

# Safety & Engineering

## Safety Management System (SMS)

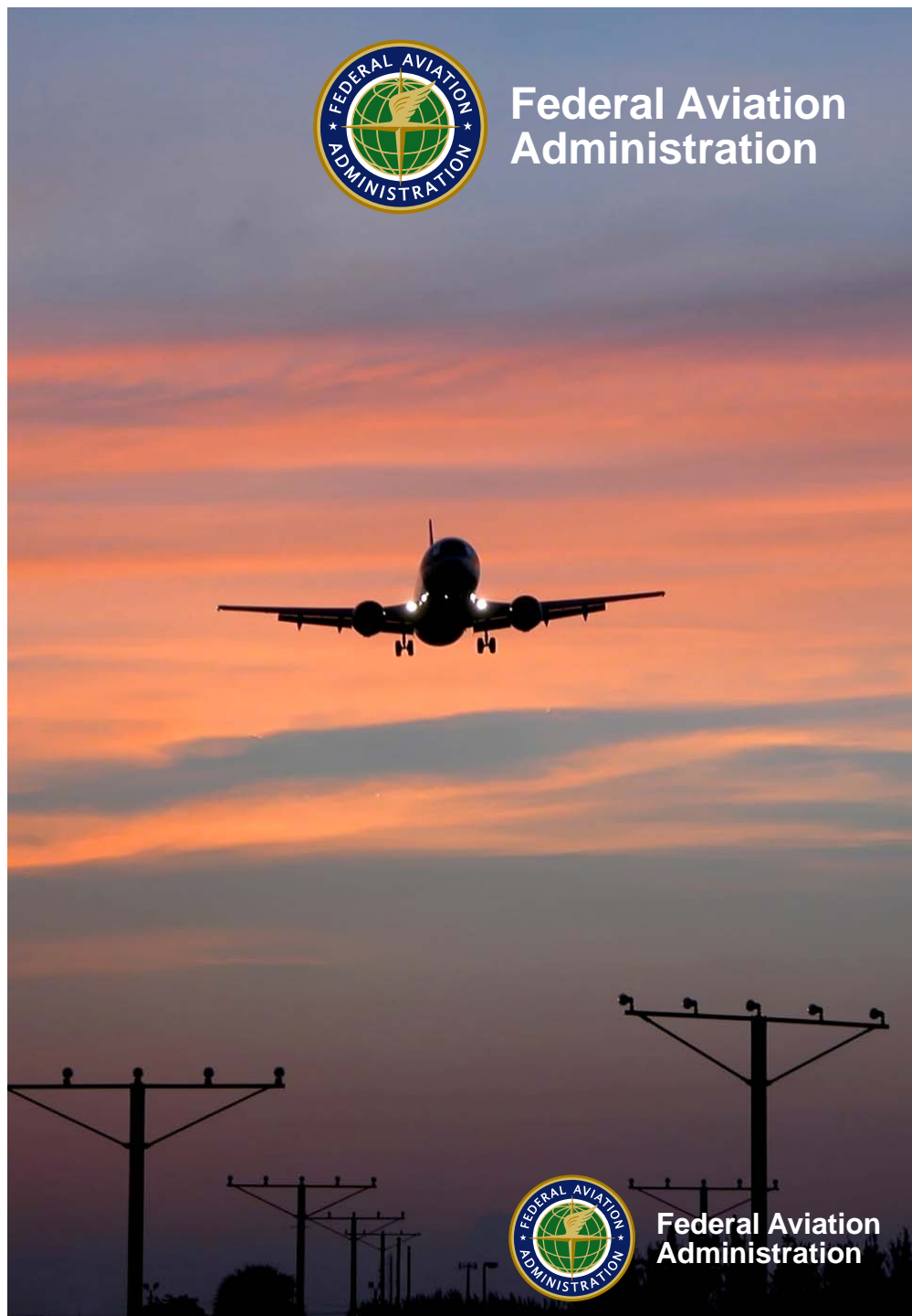
Prepared for: 2018 Southwest Region Airport Conference

Presented by: Eric Swann  
Regional SMS/NAS  
Integration Specialist  
ASW – 620

Date: January 31, 2018



Federal Aviation  
Administration



Federal Aviation  
Administration

# 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

## Safety Policy

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

## Safety Assurance

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



## Safety Risk Management

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

## Safety Promotion

Includes training, 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

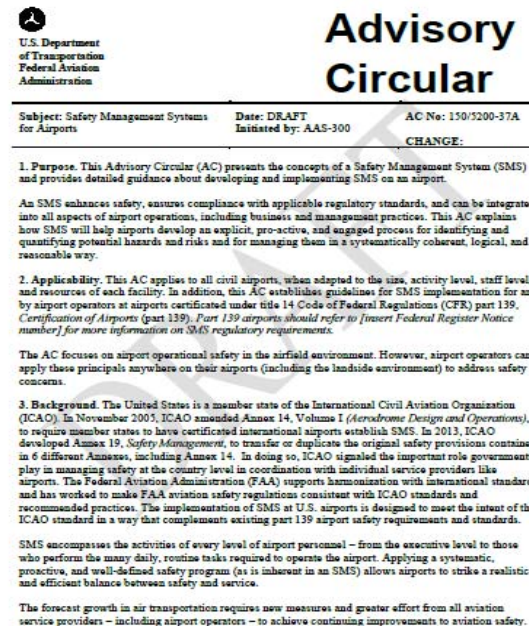
- **Published original Notice of Proposed Rulemaking (NPRM) in October 2010.**
  - Extended comment period through July 2011.
  - Published Technical Report on Pilot Studies.
  - Responded to Clarifying Questions on NPRM.
  - Updated AC guidance material.
- **Received many thoughtful comments.**
  - 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.



# 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-to-date 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

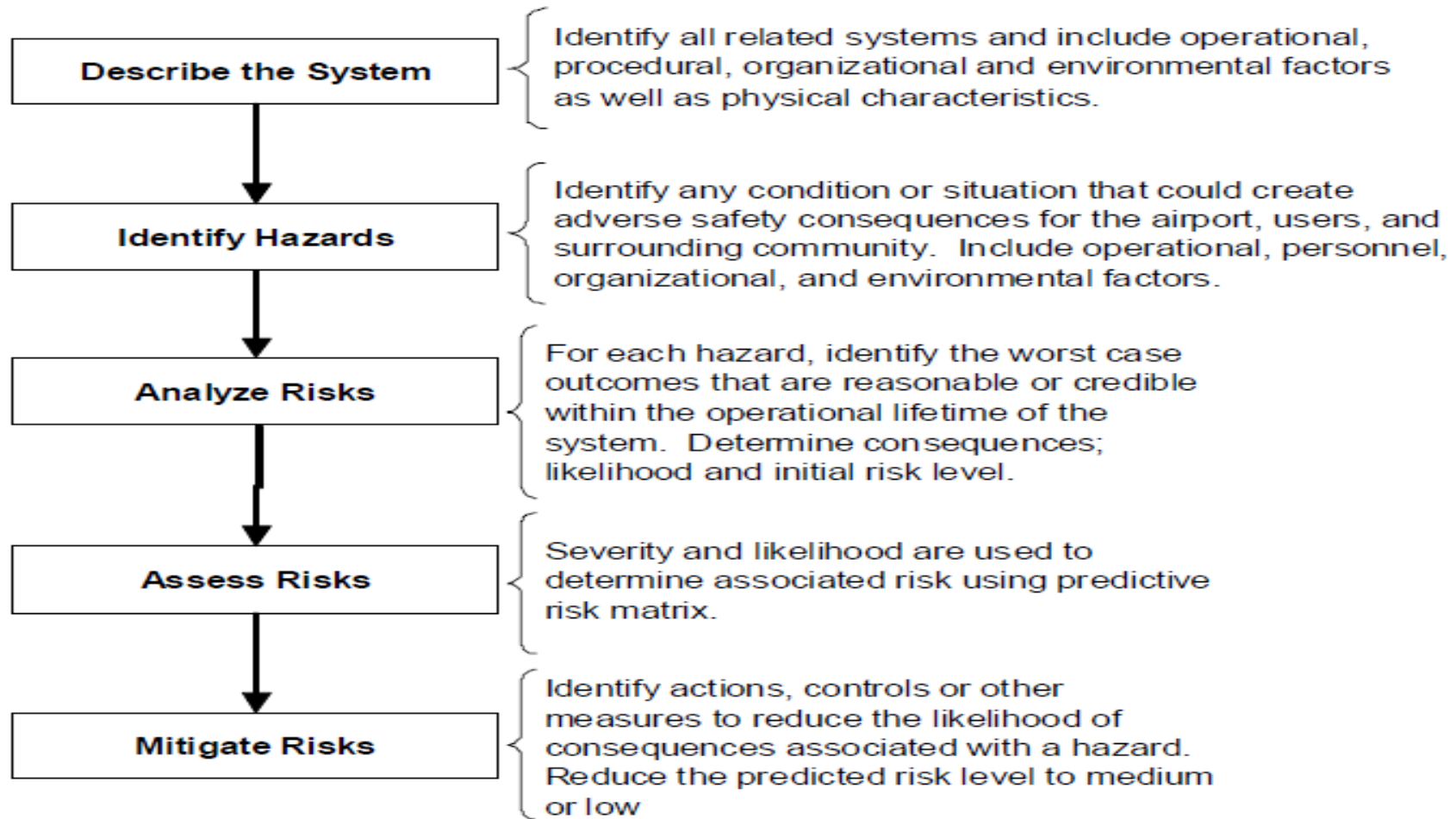


# SRM Panels

- **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\\_management\\_systems/](https://www.faa.gov/airports/airport_safety/safety_management_systems/)



# Questions?



Federal Aviation  
Administration