



USRowing Air Quality Index (AQI) Guidelines

Purpose

- Rowing, training, and regattas may occur during seasons with wildfire smoke or elevated ozone or particulate pollution. These conditions can pose health risks to event participants, including but not limited to athletes, spectators, volunteers, and staff.
- This document provides standardized guidance using the U.S. EPA Air Quality Index (AQI) and the Air Quality Flag Program to assess risk, implement mitigation, and make activity decisions for training and competition.
- This guidance is adapted to align with USRowing's approach to heat safety: assess, mitigate, and communicate risk, with clear thresholds for event modifications.

Organizer and Participant Responsibilities

- Organizers and responsible persons must:
 1. Assess and mitigate AQI-related risks
 2. Communicate risks and mitigation steps to all participants
 3. Implement venue-wide measures appropriate to the AQI category
- All participants should follow recommended personal mitigation steps.

AQI and Flag Colors (Air Quality Flag Program)

Color (Flag)	AQI Level Index Value	AQI Category
Green	0-50	Good
Yellow	51-100	Moderate
Orange	101-150	Unhealthy for Sensitive Groups (USG)
Red	151-200	Unhealthy
Purple	201-300	Very Unhealthy
Brown	301-500	Hazardous

Risk Evaluation and Measurement

- Current and forecasted AQI for the closest reporting station to the rowing activity location should be monitored. Favor site-specific AQI data and the specific pollutant of concern when available.
- AQI can vary through the day as the ozone often peaks mid-to-late afternoon, and smoke can pool overnight and clear with wind shifts. Reassess throughout the day.
- Consider both air quality and rowing-operational factors:
 - Duration and intensity of rowing
 - Athlete susceptibility (asthma, allergies, cardiovascular disease, recent respiratory illness, para/adaptive athletes with unique vulnerabilities)
 - Visibility and operational safety on land and on the water.



Note: Hydration and heat practices remain important for overall health but do not reduce exposure to inhaled smoke or ozone.

AQI-Based Mitigation and Activity Guidance

- Green (0–50, Good)
 - Proceed as scheduled with normal training and racing.
 - Continue routine communication.
- Yellow (51–100, Moderate)
 - Proceed as scheduled with normal training and racing.
 - Monitor athletes, especially those with asthma/allergies. Ensure access to onsite medical staff.
- Orange (101–150, Unhealthy for Sensitive Groups (USG))
 - Implement mitigation and communicate to all participants.
 - Proceed with caution; shorten event blocks or extend recovery intervals where feasible.
 - Sensitive individuals should follow their medical plans.
 - Provide access to National Institute for Occupational Safety and Health (NIOSH)-approved N95/KN95 masks for use on land when appropriate.
Note: masks are generally not recommended during high exertion because they may increase breathing resistance. Consider their use by staff, spectators, and athletes while off the water.
- Red (151–200, Unhealthy)
 - Consider postponement or schedule adjustments to periods with lower AQI.
 - If proceeding, implement enhanced measures:
 - Frequent rest
 - Hydration stations
 - On-land masking for non-exercising personnel
 - Reduced duration of exercise activity, including on land and on the water
 - Sensitive individuals should not participate in outdoor training or competition.
- Purple (201–300, Very Unhealthy)
 - Postpone or cancel outdoor rowing. Only have indoor events if the space has effective air filtration and can accommodate rowing activities safely.
 - Suspend on-water operations until AQI improves.
- Maroon (301–500, Hazardous)
 - Training and Competition:
 - Cancel all outdoor activities and suspend on-water rowing until AQI improves below the Red category.

USRowing-Owned Events: Decision Triggers

- Orange (101–150, USG): mitigation steps are required and communicated to all participants.
- Red (151–200, Unhealthy): postponement will be actively considered; events proceed only if enhanced measures are in place and AQI trends support doing so.
- Purple (201–300, Very Unhealthy) or Maroon (Hazardous): all on-water rowing will be postponed/canceled until air quality improves to a level agreed upon by USRowing personnel.



Mitigation Strategies (Venue and Program)

- Scheduling and format:
 - Schedule activities during periods of lower AQI when feasible (often early morning).
- Indoor spaces and filtration:
 - Provide clean-air rest areas with effective air filtration where able.
- Personal protective equipment (for non-exercising roles):
 - Provide NIOSH-approved N95/KN95 respirators for referees, volunteers, dock staff, spectators, and athletes to use while on land when AQI is Orange or higher. Fit guidance should be posted.
- Medical readiness:
 - Ensure first aid presence and readiness to recognize and respond to respiratory symptoms and exacerbations.
 - Reinforce emergency action plans for respiratory events, including rapid access routes and EMS activation.
- Hydration and recovery:
 - Maintain hydration and shaded rest areas; while hydration does not reduce pollutant dose, it supports overall physiologic resilience.
- Visibility and on-water safety:
 - Prior to launching, assess smoke-related visibility of lanes, buoys, and safety launches. If visibility is inadequate for safe supervision or navigation, suspend on-water activities regardless of AQI number.
- Communication:
 - Communicate AQI levels, trends, and operational decisions via email/SMS/regatta apps, venue signage, coaches/coxswain meetings, and public address (PA) announcements.
 - Reassess and update at set intervals (e.g., every 2–3 hours) or when conditions change rapidly.

Personal Recommendations

- Check local AQI daily and pre-session; adjust plans if AQI worsens.
- Sensitive individuals should follow their medical plans.
- Stop activity if respiratory symptoms develop.
- Avoid additional irritants (e.g., tobacco, strong solvents, wood smoke).
- Masks:
 - Not recommended during rowing due to increased breathing resistance
 - At AQI Orange or above: consider wearing an N95/KN95 respirator while on land, especially for sensitive individuals and staff

Special Populations and Considerations

- Coaches should individualize modifications and consider alternative roles or indoor training options for athletes with special considerations when AQI is Orange or above.



Notes

- These guidelines are intended to complement, not replace, clinical judgment, and local public health directives.
- Weather and air quality risks can co-occur. Apply these guidelines in conjunction with the [USRowing Heat Safety Guidelines](#), and the [USRowing Safety Guidelines](#). When risks overlap, follow the more conservative recommendations.

References

- Air Quality Flag Program (AirNow): <https://www.airnow.gov/air-quality-flag-program/>
- AQI Basics (AirNow): <https://www.airnow.gov/aqi/aqi-basics/>
- Air Quality and Outdoor Activity Guidance for Schools (AirNow): <https://www.airnow.gov/sites/default/files/2021-03/schooloutdoor%20activity%20guidance.pdf>
- UVA Health: Check Your Local Air Quality: <https://www.uvahealth.com/healthy-balance/check-your-local-air-quality>
- NSAA Air Quality Guidance (EPA/NCAA aligned)