



Potomac River Sailing Association

Safety Review and Standard Operating Procedures (SOP) Committee Report

10 March 2022

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List of acronyms and abbreviations:

- The Committee The Safety Review and Standard Operating Procedures (SOP) Committee
- DCYC Deep Creek Yacht Club
- DISC Daingerfield Island Sailing Club
- ExCom PRSA Executive Committee
- MPD Metropolitan Police Department (Washington, DC)
- NWS National Weather Service
- PRO Principal Race Officer
- PRSA Potomac River Sailing Association
- RC Race Committee
- RRS Racing Rules of Sailing
- SOP(s) Standard Operating Procedure(s)
- USCG United States Coast Guard
- WSM Washington Sailing Marina

Executive Summary

The PRSA Safety Review and Standard Operating Procedure (SOP) Committee (“the Committee”) was given the charge to “create an SOP & safety plan to establish when racing will occur and how many safety boats must be used” (per the motion passed by the PRSA Executive Committee (ExCom) at the April 2021 ExCom meeting. The Committee reviewed a wide range of informational resources on safety and risk assessment from US Sailing, the Gowrie Group (our insurance provider), and other sailing organizations. The Committee agreed that updating existing PRSA Race Committee (RC) documents, policies, and procedures to focus decision making on potential hazards and harm mitigation, together with the creation of some new resources (an Incident Management Plan and a Safety Equipment Checklist) would address the first portion of the charge. The Committee also agreed that PRSA should adopt additional safety requirements regarding PFDs and wetsuits/drysuits for all competitors and RC volunteers. The Committee did not reach consensus on the question of “how many safety boats must be used.” The report below summarizes the main dimensions and areas of agreement and disagreement that informed Committee deliberations on the second part of the charge. Although the specific question concerning the number of safety boats was not settled, the Committee did take numerous steps to enhance the safety of competitors and the RC (creation of an Incident Management Plan, review of safety equipment on PRSA skiffs, development of a risk assessment framework) and offers further recommendations for additional steps that PRSA can take in this regard.

Charge from the PRSA Executive Committee

The PRSA Executive Committee (ExCom) passed the following motion at the April 2021 ExCom meeting:

Create a Committee, chaired by the Rear Commodore, to create a SOP & safety plan to establish when racing will occur and how many safety boats must be used.

The discussion of this motion by the PRSA ExCom raised two big picture issues that the Safety Review and Standard Operating Procedures (SOP) Committee – hereafter, “the Committee” – should address:

- Provide clear guidance on the number of Race Committee (RC) boats that should be on the water for PRSA racing. The ExCom discussion emphasized the view of some ExCom members that decisions such as these should be delegated rather than left for the ExCom to decide. The Committee established with the motion should establish guidelines and procedures for any PRO to use.
- Develop a PRSA emergency safety plan.

The outgoing PRSA Rear Commodore (term ending December 2021), Aaron Boesenecker, chaired the committee per the ExCom motion. All other members of the Committee volunteered to serve. The Committee membership was finalized after discussion of this topic at the 2021 PRSA AGM & Awards Ceremony. All volunteers were selected to serve on the Committee. The Committee met 6 times from 29 December 2021 through 2 March 2022. The following segments of this report summarize the Committee’s discussion process, the steps taken by the Committee, action items that need to be taken, and the final list of requirements and recommendations put forward by the Committee.

Committee Process

Committee Deliberations

The Committee approached the question of safety and risk assessment from a larger framework that organizes risks into three categories: risks or potential harms to *people*, risks or potential harms to *property*, and risks or potential harms to *reputation*. These three categories are not equal in severity or importance (safeguarding the lives and safety of *people* is paramount). However, all three categories are part of the larger discussion of safety, risk management, and harm mitigation. Subsequent committee discussions further delineated things that could or should be required of the Race Committee (RC) vs. things that could or should be required of competitors. The Committee also considered the difference between the concept of *risk* (a probability calculation that, while quantifiable, can also be quite difficult to assess) vs. more the actionable concepts of hazards, harms, and mitigation.¹ Committee deliberations resulted in consensus on the overarching idea that it is preferable to have reasonable, practicable, and

¹ For an informative discussion on the question of how “risk” is a socially constructed concept (and not an objective “fact”) and how understandings of risk and risk management have changed over time, see Peter L. Bernstein, *Against the Gods: The Remarkable Story of Risk*, New York: John Wiley & Sons, Inc., 1998.

enforceable minimum standards rather than more expansive requirements that might be difficult to maintain (and thus, as they are ignored or disregarded in practice, would work counter to the goals of safety, risk management, and harm mitigation). Finally, Committee discussions took into account the unique safety and sailing environment within which PRSA operates: a relatively constrained sailing area with close proximity to numerous emergency services, albeit one where weather conditions can and do change rapidly.

The initial review of existing PRSA documents and procedures (including the [instructions provided to the RC](#) for each event and the [Decision to Race Based on a Risk Assessment](#) documents) revealed areas where instructions and procedures could be more precise. In particular, existing PRSA documentation put too much responsibility on the (assumed) knowledge and experience of the PRO rather than establishing clear benchmarks (and accompanying information references) for assessing risk and making decisions. Furthermore, existing PRSA documentation was imprecise in language related to risk assessment decisions (for example, what constitutes “too windy” or “too cold” as used in language in the existing documents?). The findings of the Committee and revision already made to these documents address these concerns by incorporating specific requirements regarding PFDs, clothing, and weather checking/reporting.

The Committee developed several additional documents and frameworks to guide discussions as various dimensions of safety, risk management, and harm mitigation were discussed. A [Risk Assessment Spreadsheet](#) provides a broad overview of potential risks to PRSA competitors and RC members along with an inventory of the steps that PRSA has already taken to address these risks and a listing of additional steps that may be necessary (if any). This document should continue to be a reference point as PRSA reviews and addresses safety procedures. This broad assessment then informed a more targeted list of potential hazards along with the mitigation steps that could be taken to reduce any potential harm to the RC or to competitors. In the course of their deliberations the Committee also examined a range of information resources (see list, below). These resources, along with the discussions among Committee members, led to the development of some initial steps: review/revise PRSA RC instructions and documentations and inventory safety equipment on the PRSA RC skiffs.

Documents and Resources Consulted by the Committee

As part of the research process the Committee consulted the following documents and resources:

- [US Sailing RC Equipment and Preparation Checklist](#): the detailed information on this list, organized by sailing environment (ocean, coastal, etc.) and by safety category, aided the Committee in developing the PRSA Skiff Safety Equipment checklist and in contextualizing the types of safety concerns that PRSA might anticipate our own sailing environment (a relatively contained environment on the Potomac River with close proximity to a range of emergency response services). Among other things, Gowrie

provided a template for an emergency response card that will be customized for PRSA and placed in the RC binders on each skiff.

- [Preparing Your Safety Boat \(US Sailing\)](#)
- [PRSA 18 December 2016 Laser & RC Boat Capsize Incident Report](#): the report aided the Committee in contextualizing our concerns related to safety, risk, hazards, and harm mitigation. The report emphasizes that one of the primary factors contributing to the incident was the fact that the RC was not aware of a gale warning issued prior to racing. Another important finding concerned the seaworthiness of the PRSA 16' skiff in use at the time. Both of these factors have since been addressed, at least in part, with the development of a Risk Assessment Framework for PRSA RCs and with the replacement of the 16' skiff with the 17' skiff with higher freeboard. The findings of the PRSA Safety Review & SOP Committee reaffirm the findings of the PRSA 18 December 2016 Committee that PRSA skiffs are not suitable for operating in a gale warning. As such, the Committee has not changed the existing PRSA policy prohibiting racing during times when a gale warning is in effect (no matter what the observed conditions at that time are). Furthermore, the Committee notes that the number of committee boats on the water during the 18 December 2016 incident was not a decisive factor. A "mass" event such as 18 December 2016 is likely to swamp, capsize, or incapacitate far more competitor vessels than 1, 2, or even more committee boats could address (and possibly place the crew of the committee boats in danger as well). As such, the findings, requirements, and recommendations of the PRSA Safety Review & SOP Committee (below) reflect an emphasis on competitor & RC preparedness (including PFDs and clothing) and the importance of weather monitoring by the RC prior to and during racing.
- [Severn Sailing Association \(SSA\) 18 December 2016 Laser Capsize Incident Report](#): this thorough report captured the situation of a frontal system that quickly swept through Annapolis and capsized almost the entire Laser fleet on the Severn. The system was predicted and relevant NWS warnings had been issued, but (similar to the 18 December 2016 PRSA Laser Incident) the RC was apparently unaware of these and/or was not monitoring weather conditions as the frontal system approached. There are many takeaways from the report, including the challenge of accounting for all of the sailors (and boats) after rescue operations were completed. SSA has since adopted, and we are recommending, better ways to reduce the risk of unaccounted for sailors being lost or in need of rescue.
- [USCG 24 April 2015 Dauphin Island Incident Report](#): the Dauphin Island incident took place in a racing environment very different from the one in which PRSA operates. Nonetheless, the report was helpful to the Committee as we considered the importance of preparedness for both RC and competitors, the importance of monitoring weather conditions in advance of and during racing, and the importance of having an incident response plan in place should any safety incident occur.
- [Gowrie Group Resources](#): the Gowrie Group provides a range of safety and planning resources. In the event of an incident we should first take the immediate safety and first aid steps necessary on site (including contacting local emergency services as needed).

Following the initial incident management, PRSA should then contact the Gowrie Group for their support (they have a wide range of resources and will provide guidance).

- Best practices from other sailing clubs/associations:
 - [SSA Frostbite Instructions for Sailors & RC](#) (reported to the Committee by Nabeel Alsalam)
 - Deep Creek Yacht Club (DCYC) procedures (discussed verbally in Committee Meetings). The DCYC policy of requiring all competitors to wear PFDs or buoyancy devices at all times aided the Committee in considering this particular aspect of risk management and harm mitigation.
- US Sailing Training and Educational Resources:
 - [Teaching and Coaching Fundamentals](#)
 - [Race Officer Courses](#) (note: these can now be completed 100% online) <https://www.ussailing.org/education/resources/course-calendars/#race-officer>
 - [US Sailing Level 1 Instructor Certification](#)
 - [Email correspondence with US Sailing](#)

Conclusions

The charge to the Committee contained two components: (1) determine when racing should be held, and (2) determine how many safety boats are needed for safe racing. On the first part of the charge, the Committee determined that updating existing PRSA policies and procedures would provide a PRO better guidance on making the determination on when racing should occur. The Committee did *not* reach consensus on the question of how many safety boats are needed for safe racing (part two of the charge to the Committee). Without a consensus, the Committee presents here the different dimensions of the question that were discussed, along with different options that were proposed, for the PRSA ExCom to consider as the ExCom continues to develop and refine PRSA policies and procedures. The Committee deliberations are summarized here and are then broken out into bullet point lists for new requirements, recommendations, steps already taken by the committee, and steps that need to be taken.

SOPs: The Decision for PRSA to Run Races

Existing PRSA resources such as the “Decision to Race Based on a Risk Assessment” document and the “RC Reminders” document provide a good framework for a PRO to make the decision to hold races. As noted in the discussion above, the Committee did identify additional information to add to these documents as well as ways to reorganize these documents for clarity. In addition, the Committee finds that:

- No racing to be held in a gale warning as per current PRSA safety procedures (the logic of which is articulated in the PRSA Report on the 18 December 2016 capsized incident).

- The PRO will make the decision to race on site at WSM on a race day based on the established PRSA risk assessment procedures.² The entire RC should report on time and be prepared to hold races on the day(s) for which they are scheduled to serve. The decision to race will be made on site based on the most up-to-date NWS information available in conjunction with PRSA risk assessment procedures.
- The ultimate decision to race a boat is the skipper's, who must assess his or her ability, crew's ability, and the conditions.

SOPs: How Many Safety Boats?

As noted above, the Committee did not reach consensus on this part of the charge. The following discussion summarizes the different dimensions of the Committee's discussions and of the various options that were considered. The Committee does agree that providing a safe racing environment is the main task for a RC, and that well-run races are safe races. However, there are a range of factors to consider here (recognizing that *safe* racing could be conducted with 0 safety boats, or with 1 safety boat, or with 2, with 3, etc.). There is also not a defined US Sailing Standard for the # of safety boats to be used.³ A prepared RC is important for safety. However, it cannot be overstated that the ultimate decision to race a boat is the skipper's, who must assess his or her ability, crew's ability, and the conditions.⁴

A survey of US Sailing material and conversations with US Sailing Race Officers determined that there is no US Sailing Standard for the number of safety boats to be used.⁵ The following considerations were emphasized in making a decision on the number of safety boats:

- Number and type of sailboats on the water
- Age, experience and self-sufficiency of the sailors
- Conditions of the body of water: protected vs. open water
- Expected weather and sea state
- Vessel type: large stationary signal boat? Can the markset boats double as safety assets?
- Are there coaches, (skilled) parents, or other vessels on the water that could provide assistance?

In an email conversation, US Sailing Race Officer Matthew Hill reported a personal "rule of thumb" of 1 safety boat per 10-12 competitors (while keeping the considerations above in mind) but emphasized that this is his own rule of thumb, not a US Sailing standard.⁶ Thus, although there is not a codified US Sailing standard on this question, there does seem to be some consensus among trained and certified Race Officers and PROs should be aware of this.

² This is in compliance with US Sailing best practices (as emphasized in, for example, US Sailing's Basic Race Management Seminar) as well as the PRSA Sailing Instructions.

³ See email [conversation with US Sailing Race Officer Matt Hill](#) on this question.

⁴ This is also codified in the Racing Rules of Sailing, specifically RRS 3, "Decision to Race."

⁵ See email [conversation with US Sailing Race Officer Matt Hill](#) on this question.

⁶ Ibid.

The Committee further disaggregated safety from the idea of what is needed to run races. In some environments safe racing could be conducted with 0 safety boats. In other conditions (e.g., many competitors, longer courses, windier conditions, shiftier conditions, a need to adjust courses often and/or quickly) two safety boats may be preferable to one, but this is also for reasons that extend beyond safety. Two safety boats on the water do provide an additional set of eyes on the competitors, engine redundancy in case one of the skiff motors fails, and an additional response boat. However, the type of vessel should also be considered. A large signal boat at anchor, such as PRSA's Bayliner, is not an effective asset for assisting capsized sailors or aiding sailors who become separated from their boat; small skiffs such as the current PRSA equipment can unanchor and provide assistance relatively quickly.

One option considered by the Committee would be to make planning for 2 skiffs (4 RC volunteers) the default for typical Spring, Fall, or Frostbite Series racing days. If conditions allow the PRO may decide to conduct racing with one skiff (and thus release the other volunteers from RC service and allow them to race or go home). This option found support among some Committee members as a way of planning to deploy all of our resources and then scaling back if conditions allow. At the same time, though, concerns were raised about the practicability of this system and the additional decision burden that it places on a PRO absent clear and specific guidelines for such a decision. Several Committee members also emphasized the fact that using multiple skiffs is as much a race management question as a safety question, and that the reason two skiffs have traditionally been used for Spring or Fall racing on the North Course vs. one skiff for the Frostbite season has more to do with the need to set different course types, move marks, and keep an eye on fleets spread out over larger courses.

Two skiffs does provide additional response capabilities to capsized vessels or sailors in distress, yet in conditions where there are multiple capsizes (such as the 18 December 2016 events at PRSA and SSA) even two safety boats cannot (could not) attend to all capsized sailors at once and need to wait for severe conditions to subside before they are able to provide assistance. Moreover, the PRSA 18 December 2016 Laser & RC Boat Capsize Incident Report emphasizes that the specific issue at hand concerned the operating limits of the 16' skiff (low freeboard and susceptibility for swamping in particular). The Committee acknowledges that in a "mass event" like the 18 December 2016 Laser & RC Capsize event (and in similar events, such as those at SSA), the number of RC boats on the water is not the critical safety feature. In a sudden event with widespread impact, there is no number of RC boats that would prevent capsizes or be able to attend to capsized boats at once. The critical safety element in incidents of this type is the preparedness of the competitors.

In sum, the safety of competitors is not just a question of how many race committee boats are on the water, though this is a consideration. However, several Committee members felt that focusing just on the number of safety boats actually detracted from the larger issues at stake. The Committee emphasizes that the RC should provide a safe racing environment to the extent that it can, given factors within their control and the considerations discussed above, and each PRO does have a responsibility to consider the various factors mentioned here. At the same

time, all competitors are responsible for assessing their own level of ability, their preparedness for the conditions, and their capabilities and limitations. This finding is consistent with the guidance provided by US Sailing in race management training courses.⁷ In particular, US Sailing emphasizes the importance of RRS 3, “Decision to Race” in considering safety on the water.⁸ Assessing the capabilities of competitors is not the responsibility of a PRO or of the RC, though the PRO and RC should provide all relevant information related to potential risks to competitors and should be attentive to the preparedness of competitors (e.g., proper clothing, PFDs, etc.) to the extent possible. With these considerations in mind, the Committee did agree that providing more (and more in-depth) training opportunities for race management and powerboat operation (including training on how to assist sailors separated from their boats and how to provide assistance to capsized boats) should be a focal point for PRSA.

Summary: Risks and Potential Harms to People, Property, and Reputation

The Committee has sought to address the categories of risk and potential harms noted in the “Committee Deliberations” segment (above) in the following ways:

- People: the clear potential harm is injury to, or death of, competitors and RC volunteers. The Committee has sought to address this category with enhanced safety requirements for competitors (detailed below), with updated and more thorough guidance for PROs and RC members, and through the development of an Incident Management Plan.
- Property: potential harms in this category include damage to PRSA equipment and/or damage to competitors’ vessels and/or equipment. The Committee has sought to address this category with recommendations for more often and more in-depth training opportunities for members (detailed below) as well as with the revised guidance provided to PROs and RC members.
- Reputation: this category relates to how PRSA is viewed by visitors/guests or members from other clubs with more robust capabilities as well as by its own membership. Several Committee members did emphasize the position that holding races with just one skiff when two skiffs (and thus two more sets of eyes) are available does present a reputational risk for PRSA, and its directors and officers, should an incident occur and it was then questioned why two launches were not on the water at a sanctioned event. The Committee has sought to address this category through the transparent presentation of the considerations that the Committee discussed on the two elements of our charge (and, in particular, on the failure to reach consensus on part 2 of the charge).

Overall the Committee findings, proposed requirements, and recommendations presented here reflect a balance between what PRSA can do as an organization (particularly what we can require of RC volunteers) to provide a safe racing environment and the responsibility that competitors have for their own preparedness.

⁷ In addition to RRS 3, RRS 1.1 (“Helping Those in Danger”) and RRS 4 (“Acceptance of the Rules”) are emphasized in US Sailing Race Management Training discussions on safety.

⁸ RRS 3 - Decision to Race: The responsibility for a boat’s decision to participate in a race or to continue *racing* is hers alone.

Summary of Required Changes, Recommended Changes & Actions, Actions Taken by the Committee, and Remaining Action Items

New Requirements⁹

- All members of the RC are required to wear PFDs or buoyancy aids at all times.
- All competitors are required to wear PFDs or buoyancy aids while racing.
- If water temperatures are below 50 degrees Fahrenheit full wetsuits or drysuits are required for all competitors and for all RC volunteers.
- Competitors leaving the racing area must notify the RC (verbally or via VHF).

Recommendations

- All competitors are strongly encouraged to carry both a safety whistle and a rescue knife in or tethered to their PFD. The PRO should remind sailors of this safety recommendation at the competitors' meeting.
- PRSA sailors are strongly encouraged to have a VHF radio on board for use in case of emergency. In addition, PRSA sailors are strongly encouraged to carry a cell phone (in a waterproof case) for emergency use.
- Consider requiring boats/skippers to register for a series (Spring, Fall, or Frostbite) in advance so that emergency contact information is current and on file. Failure to register in advance means that a boat will not be scored.¹⁰
- PRSA members should have a sticker or QR code affixed to their boat, and their trailer, to allow easy access to the name of the boat, name of the skipper, and emergency contact information.
- All vessels should have the following on board: an extra line suitable for towing, a bucket or other appropriate device for bailing.
- Promote US Sailing and US Powerboating training opportunities and encourage PRSA members to become certified.
- Encourage all PRSA sailors to assess the condition of their safety equipment (i.e., PFD's) prior to the season and at regular intervals throughout the season, to ensure that they are in good condition and properly sized for the crews that will be sailing the boat.
- PRSA sailors should know that there is a defibrillator in the WSM store. Each skiff also has a first aid kit and CPR mask in the seat.
- The PRSA ExCom should create an institutional mechanism for monitoring safety and conducting training and education. The Committee discussed a number of ways to do this, but did not reach consensus on which approach the ExCom should take. Options include:

⁹ All PRSA documents (NORs, SIs, website material, etc.) should be updated to reflect these new requirements.

¹⁰ The Daingerfield Island Sailing Club (DISC) is implementing this requirement for 2022.

- Create an ExCom Position (“Safety Officer” or “Training and Education Officer” to establish a focus on these issues at the ExCom level and to ensure that there is a point person to take the lead on and to have a permanent voice at the ExCom level.¹¹ One potential drawback with this option, though, is that safety becomes one person’s/office’s responsibility rather than being woven through the portfolios and the work of all ExCom Officers.
- Task the Rear Commodore (this is the existing position and portfolio under which most of these issues would fall) with standing up a safety, training, and education subcommittee each year. This would involve additional members by delegating the thought process and the work.¹² Potential drawbacks with this option include the risk of uneven and/or inconsistent attention to questions of safety, training, and education as well as the fact that not having an ExCom level position may result in diminished visibility and attention to these questions.
- PRSA should use the [Risk Assessment Spreadsheet](#) developed by the Committee as part of a regular (every 6 months) review of safety and risk management.

Actions Taken by the Committee

- Review of the PRSA Race Committee instructions (information provided to PRO and RC prior to an event via email as well as Decision to Race Based on a Risk Assessment instructions). Revisions included:
 - Clarifying National Weather Service (NWS) information sources and reporting schedule in PRSA risk assessment documentation.
 - Specifying requirements for PFDs, drysuits/wetsuits, and other safety equipment for the RC and for competitors.
 - RC Instructions document reorganized to clarify workflow and present information in logical (chronological) order.
- Consultation with the Gowrie Group to review our current insurance coverage (deemed adequate), to verify the services that we could expect in an incident and to verify steps that should be taken in the event of a safety incident (see PRSA Incident Management Plan, below).
- Creation of a [Safety Equipment Checklist](#) for PRSA skiffs. Regular safety equipment inspections should be conducted. As part of this process, existing required equipment was verified and the following equipment was added to each skiff:
 - 50’ heavable rescue line
 - CPR masks

¹¹ The Committee notes that the creation of governing board positions (rather than subcommittees) for these various questions has become something of an industry standard in the corporate world.

¹² At various junctures the ExCom has emphasized that the ExCom itself cannot and should not shoulder all of the work involved in running PRSA. Indeed, the creation of this Safety Review and SOP Committee resulted from an ExCom decision to delegate the work here to a special committee rather than take up the discussion and decisions itself.

- Rescue knife and whistle tethered to each console
- Wool emergency blankets in waterproof bags
- Development of an initial [Risk Assessment Spreadsheet](#). This sheet then informed subsequent discussions concerning how to think about potential hazards, the harms that might accompany these hazards, and how to mitigate these potential harms.
- Creation of a [PRSA Incident Management Plan](#) that details the steps that should be taken (who should be contacted, how, in what order) should a safety incident occur. The document also contains address information and latitude/longitude information for potential pick up points near the areas where PRSA races.

Remaining Action Items

- Update laminated console stickers on PRSA skiffs to include additional emergency contact information and information on emergency procedures.
- Update the RC binders in the seat of each skiff to include the PRSA Incident Management Plan, Risk Assessment Framework, current SIs, current NOR, and first aid instructions.
- Continue to promote educational opportunities related to sailing, race management, and powerboat safety. This includes, but is not limited to, training opportunities provided by US Sailing and US Powerboating. In particular, the Committee stresses the importance of PRO training for safe and well-run racing. US Sailing Basic Race Management training is strongly encouraged for *all* PRSA members, and additional levels of certification are encouraged for those individuals who serve or would like to serve as PRO.
- Continue to conduct PRSA training and educational opportunities on topics such as RC duty, PRO responsibilities, and the Racing Rules of Sailing.
- Provide information for First Aid training and encourage PRSA members to obtain First Aid certification.
- Develop an accessible web-based system (using, for example, QR codes) for accessing essential information and providing equipment reports post-race.
- Develop a way to capture emergency contact information from competitors (especially those that may be new or show up for a day of racing but not be in our membership database) that can then be easily accessed by ExCom officers should we need to reach out to an emergency contact.
- Update existing RC documentation with more thorough information for PROs to consider (through a safety / harm mitigation framework) in making decisions such as course selection and when to abandon racing.