

WITHOUT AIR, YOU'RE DEAD.

NFPA 1404 is just a bunch of words unless you define & enforce expectations for your organization.

BY JOSH BLUM

B Shifter Buckslip, Sept. 5, 2023

Two things keep us alive inside burning buildings (if we are operating in the correct strategy):

1. Water on the fire.
2. Air on our backs.

By now, we all know putting water on the fire as quickly as possible and from as far away as we can manage is better for victims, the building and firefighters. This article targets the air-management piece of the safety puzzle. One thing should be clear: We must drastically improve air management in the American Fire Service. As with any other fireground training or discussion, we should endeavor to be honest with ourselves and each other when assessing how and why we do things in the hazard zone. When things go well, is it because we proactively manage air supply? Or do we stumble upon accidental success?

SCBAs: A Look Back

Let's consider air management from a historical perspective. We've all seen pictures and videos of firefighters with black soot running down their faces, snot streaming through their wooly mustaches or down their chins. Their bloodshot, glassy eyes made it seem like they hadn't slept in days. As bad as they looked, these old-school firefighters working without SCBAs were much better at managing their air resources. They had no choice but to evaluate conditions carefully to determine how far they could go. Before SCBAs, firefighters would catch a breath from the air movement around the nozzle, breathe through a cloth or sponge, or look for the next window before diving back into the smoke. Back then, air management was much more like snorkeling than SCUBA diving. Snorkelers must stay close to the surface and the ambient air supply. SCUBA divers can go much deeper; they are good until they run out of air. A diver will never allow their SCUBA tanks to get depleted or even low. They monitor levels closely and ensure they have enough time to get to the surface safely.

Similarly, our SCBAs allow us to go deeper and stay longer in IDLH atmospheres. Our first on-demand SCBAs lasted 30 minutes and didn't have a lot of bells and whistles. Firefighters had to look at the system's built-in

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“If we can’t protect ourselves, there is no way we can protect our customers.” —AVB

gauge to determine remaining air levels. Most of the time, firefighters worked until the bell rang before exiting the building. This is much like getting on a plane with just enough fuel to get you from point A to point B. If one thing goes wrong, the results will be catastrophic.

As technology advanced, so did our equipment. In the early 2000s, manufacturers began putting heads-up displays in face masks so firefighters could see how much air they had left. This is a good tool—if we use it the way we should. As time and technology marched on, SCBAs got additional features to alert us of our air status. Today, we have 45-minute cylinders and SCBAs that are like mobile computers, giving us all kinds of information related to air management. The heads-up display indicates air level, the gauge tells us how much air we have left and how long that air will last, and other components may have lights that show everyone else your air status. You can even set alarms to go off when the air reaches different levels.



Air on the Side of Caution

Despite these tools, widgets and gadgets, nothing will improve until we change our mindset and culture. I frequently hear firefighters say they can work until they are almost out of air because they are close to a window, door or exit. The facts tell a different story. There are many instances of firefighters working while their low-air alarm is sounding, and the next transmission is “Mayday! Mayday! Mayday!” In some of these mayday events, other personnel were able to help solve the issue without serious injury or death. However, others aren’t so lucky, getting critically injured or even killed.

Let’s say you are working on the first floor of a two-story house and keep going until your bell starts to ring. Suddenly, a collapse occurs, pinning you under building materials as you quickly run out of air. Again, would you get on a plane with just enough fuel to reach your destination? How about the new car that goes 300 miles on a charge, and you need to travel 299 miles to the next charging station. Everything is fine until it is not. Empty is Empty. If we do not have air, we can’t function. We eventually fall unconscious and ultimately die. Accidental success is not success.

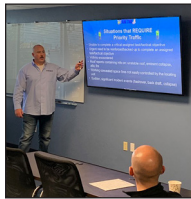
The only chance our industry has to solve low-air problems is for firefighters to follow best practices and give themselves time to exit before the low-air alarm sounds. It only takes one breath in today’s environment, and it’s lights out.

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Accidental Success Is Not Success

No level on the fireground can overcome poor air management on another level. Firefighters must manage their air, and the company officer needs to follow policy. The tactical level can remind interior crews of work times and check on them via CAN reports. It can further support air management through work-rest cycles and with on-deck companies, but it cannot perform the task level's responsibilities. The strategic level supports air management by providing personnel via the three-deep model.

Blue Card's complimentary Air Management SOG is available to help your department define best practices for air management. We are also providing two drills (available [here](#) and [here](#)) to help you practice essential skills because you better be doing everything right when something goes wrong. **BS**



Josh Blum has been in the fire service since 1993. He began his service as a volunteer firefighter before accepting a full-time career position. Josh has served in several roles, from firefighter to ops chief. He currently holds the rank of assistant chief, where he began his career. Josh is a graduate of the Ohio Fire Executive Program. He has been engaged with Blue Card since its inception and currently serves as program manager, handling all day-to-day operations. Josh has a focus on making every day better than the day before.



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