released from duties or required to remain in position on the lake until the event has been declared closed by the Safety Director and Deputy Safety Director.
* At the discretion of the Event Director, swimmers nearing the last turnaround by cutoff time may be allowed to finish.

**Swimmer Briefing**

All swimmers are required to attend a public briefing held prior to the start of the event and covers the following points:

* Description of general conditions i.e., water temperature, depth, unusual hazards, weather conditions, etc.
* Opportunity for withdrawal;
* Dropping out or quitting during the race;
* How to get assistance during the race;
* General courtesy and attention to the safety of other swimmers;
* Course directions/markers/rules;
* Starting procedure/signals;
* Finishing and cut-off time for the event.
* Emergency lake exit points & lake evacuation procedures

**Individual Swimmer Safety**

* Each swimmer bears the responsibility of knowing and following the safety standards necessary for protection from foreseeable dangers.
* Information about general hazards, water and air temperature are posted on the event web site and included in the swimmer briefing.
* Swimmers sign a waiver of responsibility on registration.
* Swimmers are provided with and required to wear brightly colored caps during the race.
* The race number assigned to swimmers during the seeding process will be maintained in the swimmer information database and follow the swimmer throughout the event.
* Swimmers are marked with a race number and wear an RFID-anklet on their foot and a bib id token under their caps.
* Swimmers are required to report limitations, medical or other special needs, etc. to the event registrar prior to event weekend or the event referee during the event weekend.
* To the extent possible, event directors will include planning for the safety of swimmers with disabilities on a case-by-case basis.

**Qualifying standards**

* No qualifying standards are imposed.
* All swimmers are required to submit a 1650 yards time during registration. No qualifying time standard is established for any event.

**8. ATTACHMENTS**

**Site Map**

