(AMD-25)
(8/06)

UNITED STATES DEPARTMENT OF THE INTERIOR
AVIATION MANAGEMENT

Safety Alert

No. 07-01 **July 19, 2007**

Subject: **Situational Awareness During Flight Operations**

Area of Concern: **All Aviation Operations**

Distribution: **All Aviation Users Including Fixed-Wing Flight Managers, Helicopter Managers, SEAT Managers, Air Attack Group Supervisors, Unit Aviation Officers and Vendor Pilots**

Discussion: The Department of the Interior's aviation safety philosophy as published in 352 DM 1.3A. Policy states that **"…all aircraft mishaps can be prevented and that mishap prevention is an inherent function of management."**

The good news! Mishap-free flying is a challenging, although achievable goal that requires teamwork and constant vigilance to attain and sustain. Recently, DOI experienced an unprecedented **10 ½ months of aircraft mishap free flying** (no accidents and no incidents-with-potential) that began on August 21, 2006 and ended on July 7, 2007.

The bad news! The bad news is that the Department's unprecedented 10½ month run of aircraft mishap-free flying ended with the Department suffering **3 aircraft mishaps within a recent 10 day period.**

The two aircraft accidents involved Single Engine Air Tankers (SEAT) impacting the ground. The Incident With Potential (IWP) involved a rented light fixed-wing aircraft supporting a natural resource law enforcement mission that was damaged on impact with a tree during a forced landing caused by fuel exhaustion. **Preliminary investigations reveal that in all three mishaps, human error, not mechanical failure contributed to their occurrence**.

Experiencing three aircraft mishaps in such a short span following an unprecedented period of mishap free flying is a call to action that none of us can afford to ignore.

In an effort to learn from these recent events and prevent the occurrence of further aircraft mishaps, let's review the valuable information recently provided to the interagency aviation community via ***Interagency Aviation Safety Alert No. 07-03*** and ***Interagency Aviation Lessons Learned 07-01*****. In particular,** ***Interagency Aviation Safety Alert No. 07-03, Risk Awareness and Mitigation of Hazards Caused by Human Factors*** provides discussion on (6) different topics for the mitigation of hazards. Of those topics listed, Risk vs. Reward and Task Saturation are provided again for emphasis:

Risk vs. Reward: Routine acceptance of high-risk mission assignments as a normal job expectation is a hazardous attitude. Assess the complexity, as well as the need/value for the mission, ask if it can be done another way, and ask if all personnel are essential to the flight/mission. Solicit input from the fire line and pilots as to the effectiveness of air operations. Risk Management courses are available at ACE.

Task Saturation: Potential for human error is increased when personnel must multi-task as a result of the mission/ergonomic environment (human/machine interface), the organization, or the complexity of a tactical operation, thereby losing situational awareness. Ensure that flight crews and aviation managers are qualified in their assigned position and trained in techniques for workload management (i.e. delegate tasks, adjust tactics, reduce number of resources if necessary, get additional personnel to help with operation). It may be helpful to establish local/personal "trigger points" to identify when task saturation is at a critical level. When practical attend Crew Resource Management and/or simulator training.

At a minimum, these **two original discussion topics in particular were and will continue to be central to our success** this flying season. They **apply equally** to fire and non-fire natural resource missions as well as to **Federal and vendor personnel**.

Take another look at what your mission is, and who's doing that mission for you. In those situations where we already have known policy to guide our operations, as the discussions above suggest, consider the appropriate policy that applies to your mission with the realities of where you're operating and how you're operating.

- Are your aircrews showing signs of fatigue as a result of the operational tempo in your area that's requiring 8 hours of flying and 14 hour crew days from your aircrew?
- Are your aircraft operating in environmental conditions that might require adjustments in tactics (airspeed, drop heights, route of flight, etc.) as a result of local conditions?
- Assess the need/value for the mission. Is everyone essential for this mission?

The Departmental and vendor losses associated with the three mishaps suffered in this 10-day period included the complete destruction of (2) SEATs, minor damage to (1) C-172, and two minor injuries, totaling approximately **$500,000**.

In an effort to use these recent events to quickly re-focus our attention on the fundamentals of aviation safety and to reestablish the balance of mission and risk that enabled the Department to go 10 ½ consecutive months without an aircraft mishap, it is strongly recommended that all organizations utilizing aviation resources review this information at either a safety stand-down or include this safety alert as a discussion item at the next morning mission briefing.

Don't Learn Aviation Safety by Accident.

/s/ Robert Galloway
Robert Galloway
Aviation Safety Manager

Safety doesn't slow the job down, but mishaps do.