



City of San Antonio  
Aviation Department

SAN ANTONIO  
AIRPORT SYSTEM



# SMS Round Table, Pilot Program #3

## FAA Headquarters, Washington D.C.

### November 2, 2011

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**John Chase**  
SMS, Manager





# Agenda



- ✧ San Antonio Airport System (SAAS) SMS Manual
- ✧ Accomplishments
- ✧ Updates to Data Collection Processes and Systems
- ✧ Trends Discovered During the Project
- ✧ Key Findings
- ✧ Program or Task Difficulties
- ✧ Recommendations to FAA for NPRM
- ✧ Deliverables



# SMS Manual



## **San Antonio Airport System (SAAS) Includes San Antonio International Airport and Stinson Municipal Airport**

- ✧ SMS Program is based on a SAAS decision that it will encompass airside and landside components
  - ✧ Original Manual was dated was 30 Apr 2008



## Complete rewrite of SMS Manual



- ✧ Keep in mind that SAAS SMS Program will encompass airside and landside components
- ✧ The SMS Manual was written using the following documents as reference:
  - ✧ SAAS SMS Manual & Program Development Plan, dated Apr 2008
  - ✧ ICAO Doc 9859, dated 2009
  - ✧ FAA SMS Manual Version 1.1, dated May 2004
  - ✧ FAA System Safety Handbook, dated Dec 2000
  - ✧ ACRP – SMS for Airports, Vol 1 and Vol 2, 2008-2009
  - ✧ FAA – AC 150/5200-37 Intro SMS for Airports, Feb 2007
  - ✧ OSHA – 29 CFR Occupational Safety & Health Standards
  - ✧ COSA AD 4.5 – Occupational Safety & Health Policy



## Rewrite of SMS Manual continued



- ✧ The SMS Manual contains the following Chapters and Appendixes
  - ✧ Chapter 1 – Manual Overview
  - ✧ Chapter 2 – Acronyms and Definitions
  - ✧ Chapter 3 – SMS Organization
    - ✧ **AC 150 / 5200 – 27 – Intro to SMS for Airports**
    - ✧ **14CFR119.65 – Reference to Director of Safety qualifications**
  - ✧ Chapter 4 – SAAS SMS Program
    - ✧ **SAAS Original Manual**
    - ✧ **ICAO, FAA, and ACRP**





## Rewrite of SMS Manual continued



- ☆ Chapter 5 – Internal Evaluation Program
  - ✦ AC 120-59A, ICAO and ISO 9001(MGT Element)
- ☆ Chapter 6 – Injury and Illness Prevention
  - ✦ OSHA – Texas,
  - ✦ City of San Antonio (COSA), Administrative Directive 4.5 – Occupational Safety and Health Policy
- ☆ Chapter 7 – Driver’s Safety Program
  - ✦ FAA Part 139 / AC 150/5210-5C
  - ✦ COSA Administrative Directive’s (1.8, 4.8, and 4.79)
- ☆ Chapter 8 – Wildlife Management Program
  - ✦ AC 150/5210



**SAFETY  
MANAGEMENT  
SYSTEM  
MANUAL**



**BOOK 1**

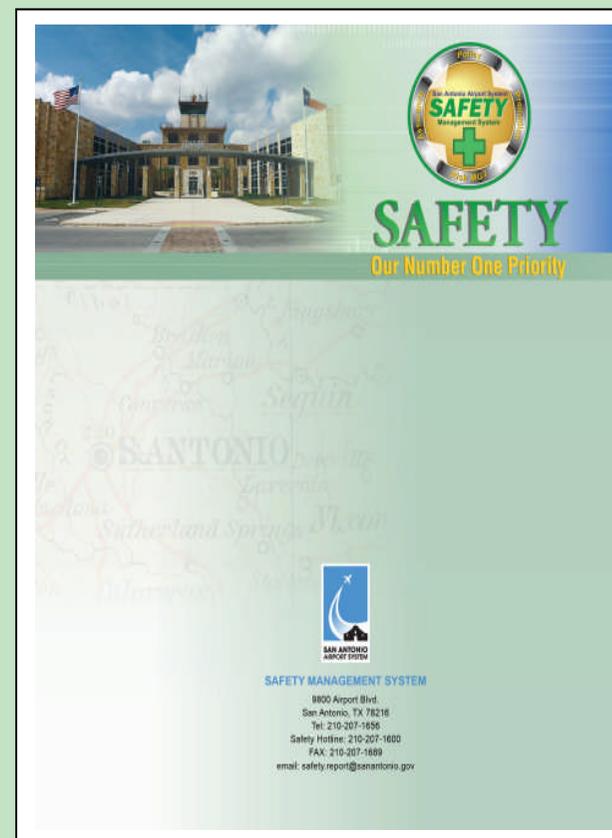
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SAN ANTONIO  
AIRPORT SYSTEM  
AVIATION DEPARTMENT**



## Rewrite of SMS Manual continued



- ☆ Chapter 9 – Fire Safety and Evacuation Plan
  - ✦ **IFC, NFPA and OSHA requirements**
- ☆ Chapters 10 – 15 – Reserved for future additions
- ☆ Appendix A thru H – Support documents / program procedures
  - ✦ **A – SMS GAP Analysis**
  - ✦ **B – SAAS Airfield Drivers Handbook**
  - ✦ **C – COSA AD's**
  - ✦ **D – Fire Evacuation Routes**
  - ✦ **E – Bloodborne Pathogens Exposure Control Plan**
  - ✦ **F – Respiratory Protection Program**
  - ✦ **G – Vehicle Accident Review Committee Procedures**
  - ✦ **H – Wildlife Assessment Plan**





Accomp

Figure 3-5 – Executive Team Support

**SAN ANTONIO AIRPORT SYSTEM**

01 Jul 2010

Executive Team



01 Jul 2010

Executive Team

TO: All Aviation Department Employees

Subject: Executive Team support for Safety Management System (SMS)

The Executive Team of San Antonio Airport System is committed to the Safety Management System that we are currently implementing. It is not only the right thing to do; it is good business as well.

The Executive Team recognizes that people will make mistakes. However, we can and should learn from those situations in order not to repeat our mistakes. In accordance with the San Antonio Airport System's non-reprisal policy, no disciplinary action will be taken against any employee for reporting a safety hazard or concern.

The Executive Team supports the San Antonio Airport System's Safety Policy and Objectives as well as the Safety Management System program, and will serve on various safety committees and groups. The Executive Team has reviewed the Safety Policy and Objectives which have been published under the Safety Management System.



# Accomplishments continued





# Accomplishments continued



Members	Voting Member	Non-Voting Member
SMS Manager (Chairs the Committee)	X	
Safety Specialist		O
Wildlife Manager		O
Operations Manager	X	
Maintenance Tenant Representative	X	
Corporate Tenant Representative	X	
Facilities Manager	X	
Stinson Airport Manager	X	
Properties Manager	X	
Airfield Facilities Manager	X	
Planning & Development Manager	X	



Aviation Director  
(Accountable Executive)

SMS Executive Committee



## Executive Committee

Members	Voting Member	Non-Voting Member
Aviation Director (Accountable Executive)	X	
Assistant Aviation Director – Operations (Responsible Executive)	X	
Assistant Aviation Director - Finance	X	
Assistant Aviation Director – P&D / Construction	X	
SMS Manager		O
Safety Specialist		O
Wildlife Manager		O
Operations Manager		O
Maintenance Tenant Representative		O
Corporate Tenant Representative		O
Facilities Manager		O
Stinson Airport Manager		O
Properties Manager		O
Airfield Facilities Manager		O
Planning & Development Manager		O



# Accomplishments continued



**WANTED**

LUG NUT THE KID

NUBBINS BOLT

ZIP TAG ZAPATA

FOD COSTS \$4 BILLION IN DAMAGE ANNUALLY.

**JOIN THE FOD POSSE**

**DON'T FEED THE ENGINES**

**FOD IS EVERYBODY'S PROBLEM**

**FOD NIGHTMARE**

**PUT FOD IN IT'S PLACE**

**WANTED**

**BOLTED TOGETHER AGAINST FOD**



**CITY OF SAN ANTONIO**

<b>Administrative Directive</b>	<b>AD 4.5 City of San Antonio Safety Policy</b>
<b>Procedural Guidelines</b>	Outlines procedures related to Workplace Safety
<b>Department/Division</b>	Human Resources Department- Risk Management Division
<b>Effective Date</b>	September 26, 2011
<b>Project Manager</b>	Risk Management Safety Manager



**Purpose**

This Administrative Directive will serve as the safety policy to foster an understanding of safe work practices for the organization.

**Policy**

It is the policy of the City to ensure the safety of its employees in the workplace to the extent that the attached Consolidated Occupational Safety Manual and additional departmental practices are covered with employees and enforced.

**Policy Applies To**

<input checked="" type="checkbox"/> Uniformed Employees Under Collective Bargaining Agreements	<input checked="" type="checkbox"/> Current Temporary Employees
<input checked="" type="checkbox"/> Current Full-Time Employees	<input checked="" type="checkbox"/> Current Volunteers
<input checked="" type="checkbox"/> Current Part-Time Employees	<input checked="" type="checkbox"/> Current Grant-Funded Employees
<input checked="" type="checkbox"/> Current Paid and Unpaid Interns	<input checked="" type="checkbox"/> Police and Fire Academy Trainees

**Policy Guidelines**

The attached City of San Antonio Consolidated Occupational Safety Manual shall serve as the official procedural guide for development and dissemination of information regarding safety practices and procedures.

**Roles & Responsibilities**

Functional responsibilities for the Risk Management Division and City employees are outlined within the Consolidated Occupational Safety Manual, Chapter 1, section 1.3 and throughout the manual specifically related to individual operational procedures.



# Trends Discovered during the Project



## 1. SRA Risk Matrix

- ☆ Original risk matrix completed under Phase 1 Pilot Study Program
- ☆ Revised Risk Assessment Matrix

### SAAS Risk Matrix

Consequences		Risk Assessment Matrix									
People	Assets	Consequence				Likelihood	Severity				
		People	Assets	Environment	Reputation		5 Negligible	4 Minor	3 Moderate	2 Major	1 Catastrophic
No Injury or Health Effects	No Damage	No Injury or Health Effects	No Damage	No Effects	No Impact	A Frequent (Has happened more than five times at airport)	L5	M13	H18	H21	H25
Minor Inquiry or Health Effects	Minor Damage	Minor Inquiry or Health Effects	Minor Damage	Minor Effects	Minor Impact	B Probable (Has happened more than once at airport or in industry)	L4	M12	H17	H20	H24
Moderate Injury or Health Effects	Moderate Damage	Moderate Injury or Health Effects	Moderate Damage	Moderate Effects	Moderate Impact	C Remote (Has happened once at airport or once in industry)	L3	L8	M14	H19	H23
Major Injury or *PTD	Major Damage	Major Injury or *PTD	Major Damage	Major Effects	Major Impact	D Extremely Remote (Heard of in industry)	L2	L7	L10	M15	H22
Fatalities	Catastrophic Damage	Fatalities	Catastrophic Damage	Catastrophic Effects	Catastrophic Impact	E Extremely Probable (Never heard of in industry)	L1	L6	L9	L11	M16

\*PTD = Perm  
\*PTD = Permanent Total Disability

■ Low Risk: Acceptable Risk   
 ■ Medium Risk: Acceptable Risk   
 ■ High Risk: Unacceptable Risk



# Trends Discovered during the Project



## 1. SRA Risk Matrix continued

☆ Wide variety of risk matrices in industry (airport, FAA, airlines)

		Catastrophic	Hazardous	Major	Minor	Negligible
Frequency	Frequent	A	A	B	B	C
	Occasional	A	B	B	C	D
	Remote	B	B	C	C	D
	Improbable	B	C	C	D	E
	Extremely Improbable	C	D	D	E	E

Extremely High Risk **A**    High Risk **B**    Moderate Risk **C**    Minor Risk **D**    Negligible Risk **E**

**Acceptable:** No mitigation action needs to be taken, but it needs to be monitored by the responsible department. (Levels 1– 4; D-E)

**Undesirable:** Living with the risk in order to have certain benefits, with the understanding that the risk is being mitigated. (Levels 5 – 10; Low B-C)

**Unacceptable:** The hazard must be mitigated immediately until the risk is reduced to the *Undesirable* level. (Levels 11–25; A-Medium B)



## Trends Discovered during the Project



### 2) Clarification of Terms

- ★ SRM vs SRA
  - ✦ SRA is a process versus everyday management of risk (SRM)
- ★ SRMD vs SRAD
  - ✦ Documentation of the SRA process and recommendations / Mitigations
- ★ Definitions for Severity and Likelihood
  - ✦ Need to be flexible and should be aligned with the requirements of your airport SMS process



## Updates to Data Collection Processes and Systems



- ✧ Purchased SMS Package from Intelelex
  - ✧ Developing customized forms for SMS for the Airport
  - ✧ Customized for the City as well as the Airport's accident investigation program
  - ✧ Rollout of the software by 1<sup>st</sup> Quarter FY-2012
  - ✧ Full implementation by mid-2012
  - ✧ SMS Package consists of 19 Modules (just to name a few):
    - ✧ Safety Incident Reporting
    - ✧ Safety Hazards and Risk Assessment,
    - ✧ Audits Management / Non conformance
    - ✧ Document Control
    - ✧ Records Management
    - ✧ Training Management



## Key Findings



### 1. Audit

- ☆ Cannot analyze data until you have a reasonable amount of data to review; at a minimum a year's worth of data should be collected
- ☆ However, can audit against your SMS Manual, processes and procedures already in place

### 2. SRA Schedules

- ☆ Beneficial to split the SRAs into two days
- ☆ Facilitator can prepare documentation for second session, and can be more efficient



## Program or Task Difficulties



### 1. FAA Participation in SRAs, for airport-sponsored assessments

- ☆ FAA Order 5200.11, Chapter 7, Para 7-7. d - outlines that Regional Office shall participate in Airport sponsored SRM (SRA)
  - ✦ FAA should participate in airport-sponsored SRAs
  - ✦ FAA (local ATCT) did participate in SRA
  - ✦ Observations?

### 2. IT Issues

- ☆ FAA document size restrictions for file transfer
- ☆ Recommend some type of File Transfer Protocol



## Program or Task Difficulties continued



### 3. Misuse of SRA process

- ☆ It has been observed that some come to the SRA with preconceived notion of the outcome
- ☆ Some tailored the SRA to reach a desired outcome

### 4. Two SRAs accomplished for same issue

- ☆ Airport conducts an SRA for enhancement of visibility on the AOA
- ☆ Tenant conducts an SRA for enhancement of visibility on the AOA – because they did not like the Airport SRA outcome
- ☆ Who trumps whom?



## Program or Task Difficulties continued



5. For a smaller airport this program
  - ✧ Is scaleable
  - ✧ Can be done in house or
  - ✧ Can hire a consultant or contractor to assist or complete



## Recommendations to FAA for NPRM



1. Assess findings from all pilot programs to make a qualified decision, including the current pilot study
2. Ensure increased participation from the FAA for SRAs.
3. Standardization of Risk Matrix size
  1. Five by five, or
  2. Four by four
4. FAA Accept the SMS Manual and not approve



## Deliverables



- ✧ Program Task Status
  - ✧ All tasks and deliverables have been completed
- ✧ Hard Copies due (NLT 13 Nov 2011)
  - ✧ Will be delivered to FAA today



**SAFETY**