**Open Water Safety Plan**

**Application Instructions**

* Before applying for a USMS open water sanction, event hosts must review their event information and safety plans with their LMSC Sanctioning Officer. Upon approval from the LMSC Sanctioning Officer, the event host is then ready to apply for sanction.
* When applying for a USMS open water sanction, event hosts are required to submit their safety plan for review and approval by the Open Water Compliance Coordinator (OWCC) ON THIS APPLICATION through the online sanction process. We welcome additional supporting information—after all, many event hosts have developed extensive safety plans over years of hosting events—but everyone must submit this completed application to ensure that all pertinent points are covered in safety planning.
* Using a Google Earth map or equivalent, event hosts are also required to upload a map of the venue and course with the safety plan application. Maps must include locations of start & finish, guide & turn buoys, feeding stations, safety craft, lifeguards/first responders, on-site medical care, and evacuation points.
* In the best scenario, the Safety Director should assist the event host in the developing the event safety plan. If the Safety Director did not take part in developing of the safety plan (usually in the case of appointment after the sanction request or in the case of a substantially unchanged safety plan developed over years of experience), the event host must give the Safety Director a copy of the approved safety plan.
* Upon request, USMS OWCC David Miner will send you a copy of the approved safety plan. Contact David at [openwateradvisor@usmastersswimming.org](mailto:openwateradvisor@usmastersswimming.org) or 941-545-9709.

**Open Water Safety Plan Application**

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## Event Information

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| **General Information** |

Name of Host: Portland Bridge Swim

Name of Event: Portland Bridge Swim

Event Location: Willamette River, Portland OR

City: Portland State: OR LMSC: OREG

Event Dates: 7/8/2018 through 7/8/2018

Length of Swim(s): Approximately 10.7 miles, from the Sellwood Bridge to the St. Johns Bridge

Dual Sanctioned with USA-Swimming: Yes or No

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| **Key Event Personnel** |

Event Director: Marisa Frieder Phone: 971-235-5140 E-mail: marisafrieder@gmail.com

Referee: Marisa Frieder Phone: 971-235-5140 E-mail: marisafrieder@gmail.com

Certified Safety Director: Tim Waud Phone: 503-341-3152 E-mail: twaud@aol.com

| **Pre-Race Safety Meeting (required):** **all officials & safety personnel must attend** |
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Tentative date: 7/7/2018 Time: 11:00 AM – 1:00 PM

Tentative agenda: See attached: Meeting agenda from 2017

| **Pre-Race Swimmer Meeting (required):** **all officials & swimmers must attend to participate in race** |
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Tentative date: 7/8/2018 Time: 6:30 AM

Tentative agenda: 1. Welcome. 2. Race Rules. 3. General instructions. 4. Safety. 5. Escort kayaker instructions. 6. River conditions, advice re. course, water temperature, etc. 7. How the start works. 8. What to expect approaching the finish & what to do at the finish.

**Course & Event Conditions**

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| **The Course** |

Body of water: River Water type: Fresh Water Water depth from: 1 foot to: 40 feet?

Course: Open - non-event watercraft allowed near swim course

If open course, indicate the agency used to control the traffic while swimmers are on the course.

Agency name: Race boats line the course to help control traffic. Portland Sheriff’s River Patrol & US Coast Guard will be called for problems. How to contact during event: US Coast Guard Emergency: 1-800-982-8813 US Coast Guard Portland Station: 503-240-9365 Portland Police & Multnomah County Sheriff Non-Emergency: 503-823-3333

Expected water conditions for the swimmers: (marine life, tides, currents, underwater hazards): Limited marine life; weak tide and river current, max. 0.5 mph; some debris in shallow water, possible floating debris on course (should be spotted by escort boater)

How is the course marked?

* Turn buoy(s): Height(s) Enter text Color(s) Enter text Shape(s) Enter text
* Guide buoy(s): Height(s) Enter text Color(s) Enter text Shape(s) Enter text
* Approximate Distance between Guide buoys: Swim progresses along the river with safety boats as boundary to the west and river bank on the right. Round orange 4’ buoys mark 2 relay transfer points/emergency exit points and the race finish.

Number of Feeding Stations: 0

Type of structure(s) used as feeding station(s): Not applicable

Number of people the structure(s) can safely hold: Not Applicable

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| **Water & Air Temperatures** |

Expected air temp range: 75 Expected water temp range: 65-75 Wetsuits: Optional

**USMS Water Temperature Index for sanctioned open water events:**

**- Below 57°F (Very Cold) – heat retaining swimwear and a Thermal Plan for Cold Water Swims is REQUIRED**

**- 57°F-60°F (Cold) - heat-retaining swimwear is required or a Thermal Plan for Cold Water Swims is REQUIRED**

**- 60°F-66°F (Quite cool) - Thermal Plan for Cold Water Swims is RECOMMENDED**

**- 66°F-72°F (Fairly cool) - Thermal Plan for Cold Water Swims is ENCOURAGED**

**- 72°F-78°F (Cool) - No Thermal Plan required**

**- 78°F-82°F (Optimal) - Heat-retaining swimwear & neoprene caps are not permitted above 78°F.**

**- 82°F-85°F (Warm) - Thermal Plan for Warm Water Swims is RECOMMENDED**

**- 85°F-87.8°F (Very warm) - Thermal Plan for Warm Water Swims is REQUIRED**

**- 87.8°F-95°F (Hot) - Sanctioned open water swims cannot be held**

**- Over 95°F (Extremely hot) - Any swimming is ill-advised**

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| **USMS Water Temperature Measurement Procedure:** Using an accurate thermometer, the event host should take three to five measurements at various places on the course—12 to 18 inches below the water surface and no closer to the shore than 25 meters (if possible)—within one hour before the start of an open water swim. The host should average these measurements, post and/or announce the resulting average temperature at least 30 minutes before the start of the swim, and announce it during the pre-race staff safety and swimmers’ meetings. |

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| **Water Quality** |
| It is recommended that one week before the event, check water quality. If results returned are inconsistent with the local governing body’s standards, notify swimmers who participated in the event of any known exposures post-race. If an exceptional event such as heavy rain or flooding affects the water quality, the Event Director, Referee, or Safety Director shall have the authority to postpone or cancel the race. It is recommended to take and retain water samples on race day and retain for reference. |

Water conditions are monitored by checking the USGS monitoring data: <http://or.water.usgs.gov/will_morrison/monitors/>

To reduce exposure to chemical contaminants present in river mud, turbidity must be below 15 FNU for the race to take place. If water temperature is above 78 degrees, wetsuits are banned. If water temperature exceeds 85 degrees F, the swim will be canceled.

Portland Bureau of Environmental Services checks E. coli levels (as a surrogate for sewage contamination and related fecal pathogens) along the race course from monthly to weekly in the summer, and often schedules testing to coincide with the race. Results are available here: <https://www.portlandoregon.gov/bes/waterquality/results.cfm>

When possible (availability online has gone down in recent years), we check E. coli monitoring done by Willamette Riverkeeper to ensure agreement with Portland Bureau of Environmental Services results. <http://www.willamette-riverkeeper.org/WRK/ecolisitesreports.html>

E. coli levels must be below EPA and DEQ health standards.

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## Event Safety

| **Medical Personnel** |
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Lead medical personnel (emergency trained) on site: AMR-contracted EMS crews, EMT

Experience in sporting events (Marathon, Triathlon, Open water swim, etc.): Yes

Will medical personnel be located on the course? Yes

The number of medical personnel will be dependent on the course layout, number of swimmers in the water,

expected conditions, etc. How many medical personnel do you plan to have on site? 6

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| **First Responders/Lifeguards & Monitors** |

Indicate the qualifications of the first responders: Other

Number on course: 10 Number on land: Number

Indicate their location on the Race Plan Map.

| **Onsite Medical Care & Facilities** |
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Describe onsite set up for medical care, such as medical treatment tent, heating/cooling tent or facility. etc., and indicate locations on the Race Plan Map. Heating/cooling will take place in under a canopy at the race finish. All other care at the race finish and at other exit locations will take place outside of a tent, most likely next to or in the ambulance.

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| **Ambulance/Emergency Transportation & Nearby Medical Facilities** |

Ambulance(s) onsite: 503-231-6300 On Call: **000-000-0000**

Have you spoken with local emergency response agency regarding potential emergencies? Yes

Closest medical facility: **Click here to enter name.** Phone: **000-000-0000**

Type of medical facility (urgent care, hospital, etc.): Race Start: Providence Milwaukie Hospital, 2.7 miles, 9 minutes; 1st relay transfer/evacuation point: Oregon Health & Science University Hospital, 3.1 miles, 8 minutes; 2nd relay transfer/evacuation point: Legacy Emanuel Medical Center, 2.5 miles, 6 minutes; Race Finish: Legacy Emanuel Medical Center, 7.7 miles, 12 minutes

Distance to closest medical facility: **Choose an item.** Approximate transport time: **Time in minutes**

| **Watercraft** |
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Motorized Watercraft:

* Owned/operated by government agencies (Coast Guard, police, fire & rescue, etc.): At agency’s discretion
* Owned/operated by volunteers or hired individuals: 8-12

Will all motorized watercraft with a propeller owned/operated by volunteers or hired individuals be equipped either with a propeller guard or a swimmer monitor? Yes

Other motorized watercraft:

* With propellers fore of the rudder: 0
* With impeller motor (jet ski, jet boat): 0
* Anchored from start to finish: 0

Allocation of Watercraft:

* Safety Watercraft:
* 1st Responders: Motorized: 10 Non-motorized: 100 (1 per swimmer, mandatory)

# 2nd Responders: Motorized: Number Non-motorized: 12

* Watercraft for race officials: Motorized: 0 Non-motorized: 12
* Watercraft for race supervision: Motorized: 8-12 Non-motorized: 0
* Watercraft for feeding stations: Motorized: 0 Non-motorized: 0
* Watercraft for escorted events: Motorized: 0 Non-motorized: 100
* Other event watercraft: Click here to enter text.

Emergency Signal Flag Color for all watercraft: Orange, on motorized safety boats

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| **Communications** |

Primary method between event officials: Radio Secondary method: Cell Phone

Primary method between medical personnel, first responders & safety craft: Radio (separate channel from Meet Officials)

Secondary method: Cell Phone

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| **Swimmer Counting & Accountability** |

Describe method of swimmer body numbering: ClickNothing (yet) withstands 4-8 hours in silty water, but we will be using race tattoos. They worked reasonably well. The main and most visible method of identification is requiring a bib number worn by each escort kayaker.

Describe method of electronic identification of swimmer (Recommended): None

Describe different bright cap colors for various divisions (Recommended): Solo swimmers are seeded into 3 waves, each with a separate NEON cap color based on qualifying time. Relay swimmers are in a 4th wave with a fourth NEON cap color.

Describe method of accounting for all swimmers before, during and after swim(s): At checkin, all swimmers sign a waiver so we know they are present. During the race, swimmers are monitored by course kayakers in the swimmer zone and their numbers (displayed on their escort kayakers) are relayed via text message back to the safety director who tracks their progress. Frequent checks are made to inquire about the location of swimmers along the course. At the finish, a spotter notes the kayaker’s race numbers as they approach the finish. As swimmers exit the water, timers note the race numbers on the escort kayaker, and their numbers & names are checked manually/verbally with swimmers as they exit the finish chute.

Describe method of accounting for swimmers who do not finish: Swimmers who do not finish exit the water at the relay transfer points or the race start/finish (either of their own power or they are brought there by a safety boat). Race numbers are communicated to the safety director via radio from the safety boat and from the exit location.

| **Warm-up/Warm-down Safety Plan** |
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Describe safety plan for warm-up/warm-down, include number and location of lifeguards and designated

watercraft. Swimmers may warm up prior to the race start, and have 10 minutes to get from the entry point to the starting area (approx.. 200 yds distance). Kayakers patrol the warm-up area to direct swimmers to the start area and keep them away from departing waves. Warming up swimmers also have their escorts nearby, and at least two motorized safety boats with lifeguard/CPR-certified safety officials on board are present at the start. Once the swimmers have exited the water at the finish, they are free to warm down as they wish- as long as they don’t impede other swimmers and stay away from the downstream boat ramp.

| **Swimmer Management** |
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Maximum number of swimmers on course at a time: 100 (plus additional swimmers at relay transfers when teammates must tag each other)

If more swimmers show up on the day of the swim(s), how will you adjust the safety plan to accommodate the increased number of entries? Entries close one week before race days, so additional swimmers are not permitted.

How will you deploy the safety staff and crafts distributed to supervise this event to ensure swift recognition, rescue, and treatment of any swimmer? All swimmers are accompanied by an escort kayaker. The kayaker wears a bright orange vest with a bib number on the front & back to enable identification by safety crews. The course is broken up into 3 zones of 3-4 miles each. 3 safety boats with safety officials on board patrol each zone, with a 10th boat acting as first responder and monitoring all activities. In each zone, 3-4 race officials in kayaks and wearing bright yellow vests move with the swimmers to monitor progress, relay information to/from safety officials, and assist in an emergency.

How will you deploy the safety staff to maximize rapid response to a troubled swimmer? The escort kayaker is the first responder to a troubled swimmer. S/he will signal to a race official with a raised paddle. The race official will communicate with the nearest safety boats via radio and go to the swimmer/escort to investigate and assist.

How will you alter the event if insufficient safety personnel/craft are available on the day of the swim(s)? If fewer than 7 safety boats or 9 course kayaker/paddleboarders are present, a tighter, leapfrog approach will be used to concentrate crafts & personnel around the mass of swimmers. Boats will stay with the lead and trailing swimmers to ensure full coverage.

Describe your missing swimmer plan: Call Emergency Services and follow their emergency plan. Multnomah County Sheriff’s River Patrol will be sent out to take over search & rescue operations.

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| **Severe Weather Plan** |

Is a lightning detector or weather radio available on site? No

Describe your plan for severe weather or natural disaster: If lightning is predicted on the day of the race, we can adjust the race time or cancel outright. As we learned in 2014, lightning can still occur when not predicted. For this reason, the safety director is in contact with up to three meteorologists during the race. If lightning is approaching the area or is (as in 2014) sighted in the area, the course will be evacuated.

Describe your course and site evacuation plan, including accounting for all swimmers and other participants: The safety director warns safety personnel of weather-related conditions and advises them to change their distribution along the course to stay closer to the field of swimmers, and for course kayakers to move swimmers closer together as much as possible. When an evacuation is ordered, course kayakers work to get swimmers & escorts to the closest safe spot. In the first half of the course, this is the shoreline or Ross Island. In the second half of the course, shore access is limited. All swimmers who cannot exit the water on their own will hang onto their kayaks and be picked up by safety boats for transport to the closest evacuation spot (race finish, 2 relay transfer sites, race start) where all personnel will be moved to the closest possible shelter. Once swimmers have been removed from the water, those who exited on the shoreline or Ross Island (ie. Not at evacuation sites) will be picked up and moved to evacuation sites. Swimmer packets contain foil emergency blankets to keep swimmers warm after the evacuation while they await transportation back to the race start or finish (where they likely have their clothes, etc.)

## Thermal Plan for Cold Water Swims

| **General Information** |
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| Thermal Plan for Cold Water Swims: USMS Rules for Open Water Swims state:  302.2.2A (1) A swim shall not begin if the water temperature is less than 60° F. (15.6° C.), unless heat-retaining swimwear is required of all swimmers or a USMS-approved thermal plan is in place.  302.2.2A (2) A swim in which heat retaining swimwear is required of all swimmers shall not begin if the water temperature is less than 57° F. (13.9° C.), unless a USMS-approved thermal plan is in place. |
| Remember that the average masters swimmer does little or no acclimatization to cold water, so even a small drop in water temperature—especially in the colder ranges—dramatically increases the odds of thermal issues: Cold Shock Response, Cold Incapacitation, Hypothermia, and Circum-rescue Collapse). Be Prepared! |
| - If your swim course has a remote chance of water temperature less than 60° F., you are **REQUIRED** to complete the thermal plan below, showing your specific commitment to increased swimmer preparation before the event, reduced swimmer exposure during the event, and maximize mitigation & treatment of thermal issues during & after the event.  - If your swim course has a chance of water temperature between 60° F & 66° F., a thermal plan is **RECOMMENDED**.  - If your swim course has a chance of water temperature between 66° F & 72° F., a thermal plan is **ENCOURAGED**. |

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| **How will you assist swimmer preparation before the event:** |

**The following methods are among the ways you can do this:**

1. Emphasize & stress on entry information of possible cold water swim conditions.

2. Require prior cold water swim experience.

3. Require swimmer cold water preparation plan.

4. Refuse entry if swimmer is not acclimated to cold water swimming.

What method(s) of swimmer preparation will you take: Emphasize and stress cold water swim conditions, outlining signs of hypothermia, when such conditions occur. The swim will not take place if water temperature is below 60 degrees F.

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| **What action will you take to reduce swimmer exposure to thermal issues:** |

**The following methods are among the ways you can do this:**

1. Cancel the swim(s).

2. Shorten swim(s) or institute/shorten time limits.

3. Encourage wetsuits for all swimmers.

4. Require wetsuits for all swimmers.

Explain your plan of action: Cancel the swim

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| **What extra medical care will you provide to mitigate & treat symptoms of thermal issues:** |

**The following methods are among the ways you can do this:**

1. Bring in more emergency trained medical personnel and/or ambulances.

2. Bring in more volunteers to assist medical personnel.

3. Bring in more emergency craft and first responders on the course.

4. Increase warm beverages before the swim and at feeding stations.

5. Have special procedures (different than normal) for removing swimmers from the water & venue.   
6. Increase warm beverages after the swim.

7. Increase thermal treatment gear (blankets, hot water bottles, etc.)

8. Make warm showers available on-site.

9. Make warming facilities (buildings, tents, vehicles, etc.) available on-site.

10. Other:

Specify what extra listed items you will provide: After evacuating the entire course due to lightning in 2014, swimmer race packets and all safety boats include a foil emergency warming blanket.

Comment on how you will be prepared to care for multiple medical issues: Having multiple safety boats patrolling the same area means that other boats can move in to cover an area while a boat is performing an evacuation. Last year we successfully evacuated two swimmers at the same time, with roughly 10 minutes elapsing between the escort’s signal and delivering the swimmer to the exit point. (Happily, neither was a life-threatening situation.)

**If the water temperature is below 72° F, will you be prepared to deal with cold water medical issues:** When water temperatures are below 72 degrees, escort kayakers are instructed on signs of hypothermia. Race officials and safety crews are monitoring swimmers for such signs as well and can remove swimmers when necessary, according to the decision of the Safety Director. Warm beverages are available at the race finish, as well as the warming station and, when necessary, EMT crews.

## Thermal Plan for Warm Water Swims

| **General Information** |
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| Thermal Plan for Warm Water Swims: USMS Rule 302.2.2A(3) for Open Water Swims states:  “A swim of 5K or greater shall not begin if the water temperature exceeds 29.45° C. (85°F.). A swim of less than 5K shall not begin if the water temperature exceeds 31° C. (87.8°F.).” |
| Remember that the average masters swimmer does little or no acclimatization to warm water, so even a small increase in water temperature—especially in the warmer ranges—dramatically increases the odds of thermal issues: Dehydration, Heat Stroke, and Hyperthermia. Be Prepared! |
| - If your swim course has a chance of water temperature from 85° F to 87.8° F, you are **REQUIRED** to complete the thermal plan below, showing your specific commitment to increased swimmer preparation before the event, reduced swimmer exposure during the event, and maximize mitigation & treatment of thermal issues during & after the event.  - If your swim course has a chance of water temperature between 82° F & 85° F., a thermal plan is **RECOMMENDED**. |

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| **How will you assist swimmer preparation before the event:** |

**The following methods are among the ways you can do this:**

1. Emphasize & stress on entry information of possible warm water swim conditions.

2. Require prior warm water swim experience.

3. Require swimmer warm water preparation plan.

What method(s) of swimmer preparation will you take: Emphasize and stress warm water swim conditions, outlining signs of hyperthermia, when such conditions occur. Wetsuits will be banned if the temperature is above 80 degrees F, but they will also be highly discouraged when the water temperature exceeds 75 degrees F. The swim will not take place if water temperature is above 85 degrees F.

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| **What action will you take to reduce swimmer, official, and staff exposure to heat-related issues:** |

**The following methods are among the ways you can do this:**

1. Cancel the swim(s).

2. Shorten swim(s) or institute/shorten time limits.

3. Remind all participants to stay well hydrated.

4. Remind swimmers to select appropriate pace.

5. Make swim caps optional or use Lycra swim caps.

Explain your plan of action: Cancel the swim.

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| **What extra medical care will you provide to mitigate & treat symptoms of heat-related issues:** |

**The following methods are among the ways you can do this:**

1. Bring in more emergency trained medical personnel and/or ambulances.

2. Bring in more volunteers to assist medical personnel.

3. Bring in more emergency craft and first responders on the course.

4. Increase cool beverages before, during and after the swim (for swimmers and staff, including extra cool beverages on watercraft and feeding stations)

5. Increase heat exhaustion and heat stroke treatment gear (iced water, ice chips, cold water bottles, misting tents/fans, etc.)

6. Make cool showers available on-site.

7. Make shade and cooling facilities (buildings, tents, etc.) available on-site.

8. Other: Specify

Specify what extra listed items you will need to provide:

**Comment on how you will be prepared to care for multiple medical issues:** Having multiple safety boats patrolling the same area means that other boats can move in to cover an area while a boat is performing an evacuation. Last year we successfully evacuated two swimmers at the same time, with roughly 10 minutes elapsing between the escort’s signal and delivering the swimmer to the exit point. (Happily, neither was a life-threatening situation.)

**If the water temperature is above 82° F, will you be prepared to deal with heat-related medical issues:** When water temperatures are above 80 degrees, escort kayakers are instructed on signs of hyperthermia. Race officials and safety crews are monitoring swimmers for such signs as well and can remove swimmers when necessary, according to the decision of the Safety Director. Cold beverages are available at the race finish, as well as the cooling station and, when necessary, EMT crews.