

## NAAA 50th Anniversary Convention Was Good as Gold!



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Keynote Breakfast Speaker delivers very strong safety message

### Mullane Knocks Kickoff Address Out of Orbit



Col. Mike Mullane, a retired astronaut, opened NAAA's 50th Annual Convention & Exposition with a stirring address at the Dec. 5 Kickoff Breakfast. While his presentation was filled with humor and stories from his days as an astronaut, most importantly, the veteran of three space shuttle missions had a vital safety message to share with ag pilots.

Mullane's message focused on the responsibility of individuals to keep themselves and their teams safe in hazardous environments. He also cautioned against normalization of deviance and explained how NASA fell into the trap that ultimately led to the space shuttle Challenger disaster. In January 1986 the Challenger broke apart 73 seconds after it launched, killing all seven of its seven crew members.

"When you start normalizing deviance, it leads to a predictable surprise," Mullane said. "Challenger was a predictable surprise."

With a goal of 26 missions per year, NASA had placed unreasonable production and schedule pressures on the personnel involved in its space mission. Challenger was the result of a failure of a booster rocket O-ring seal, something that was predicted by a NASA contractor in a memo written six months before the Challenger explosion. Any O-ring damage should have resulted in an automatic grounding. The problem, Mullane said, was that there were conflicting performance results with the O-ring over the course of multiple missions. In situations with conflicting performance results, all options need to remain on the table. But that's not what happened. NASA's engineers were guilty of confirmation bias, which is what happens when a team troubleshoots a problem but are already preconditioned to the cause.

“What is the most common, immediate effect of shortcutting a best practice? You get away with it,” Mullane said. This provides a sense false feedback that makes the corner-cutting seem manageable. The risks of engaging in a safety shortcut, however, are not lessened just because you get away with it.

The takeaway message from the Challenger disaster? “The first thing I want you to take away from this is a strong sense of vulnerability,” Mullane said. “If it can happen to NASA, it can happen to anybody, and it can happen to you.”

Just as NASA fell victim to normalization of deviance, so too can aerial applicators. Operating in a low-level environment isn’t the problem, however. Asked about normalization of deviance after his speech, Mullane said, “That term doesn’t apply to the environment that you’re operating in, it applies to taking shortcuts—whatever the environment is. There’s a lot of dangerous environments. Go under water. Fly in the air. Fly in space. Work in the oil patch. Climb a telephone pole to work on electrical utilities. Those are all by nature hazardous environments, but the deviance comes in when you shortcut best practices. That’s what the deviance refers to—not at all to the environment you’re working in.”

Everyone needs to take responsibility and accountability, including pilots for the safety of their operators, and ground crew for the safety of their pilots and each other. Mullane highlighted this point by recounting a near-death experience he had in a fighter jet. He failed to speak up when the pilot of a fighter jet Mullane was flying in for the first time tried to finish up a mission after the plane had reached a critically low fuel stage. Mullane kept quiet because he assumed the pilot knew more than he did. He nearly stayed dead silent. Both he and the pilot survived after they ejected from the crashing jet.

The lesson? If you see something, say something and do something. “We’re all in it together. That’s the definition of teamwork anywhere,” Mullane said. “But it really takes on a whole new meaning in hazardous environments. Our behavior can influence the safety of others around us.”

Mullane implored leaders to empower their teams and encourage everybody to speak up. “I don’t want any passengers on my team,” he said. “We’re not clones. We all bring a different perspective to the same situation.”

Don’t settle for a certain number of accidents either. “If you spike the ball and say game over and say it’s never going to get any better, that is very, very dangerous,” Mullane said.

He also had an important message for anyone seeking to break into the agricultural aviation industry: Genius is overrated; grit is more important. “I tell people, if you don’t try the answer is always no. Tenacity really, really counts big. Don’t just throw up your hands on the first speed bump you encounter. ... I think you can do amazing things when you really make a very vigorous attempt at completing it.”

Finally, Mullane encouraged the audience to demonstrate courageous self-leadership and to strive for continuous self-improvement. It takes guts to change ourselves, but we are better than we think, he said.