Safety & Engineering

Safety Management System (SMS)

Prepared for: 2018 Southwest Region

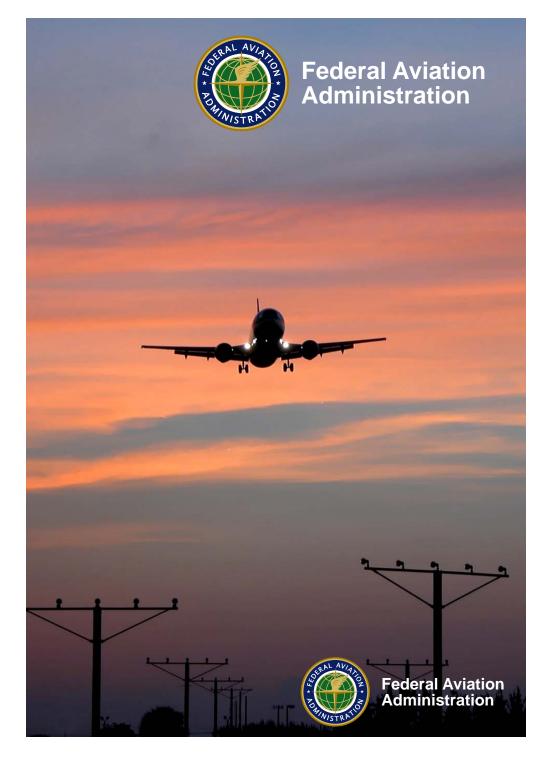
Airport Conference

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ASW - 620

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Objective

- What is SMS?
- External SMS Effort
 - Path to Rulemaking
 - Pilot Studies
 - NPRM & SNPRM
 - Update
 - Voluntary Implementation and AIP Eligibility
- Internal SMS Effort
 - Sponsor Participation
 - Triggers
 - Safety Assessment Process
 - SRM Panels
- What's on the horizon?

SMS

- The formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of safety risk controls. It includes systematic procedures, practices, and policies for the management of safety risk.
 - FAA Order 8000.369B, Safety Management System.
- An integrated collection of processes and procedures that ensures a formalized and proactive approach to system safety through risk management.
 - SMS for Certificated Airports; Supplemental Notice of Proposed Rulemaking, 2016.

SMS Components

SRM

Safety Policy

Establishes senior management's commitment to continually improve safety; defines the methods, processes, and organizational structure needed to meet

Safety Risk Management

safety goals

Determines the need for, Safety Promotion and adequacy of, new or revised risk controls based on the assessment of acceptable risk

Safety Assurance

effectiveness of implemented risk control strategies; supports the identification of new hazards

Safety Promotion

communication, and other actions to create a positive safety culture within all levels of the workforce



External and Internal Efforts

External SMS Efforts – Part 139 Rulemaking

- Proposed requirement to develop and maintain SMS at part 139 airports.
- To be implemented through rulemaking to part 139.
- Currently voluntary.

Internal SMS Efforts – FAA Airports (ARP)

- Integrating SMS and Safety Risk Management (SRM) components into ARP's organization, processes and programs that impact safety.
 - Guided by FAA SMS.
 - Implemented through internal FAA Orders and guidance.



Path to SMS Rulemaking

- Published initial AC 150/5200-37 in 2007.
- Conducted 3 rounds of pilot studies.
 - Initial study with more than 30 participating airports.
 - Proof of Concept with 3 airports of varying size and operations.
 - Implementation study with 15 airports participating.
- Participated in 5 SMS-related industry research projects.



SMS Initial Pilot Study Findings

- Part 139 in and of itself does not constitute an SMS; but many existing Part 139 requirements can serve as building blocks for SMS.
- Airports found substantial benefit to SMS application in the non-movement area.
- Some airports saw benefits like reduced insurance costs and improvements in operational safety.
- Airports are excited about benefits of SMS but worried about implementation and operation costs.
 - Smaller certificated airports needed more time to develop SMS.

NPRM

Published original Notice of Proposed Rulemaking (NPRM) in October 2010.

- Extended comment period through July 2011.
- Published Technical Report on Pilot Studies.
- Responded to Clarifying Questions on NPRM.
- Updated AC guidance material.

Received many thoughtful comments.

- Evaluation of public comments led FAA to reevaluate approach/applicability.
- Changes triggered need to get public comment.

SNPRM

- Supplemental Notice of Proposed Rulemaking (SNPRM) published July 2016.
 - Comment period closed on September 12, 2016.
- Revised supporting material.
 - Updated cost-benefit estimates in Regulatory Evaluation.
 - Revised draft
 AC 150/5200-37A.



Advisory Circular

Subject: Safety Management Systems for Airports Date: DRAFT Initiated by: AAS-300 AC No: 150/5200-37A

Purpose. This Advisory Circular (AC) presents the concepts of a Safety Management System (SM and provides detailed guidance about developing and implementing SMS on an airport.

An SMS enhances safety, ensures compliance with applicable regulatory standards, and can be integrated into all aspects of airport operations, including business and management practices. This AC explains how SMS will help airport develop an explicit pro-active, and engaged process for identifying and quantifying potential hazards and risks and for managing them in a systematically coherent, logical, and managing the systematically coherent, logical, and managing the systematically coherent, logical, and

2. Applicability. This AC applies to all civil airports, when adapted to the size, activity level, staff level, and resources of each facility. In addition, this AC estabilities guidelines for SMS implementation for and by airport operations at airports estificated under title 14 Code of Federal Regulations (CFR) part 139. Certification of Airports (part 139). Part 139 airports should refer to Innert Federal Register Notice number J for more information on SMS regulators.

The AC focuses on airport operational safety in the airfield environment. However, airport operators ca apply these principals anywhere on their airports (including the landside environment) to address safety concerns.

3. Background. The United States is a member state of the International Civil Aviation Organization (ICAO). In November 2005, ICAO amended Amore 14, Volume I. (Aerochrome Design and Operations), to require mamber states to have certificated international sirports establish SMS. In 2013, ICAO developes A amore 19, Suffery Minusgement, to transfer or displicate the original safety provisions contained in 6 different America, including Amore 14. In doing to, ICAO signals the important role government play in managing safety at the accountry level in coordination with individual service providers like sirports. The Federal Aviation Administration (FAA) supports harmonization with international standard and has worked to make FAA studies as fastly regulations consistent with ICAO students of the ICAO student in a way that complements existing part 19 a import safety requirement and students of ICAO students in a way that complements existing part 19 a import safety requirement and students.

SMS encompasses the activities of every level of airport personnel – from the executive level to those who perform the many daily, routine tasks required to operate the airport. Applying a systematic, proactive, and well-defined safety program (as is inherent in an SMS) allows airports to strike a realisti and efficient balance between safety and service.

The forecast growth in air transportation requires new measures and greater effort from all aviation service providers – including airport operators – to achieve continuing improvements to aviation safety

Differences Between SNPRM and NPRM

	SNPRM	NPRM
Applicability	Large, Medium, and Small hub airports; certificated airports with > 100,000 total annual operations; and international airports (268 total for 98% of enplanements)	All Part 139 airports (544 total for 99.7% of enplanements)
Implementation Plan and SMS Manual	12 and 24 months	6 and 12 months
Training	Specialized training for employees with responsibilities under SMS Hazard awareness briefing for all individuals accessing movement and non-movement areas	SMS training required for all employees
Definitions	Revised definitions of "accountable executive" and "hazard" to better align with part 121 SMS final rule and to address airport concerns.	
Pools for Accident/ Incident Data	Original NTSB and OSHA accident data Additional NTSB accident data FAA Accident and Incident Database (AIDS) Aviation Safety Reporting System (ASRS) Runway Incursion Database National Wildlife Strike Database	NTSB and OSHA accident data



Rulemaking Update

- DOT rulemakings are being evaluated in accordance with Executive Orders 13771 and 13777.
 - The schedules for many ongoing rulemakings are still to be determined.

https://www.transportation.gov/regulations/report-on-significant-rulemakings

Voluntary Implementation

- Encouraging voluntary implementation.
- Interested airports should contact FAA HQ for more information.
- Guidance is available:
 - Draft AC 5200-37A (dated 11/10/16) is most up-todate FAA guidance.
 - Airport Cooperative Research Program (ACRP)
 Reports available.

AIP Eligibility

- AIP Handbook (Order 5100-38D) provides information regarding eligibility.
 - SMS Manual and Implementation Plan development.
 - SMS Software (with caveats).
- Computer hardware is NOT eligible.
- SRM Panels (led by the airport sponsor) are NOT eligible.

Sponsor Participation in ARP SMS

The airport sponsor plays a pivotal role.

 Provide information to support the SRM Safety Assessment.

Airport sponsor participation includes:

- Understand actions that trigger SRM.
- Notify FAA early in project cycle.
- Provide necessary documents.
- Participate in the SRM process for their projects.
- Participate in SRM panels as SMEs.
- Sign the final SRM Safety Assessment document.
- Implement the outcome of SRM panels.



Triggering Actions

SRM Applicability

- Submittal of new or revised Airport Layout Plans (ALPs).
- Airspace determinations for Construction Safety and Phasing Plans (CSPP).
 - IAW JO Order 7400.2
- Airspace determinations for non-construction airport changes.
 - Submitted by FAA Form 7480-1
- Part 150 noise compatibility programs.
- Modification of Standards.
- New and updated airport planning, design, or construction standards.

SRM Safety Assessment Process

The Safety Assessment Process

- Begins when a pending project, or action, is identified.
- Continues through the SRM panel (if needed).
- Ends with final signatures on the completed SAS form.

Steps

- Initiate the Safety Assessment Screening (SAS) form.
- Prepare a Proposal Summary.
- Determine if an SRM panel is required.
- Prepare for the SRM panel.
- Conduct the SRM panel meeting.
- Obtain final signatures on the completed SAS form.

SRM Safety Assessment Process

Safety Assessment Screening (SAS)

- SAS is a set of forms that document the Safety Assessment process.
- Living documents that can be revised.

Project Manager

 Begins completing the SAS as soon as a project or SRM triggering action is identified.

Objective

Decide if an SRM panel will be required.

When is a SRM Panel Convened?

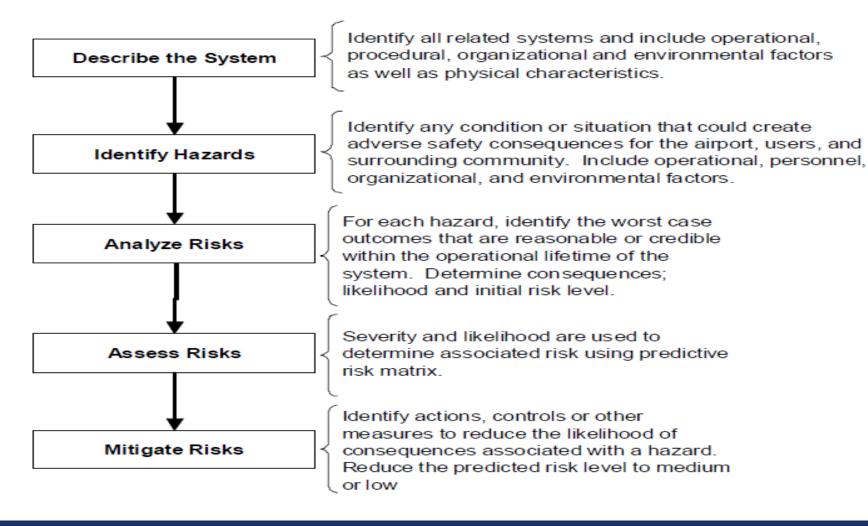
- If the SAS process indicates further review is needed and in-depth examination of hazards is required.
 - A significant impact on aircraft operations, such as:
 - Displaced thresholds
 - Declared distances
 - Taxiway entrance changes



SRM Panels

- Begin planning and scheduling as early as possible; not to delay approval or determination.
- Although Order 5200.11 requires a panel if there is an objection from the OE/AAA review.
 - There is no requirement to delay panel formation until after the airspace comments are registered.
- The key is the consideration and selection of SRM panel members.

Five Steps of SRM



What's on the horizon?

External

- Continue to work on rulemaking keep checking DOT website for updates.
- Promoting voluntary implementation.

Internal

- Update Order 5200.11
- Update SAS forms

Reference Guides

Internal

- FAA Order 5200.11, FAA Airports (ARP) Safety Management System (SMS).
- FAA Order 8000.369B, Safety Management System.
- FAA Office of Airports Safety Management System;
 Desk Reference.
- ARP SOP 4.00, Standard Operating Procedure (SOP); Safety Risk Management (SRM) Under the FAA Office of Airports Safety Management System (SMS).

Reference Guides

External

- AC 150/5200-37A (DRAFT), Safety Management Systems for Airports.
- SMS for Certificated Airports; Notice of Proposed Rulemaking.
- SMS for Certificated Airports; Supplemental Notice of Proposed Rules.

Website

https://www.faa.gov/airports/airport_safety/safety_m anagement_systems/

Questions?



