



Interagency Aviation Accident Prevention Bulletin



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Subject: Aviation Management in High Operational Tempo

Area of Concern: Flight Safety

Distribution: All Aviation Operations

Discussion: With the “[Dog Days of Summer](#)” upon us, we are entering a period of the season where historically the most aviation mishaps associated with aerial firefighting occur. While each mishap is the result of a unique chain of events, a comprehensive analysis of these events has shown the presence of common conditions and hazards. These common conditions and hazards can be mitigated!

It is recognized that operational tempo, or the speed and intensity of our actions relative to the speed and intensity of unfolding events in the operational environment, increases when fire activity increases. This commonly occurs during the Dog Days of Summer and coincides with the knowledge that fatigue will become a factor. The Tac Pause memo issued by the National Multi-Agency Coordinating Group ([NMAC](#)) on July 23, 2024, highlights the importance of taking care of personal health, reviewing critical procedures, and managing fatigue. We need to be mindful of our propensity to speed up to match the pace of the environment, instead of knowing when to slow down, reevaluate and adjust.

Fatigue management is critical. By this time of the season, many flight crews have already been engaged in aerial firefighting for several months, including efforts in other countries and across multiple time zones. The Federal Aviation Administration (FAA) [AC 120-103A](#) characterizes fatigue as “lack of alertness and reduced mental and physical performance.” Fatigue can intensify the following conditions making it harder to recognize and mitigate hazards. The list below represents some of the common conditions contributing to past aviation mishaps:

- Communication breakdowns (instructions, frequency congestion, information not shared)
- Lack of teamwork/Crew Resource Management (CRM)
- Procedural failures (cutting corners, policy violations)
- Breakdown in situational awareness
- Complacency
- Inexperience/Inadequate training
- Environment/Visibility (smoke, unfamiliar or formidable terrain, heat, weather, airspace)
- Distractions (cockpit noise, loose objects)
- Pressure (real or perceived)
- Inadequate risk management
- Norms/SOPs not appropriate for the situation



As the season progresses, we must be aware that these conditions often become normalized and tolerated as the same hazards and conditions are encountered daily. As a result, an inaccurate perception of risk may develop. The tolerance of risk, or the amount of risk one is willing to accept, often increases when hazards (threats) are seen as normal or routine.

Throughout the course of the day, all engaged in fire suppression need to make hundreds of micro-decisions that could affect outcomes.

In addition to the Tac Pause issued by NMAC, aviation personnel are encouraged to discuss one of the following in a briefing, report out, coordination call, etc. and share lessons learned:

“Each new plateau of risk when first attained, seems to be the last; but, as we grow accustomed to it, a new horizon beckons. What insulates us from fear as we approach the danger is simply habit, the familiarity of a point we have reached and all the points we’ve left behind. Until one steps too far, it’s often hard to tell the difference between recklessness and skill.”

~ MAJ Chris Miller, Aviation Systems, Air Delivery Branch, Yuma Proving Ground, AZ (in Flightfax, February 1997)

Discussion Points:

1. Give an example of when you experienced changes in operational tempo that resulted in you feeling uncomfortable.
 - How did you maintain situational awareness and manage the operational tempo?
 - When do you see this occurring most?

OR

2. Discuss a time when your situational awareness eroded.
 - What clues and cues did you miss?
 - How did that impact your decision making?

We are most vulnerable to mishaps and errors when the operational tempo is changing quickly in a complex environment. The antidote lies within maintaining a disciplined approach to fatigue management, risk management and CRM. These proven practices can help disrupt the sequence of events that you can’t foresee and prevent the “Swiss Cheese” effect that so often occurs in high tempo environments.

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