

INTRODUCTION TO AVIATION RISK MANAGEMENT

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Objective: The objective of a Safety Management System (SMS) is to provide structure to control risk in operations. A formal system of hazard identification and safety risk management is essential in controlling risk to acceptable levels. System Safety is centered on an organized approach to hazard identification and risk management with intent to minimize the effect on property, financial, environmental, human and societal losses.

Significant attention to good practices in the aviation industry has evolved over many years. Continuous improvement in accident rates are being experienced internationally. Participants in System Safety continually challenge the processes, the culture, and the systems to identify weaknesses that can be mitigated toward the greater purpose of mishap prevention.

Description: The System Safety concept is a comprehensive process to analyze system characteristics and engineer solutions to prevent mishaps from occurring. Aviation Safety Management System (SMS) is an approach to managing safety that includes the necessary organizational structures, accountabilities, policies and procedures. The SMS process identifies hazards and control risks, then provides assurance that risk controls are effective. Although we currently do a good job of identifying hazards and controlling risks, we are not realizing the full benefit that a system wide approach provides.

The foundation of SMS consists of four “components,” they are **Policy, Risk Management, Assurance and Safety Promotion**. When fully implemented SMS provides and promotes a Positive Safety Culture. The desired positive Safety Culture is informed, flexible, learning, just and a reporting culture that captures the operational knowledge and experience of the employees. The end result of this cultural shift is to achieve the status of a High Reliability Organization (HRO). **

Following your review of the stated Objective and Description of System Safety, you probably have questions on how to best utilize the Guide, as well as how this fits into “the big picture”. First the big picture; the agencies started looking into System Safety in 2005. The findings were positive and in 2006 the BLM and USFS partnered in their work on Aviation Safety Assessments. The first assessments were completed by Interagency Subject Matter Experts (SME) in March of 2007 and were made available on line in May of 2007. This third revision, completed in March of 2009, is posted online and has been distributed in hard copy as the **Aviation Risk Management Workbook**. This workbook helps to establish an Interagency Safety Management System that incorporates all four of the SMS components mentioned earlier. Adoption of SMS also brings the agencies into alignment with the minimum aviation safety standards agreed to internationally within guidelines of the International Civil Aviation Organization. (ICAO 9859).

** Weick and Sutcliff, Managing the Unexpected

What are the four “components” that will achieve the SMS goal?

1. **Safety Policy.** We have existing policy in place that supports the foundation of SMS in our aviation safety programs. This policy is reflected in the “Red Book”, Interagency Standards for Fire and Fire Aviation Operations.

2. **Safety Risk Management.** This workbook contains the completed program assessments on Helicopter Operations, Rappel/RADs, External Loads, Aerial Supervision, SEATs, Heavy Airtankers, Infra-Red, EHELL, and Forest Health programs.

3. **Safety Assurance.** Accident Investigation, Program Reviews, Fire Aviation Safety Teams (FAST), Aviation Safety Technical Assistance Teams (STAT), Aviation Safety Assistance Teams (ASAT), and numerous other tools monitor and report the health of our prevention efforts. Currently we are working towards implementation of an Aviation Lessons Learned web site and work towards a “Reporting Culture”.

4. **Safety Promotion.** We have the ability to implement very positive change in this area by creating a positive “Learning Culture”. Communication is the key to success in this component. Training systems are being updated to reflect the principles and procedures being implemented in SMS. Other tools include SAFECOMs, Safety Alerts, Technical Bulletins, Lessons Learned, SAFECOM trending, safety memoranda, Aviation Safety Committees, tailgate sessions and video clips such as the Six Minutes for Safety series.