

Risk Abatement Plan

This document describes scenarios for which the open water team has made decisions on how to alleviate risks or address situations that require action. Each scenario captured in this document can have different outcomes, with decisions made depending upon the venue, the open water leadership team, and the infrastructure available. The open water leadership team consists of the Meet Director, the Independent Safety Monitor, the Meet Referee, and the Facilities Director.

The open water leadership team will discuss the any issues that occur leading up to and during the event to determine the safest course of action for everyone involved in the open water event. On race day, the Meet Director, the Independent Safety Monitor, or the Meet Referee may withdraw the meet's sanction if adequate safety precautions are not in place prior to the beginning of the race. In addition, during the event, the Meet Director, the Independent Safety Monitor, or the Meet Referee can independently decide to stop the race if the conditions for safety have changed such that, in that person's opinion, the event is no longer safe for the participants or if unforeseen circumstances occur that create an unsafe environment.

This Risk Abatement Plan documents decisions made by the open water leadership team for the Lemont, IL Open Water event planned for June 21, 2022, at The Forge. This plan addresses situations that may occur leading up to race day, on race day, and during the open water race. Common decisions for the open water leadership team can include start delay, event rescheduling, race cancellation, race abandonment.

Common Actions

Start Delay

A start delay moves the scheduled start time to alleviate a risk scenario. The open water leadership team will be responsible for communicating any start delay to the participants of the open water event.

Event Rescheduling

Event rescheduling changes the date of the open water event. The open water leadership team is responsible for communicating any event rescheduling to the participants of the open water event. Event rescheduling normally moves the open water event one day later to alleviate a risk scenario.

Race Cancellation

Race cancellation occurs before an open water race begins, where the open water leadership team determines that the event is no longer safe. The open water leadership team is responsible for communicating the cancellation to the participants of the open water event.

Race Abandonment

Race abandonment occurs after the event has started, where the open water leadership team determines a risk scenario has occurred such that the event is no longer safe. Race abandonment pulls all athletes, officials, and support personnel from the water and requires everyone at the venue (spectators, athletes, officials, support personnel) to report to a safe location. The open water

leadership team must ensure that the team on the water, support personnel, and all athletes have exited the water.

Races 10k and shorter will be restarted at the earliest possible time and the full distance completed.

For races over 10k, the following rules apply:

- If the race is abandoned before the lead swimmer completes $\frac{3}{4}$ of the distance, the race will be restarted from the beginning at the most appropriate time (as determined by the meet committee) and complete the full distance
- If the race is abandoned after the lead swimmer completes $\frac{3}{4}$ of the distance, the race is considered complete. The Meet Referee will determine final placings of all athletes.

Situations not covered by the prior scenarios will have a final determination made by the Meet Committee.

The Forge, Lemont IL Site

The Forge site in Lemont, IL provides a freshwater venue for performing open water swimming. The site has a trail system and connecting roads on three sides of the quarry, with the fourth side being bounded by railroad tracks. The following is the Google Maps image of the site:



Figure 1: Google MAPS overhead view of The Forge

The swimming venue will take advantage of the natural channels between the sandbars seen in Figure 1 to provide a course for competition:

- The start area will be just south of the dock structure, where the patio juts out
- Turn 1 will be just short of the southeast sand bar
- Turn 2 will be short of the southwest corner
- Turn 3 will be just short of the sand bar in the northwest corner
- Turn 4 will be in front of the dock structure
- The finish area will be by the dock structure to the northeast

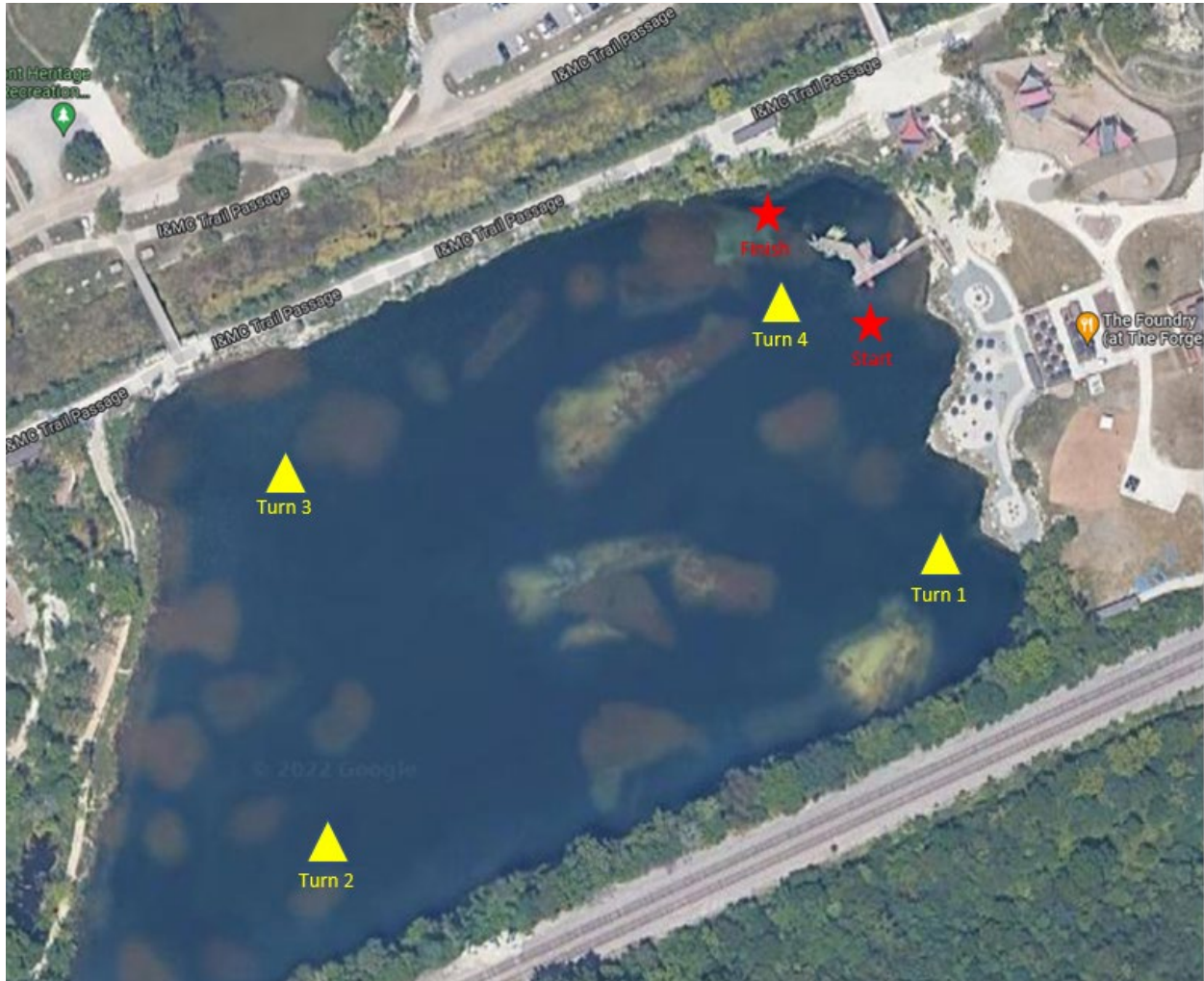


Figure 2: The Forge Course Layout

The quarry is bounded on the south, west, and north by small cliffs that lead directly into the water and shore debris. The east is bounded by a dock and patio area. This geometry provides two ingress / egress points for quarry: the dock / patio area and the northwest corner.

The dock / patio area is offset from the water by a small embankment, causing anyone using this quarry entrance to enter the venue via the docks. The following picture shows the docks on the left, below the white tent:



Figure 3: The Forge site, looking east from the west shore

The northwest corner has an exit / entry point bounded by a series of boulders and rocks lining the quarry:



Figure 4: The Forge northwest corner ingress / egress point

Scenarios

The following scenarios are documented to provide the open water event a predetermined set of decisions to guide the event through any foreseen safety scenarios. This list is not all inclusive and only documents the foreseen scenarios for the selected venue. In all cases, the open water leadership team must communicate and determine the safest, best course forward for the open water event.

At a minimum, the open water leadership team will meet the day before the open water event to determine if the open water event is to continue as scheduled, be rescheduled, or be cancelled.

At any time during an open water race, if conditions change and safety becomes a concern, any of the following people may immediately stop the race:

- Meet Director
- Independent Safety Monitor
- Meet Referee

Weather

Weather scenarios are the most common safety scenarios, with storms, temperatures, wind, and the elements playing a large role in the safe conduct of an open water event. The open water leadership team will discuss cases where the measured margin is reduced such that criteria are in jeopardy of falling outside the predetermined safe limits. The open water leadership team will monitor weather conditions, such that the team is aware of changing conditions and possible risks to the safety of the event. At least one member of the open water leadership team will monitor the NOAA Weather Radio service.

Temperature

Temperature has two facets that must be understood to determine the safety of the race: water temperature and air temperature.

- Water temperature shall be between 60.8F (16C) and 85F (29.45C)
- Air temperature and water temperature when added together shall not be less than 118F (30C) or greater than 177.4F (63C)

Leading up to the open water event, the open water leadership team will monitor the forecasted air and water temperature to determine if the conditions will meet the temperature requirements. If the conditions do not meet temperature requirements, the open water leadership team will either reschedule or cancel the event.

Race day: the open water leadership team is responsible to verify a water temperature reading 2 hours before the scheduled start of the race at a depth of 15.75 inches (40cm). In addition, the open water leadership team shall monitor the air temperature to ensure the conditions continue to support a safe environment for the race. If the conditions do not meet temperature requirements, the open water leadership team will either delay the start of the race or cancel the event. The open water leadership team will discuss conditions before the start of any race, deciding if the race is a go or no go.

During the race: the open water leadership team will monitor conditions to ensure the conditions support a safe race. If conditions change during the race such that the temperatures fall outside the

predetermined safe limits, the open water leadership team shall call for a race abandonment and ensure all athletes, officials, and support personnel exit the water and report to the race administration table. Races scheduled for later in the day will be reevaluated for either delay or race cancellation.

Water Quality

Water quality is required to be monitored and meet the standards of the local water quality testing authority.

Leading up to the open water event, the open water leadership team will ensure that adequate testing has occurred, with the venue meeting the local water quality standards. If conditions occur such that the water quality of the venue do not meet the local standards, the open water leadership team will either reschedule or cancel the event.

On race day, if conditions change such that the water quality is impacted (such as flooding, heavy rains, large scale fish kill, or spills), the open water leadership team will cancel the event.

Rain, Hail, Lightning

Rain and thunderstorms present a fluid situation for the open water leadership team, especially on race day. Light rain poses no issues for an open water event, however heavy rain and thunderstorms pose a significant risk to the safe operation of any races.

Leading up to the open water event, the open water leadership team will monitor weather forecast to determine if storms will come into play during the event. In the case where major storms are forecast on race day, the open water leadership team will determine if the event is to be delayed, rescheduled, or cancelled. In the case where major storms are forecast for race day, but the day after race day is clear, the open water leadership team will reschedule the open water event to the following day.

On race day, the open water leadership team will monitor the weather to determine if storms will impact the operation of the event. Up until the race begins, the open water leadership team has the option to delay, reschedule, or cancel the event, depending upon conditions.

The following will require an active race to immediately be abandoned and any following races to be considered for delay or cancellation:

- Hail
- Lightning within 20 miles of the venue
- Driving rain, where the dry land official's team cannot see the whole course
- Supercell thunderstorms within 30 miles of the venue

Fog

Light fog does not pose much of an issue for the open water event, however heavy fog presents a scenario that the safety of the event must be addressed. The open water leadership team will evaluate the conditions, providing a delay if the fog is dense enough to obfuscate the course. Any fog heavy enough to cover the course such that turn buoys are no longer visible from the shore will cause the open water leadership team to delay the start of racing until such time as the fog dissipates or reschedule the event.

Wind

High winds pose a scenario that creates difficulty for officials and support personnel to safely navigate the course. In addition to the type, weight, displacement, and hull design of boats on the course, the experience of each boat's captain becomes an important consideration. Also, strong, gusty winds can have an impact on the placement of buoys, docks, and other on the water infrastructure.

Leading up to the event, the open water leadership team will evaluate the forecasted winds. If the winds on race day are forecasted to be 25 MPH or greater sustained, the open water leadership team will reschedule or cancel the event. In the case where high winds are forecast for race day, but the day after race day is calm, the open water leadership team will reschedule the open water event to the following day.

On race day, the open water leadership team will evaluate the wind conditions and delay or cancel the event for any of the following:

- Any small craft advisory issued for the venue (or surrounding area) for that day
- Sustained winds greater than 25 MPH
- Wind gusts are over 40 MPH

Tornado

The open water leadership team will monitor the weather forecast and any alerts that may occur. Tornado watches are there a tornado is possible for a given, large scale area. Tornado warnings are where a tornado has been seen or indicated on radar for a specific location.

On race day, if a tornado watch or warning is issued for the venue locale, the open water leadership will cancel or reschedule the open water event.

During the race, if a tornado watch or warning is issued for the venue locale, the race will be immediately abandoned and all following races considered for delay or cancellation.

Earthquake

An earthquake that occurs can disrupt an open water event, inducing an environment that the open water leadership team will have to evaluate to determine the safe operation of the event.

On race day, if an earthquake occurs, the open water leadership team will evaluate the impacts to the venue, infrastructure, and ingress / egress to the event. Earthquakes greater than 5.0 on the Richter scale will require the event to be cancelled or rescheduled.

During the race, an earthquake greater than 4.0 on the Richter scale requires the race to be abandoned with following races to be considered for delay or cancellation.

Fire

Any fire at the venue on race day requires all participants at the venue site to check in with the Administrative Officials at the fire rally point. The Administrative Officials at the fire rally point will record all athletes by number, all support staff by assigned position, and any additional personnel by name. The Administrative Officials shall report via radio the status of the abandonment and provide the open water leadership team an ongoing accounting of all registered, on site athletes and support personnel.

For The Forge, the fire rally point is the Lemont Heritage Quarries Recreation Parking Lot to the northwest of the on-water venue:



Figure 5: Fire Rally Point

Fire occurs can occur in two locations for the open water venue: on land and on the water.

Fire on Land

Fires on land impose a safety consideration the open water leadership team needs to address because of the environment created by responding agencies.

Leading up to the open water event, the open water leadership team will address any fires that occur at the venue, ensuring that the venue remains safe and secure. The open water leadership team will send notification to coaches, officials, and support personnel if any venue fire occurs that impacts the venue, buildings, or infrastructure needed by the open water event.

On race day, a fire that impacts the venue will cause the event to be cancelled.

During the race, a fire that impacts the venue will cause the current race to be immediately abandoned and the following races to be cancelled.

Fire on the Water

A fire on the water can take many forms, frequently involving a boat or support structure catching fire. Any fire on the water can escalate, especially when fuel is involved.

On race day, a fire on the water will cause the event to be delayed until such time as the local fire department and open water leadership team determine the venue is safe. At their discretion, the open water leadership team can cancel or reschedule the event.

During the race, a fire on the water requires the current race to immediately be abandoned. The following races will either be delayed until the local fire department has determined the venue is safe or be cancelled.

Injury

Injuries occurring at the open water venue will be handled by the lifeguard staff and the venue EMT crew. All injuries requiring assistance of the on-site staff will be documented by the lead administration official and follow Illinois Swimming, USA Swimming, and The Forge reporting procedures.

Other Hazards

Other hazards are scenarios that impact race operations or create an environment that could have safety and security impacts. Hazards not covered by the following risk assessment will be discussed as they occur by the open water leadership team. At any time during an open water race, if conditions change and safety becomes a concern, the Meet Referee, Meet Director, or Independent Safety Monitor may immediately stop the race.

Power outage

Power outages before and during the open water event can lead to difficulties for the operation of the event. Unless a power outage involves life power lines on the ground, the open water team can operate the open water event without shore power.

The lead administration official shall have the necessary equipment and infrastructure to run the event without shore power. This equipment includes everything necessary to check in, start, monitor, finish, and tally results via paper and stop watches.

At a minimum, each race will have at least three independent timer officials, who keep track of time and record the finishing times of athletes (timer). In addition, each race will have at least two officials independently recording order of finish (finish judges).

Boat Failures

Boat failures during a race can create a hazardous scenario for the open water event. Any motorized boat experiencing a failed engine or difficulty in propulsion must attempt to exit the course. An operating motorized vessel must keep at least 20 feet from any in water athlete. Any time an athlete is within 20 feet of a motorized vessel, the vessel must place the engine in neutral until such time as the athlete has passed and the vessel captain determines that it is safe to resume.

As athletes approach a disabled boat, the captain shall put the engine in neutral and turn the engine off. If safe to do so, the disabled craft may drop an anchor to maintain position. The vessel captain is required to report the disabled craft via radio to the open water leadership team. If the vessel cannot be safely removed from the raceway, the support staff will provide two guide buoys or two kayaks (one on each side of the disabled craft) to alert athletes to the navigational hazard.

The support staff will make every attempt to tow the disabled craft off the course without impacting the active race.

Errant drone

Given the nature of the open water venue, a drone, or unmanned aerial vehicle, is something that may intrude upon the race. While the meet invite specifically forbids drones, the venue has little in place to prevent a drone from flying over. The open water leadership team will monitor the venue and provide oversight to eliminate any errant drones that may fly over the racecourse.

If a drone crashes into the middle of a race, the meet referee will 1) ensure no one was hurt 2) investigate the drone to determine pilot / owner 3) provide guidance to the on-water team as to recovery of the drone and 4) provide additional direction as needed.

A drone crash is not a cause to abandon or delay the open water race.

Zip lines

The Lemont IL site has zip lines above the course. The venue has closed the use of the zip lines for the day of the open water event. The Facilities Manager is responsible for keeping the zip lines above the race clear and not in use. However, if a zip line is used by someone during the race, the following will apply:

- The Meet Referee will notify the Facilities Manager, who will investigate the use of the zip line
- The current races will finish, with following races contingent upon ensuring no others will use the zip line above the course

Abandonment Procedure

Abandonment of an active race can happen for several reasons. Regardless of the reason, the safety of all open water participants is the primary goal. The expectation for everyone at the event is:

- Act in a safe manner
- Get to a safe place
- Communicate your status

The abandonment procedure for an active race at The Forge location will be communicated by the open water leadership team via radio. Upon that radio transmission, all support staff on the water will begin to signal abandonment by a series of short whistles. Athletes and support staff are required to exit the venue as quickly and safely as possible, using the two ingress / egress points of the quarry: the dock and the northwest corner. Athletes in the water and support staff on the water are required to check in with a race official as soon as they exit the venue. Except for Turn Judge 3, all on water staff will support anyone actively in the venue in exiting the course by providing a) direction to the nearest exit point and b) kayak / boat support for quickly exiting the water and c) helping safely clear the venue. On water support staff need to exit the course efficiently and safely, while aiding others. Kayaks, boats, and on water support equipment may be pulled into the shallows of the venue or returned to the dock area, whichever is most expedient and safe to have the team exit the venue. Turn Judge 3 will immediately exit the venue and be stationed at the northwest corner exit point to support anyone exiting the venue via that point.

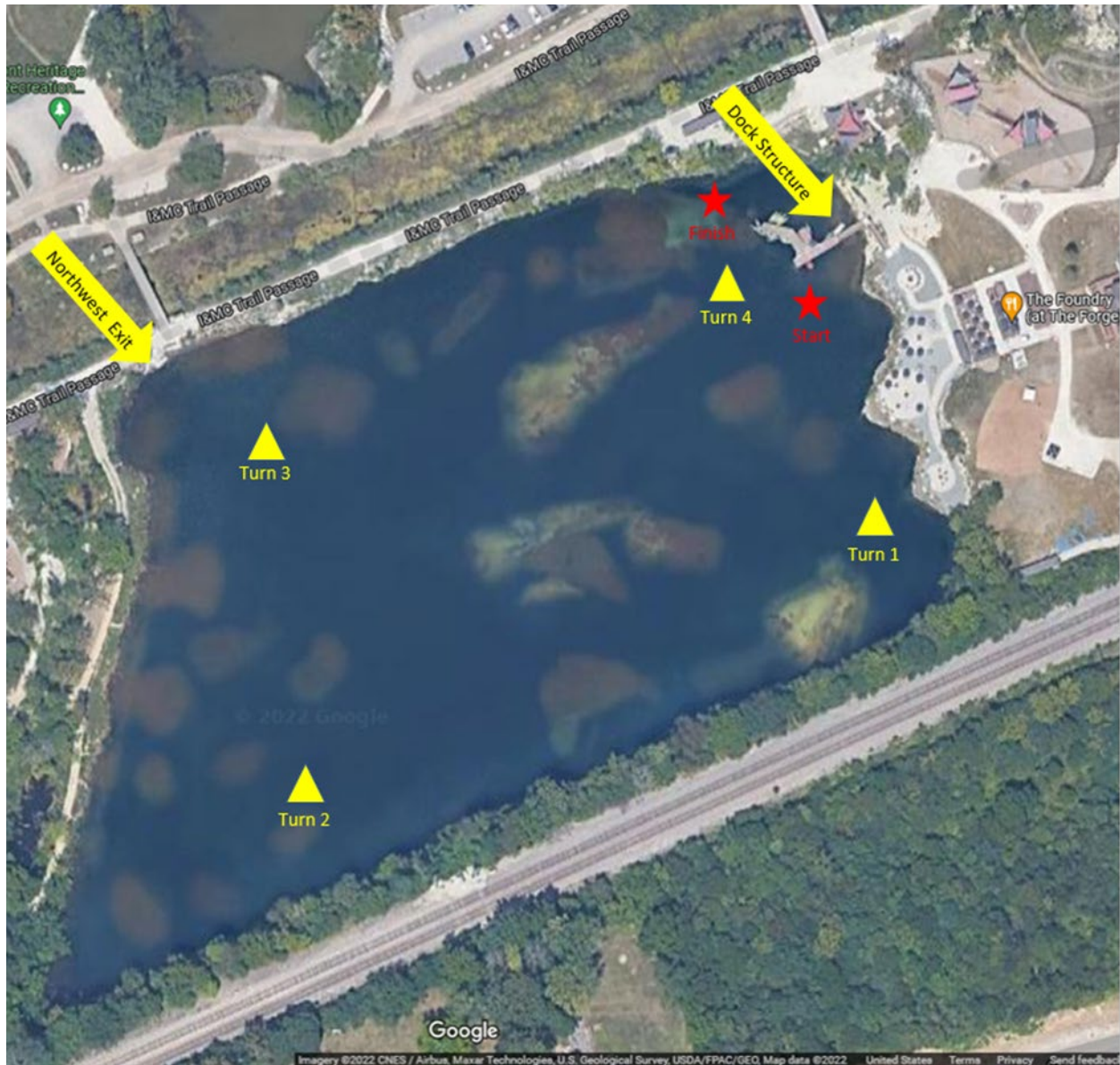


Figure 6: The Forge venue with exit points

Race officials will be stationed at both exit points on the course to write down everyone exiting the water. At the dock, the Finish Judges will record all athletes exiting the water using the dock structure as athletes exit the water and move off the dock. The Timing Judges will record all on water support staff exiting the water at the dock. At the northwest corner, Turn Judge 3 and an Administrative Assistant will record anyone exiting the water using the rock step up. Appointed by the Meet Referee, the Administrative Assistant for the northwest corner will be expected to make his / her way to the northwest venue exit and assist Turn Judge 3 for evacuating the venue and recording everyone exiting at the northwest corner.

All officials and staff interacting with anyone at the venue need to provide direction to safely move to the nearest safe place.

Upon clearing of the exit, the teams working the exit points will radio the Administrative Referee for a status of the abandonment (Northwest corner clear; dock clear). At this point, the teams will exit the venue, moving to a safe position. The team can, at their discretion, move to a safe position before or while radioing the Administrative Referee. Upon reaching a safe place, the Judge will report by number all athletes that have exited the venue; the Judge shall report by position all on water support staff that have exited the venue. The Administrative Referee will provide the open water leadership team with the status of the abandonment.

Once abandonment of the active race is complete, the open water leadership team will meet to discuss continuation of the event or cancellation of all future races.