

FAA Airport Safety & Standards Initiatives

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Federal Aviation
Administration



Airport Safety & Standards Initiatives

- FAA Call to Action - Reducing Runway Incursions
 - Enhanced Airport Markings
 - New Airfield Lighting Systems and Sources
- Winter Ops Advisory Circular
- Supertugs
- Runway Safety Areas (RSAs) – Public Law
 - Engineered Material Arresting Systems (EMAS)
- Wildlife Hazard Mitigation
- Safety Management Systems (SMS)
- FAA Airport Technology R&D



FAA Call to Action – Reducing Runway Incursions

Surface Operations Risk Factors



Minimal separation and rapid pace



High-speed operations with little margin for error



Complex environment



Low visibility in poor weather

Combination of Factors Minimizes Safety Margin

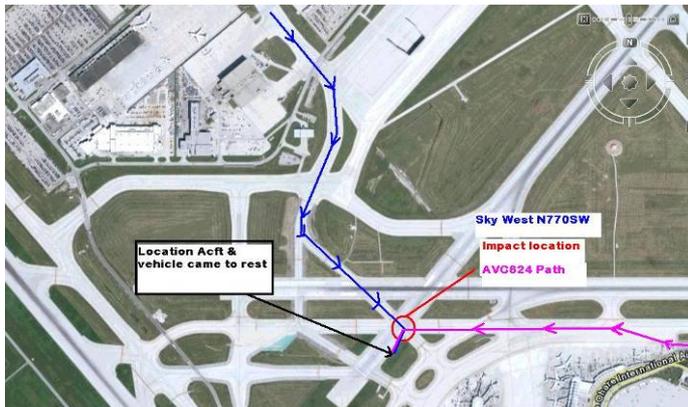
Runway Incursion Reduction Goal

- Reduce Incursions by 10% over five years (2013)
- Monthly rate is 15.4, which is around 185 for the year, below the 194 goal.

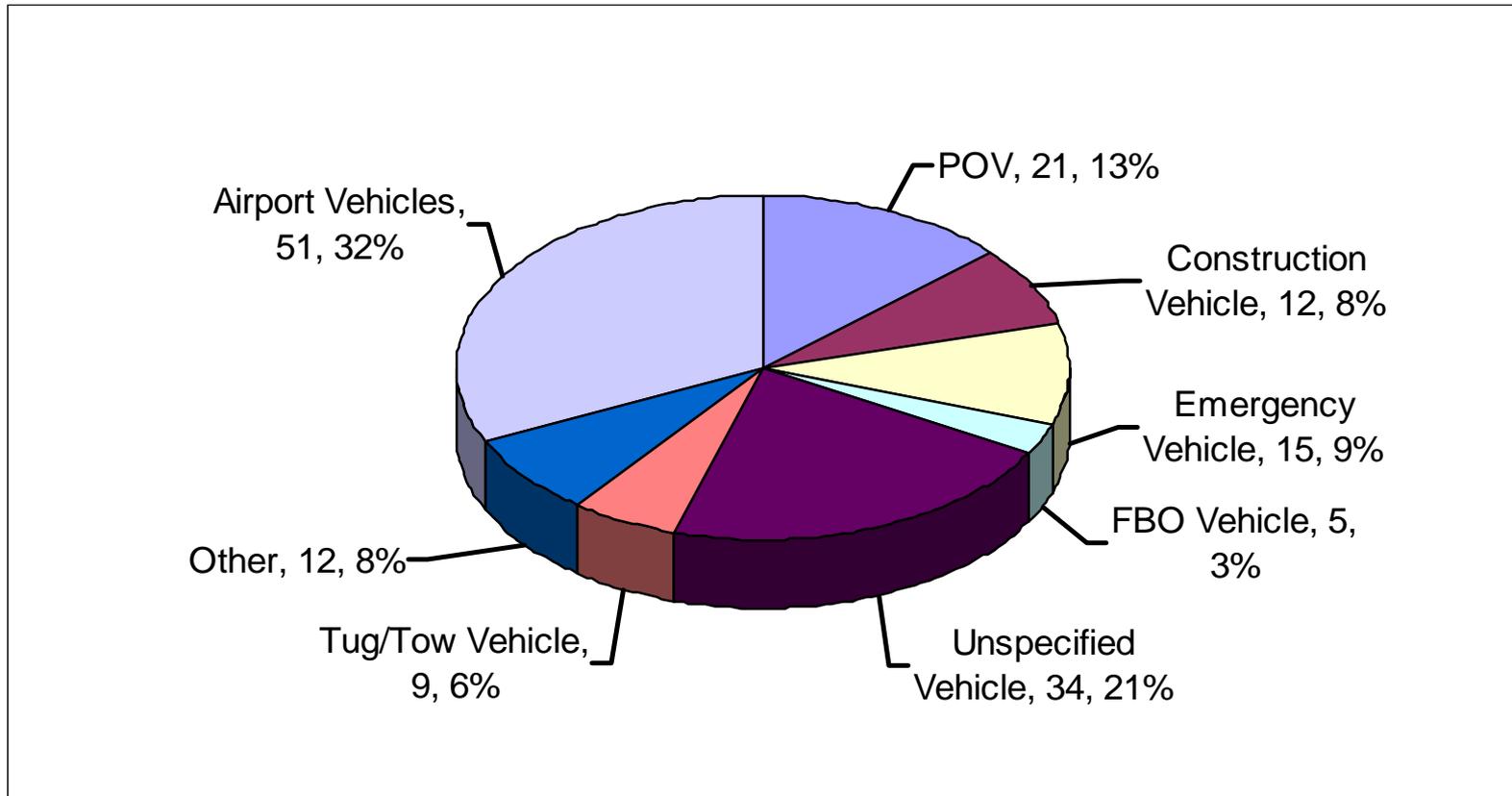


Airports by Number of FY08 V/PDs

6	5	4	3	2		
MRI	DFW	ATL	ANE	ACY	CNO	PAO
	ORD	DWH	APC	ADS	CNW	PDK
		SFO	CPR	ANC	DEN	POC
			DTN	APA	DTW	PRC
			FAI	BDL	ESN	PSC
			MIC	BET	FXE	SBA
			PHL	BIS	HPN	SNS
			YNG	BOS	IDA	SPI
				CHS	JFK	TPA
					JLN	VNY



V/PDs by Types of Vehicles



Airport Markings

Enhanced Taxiway Centerline

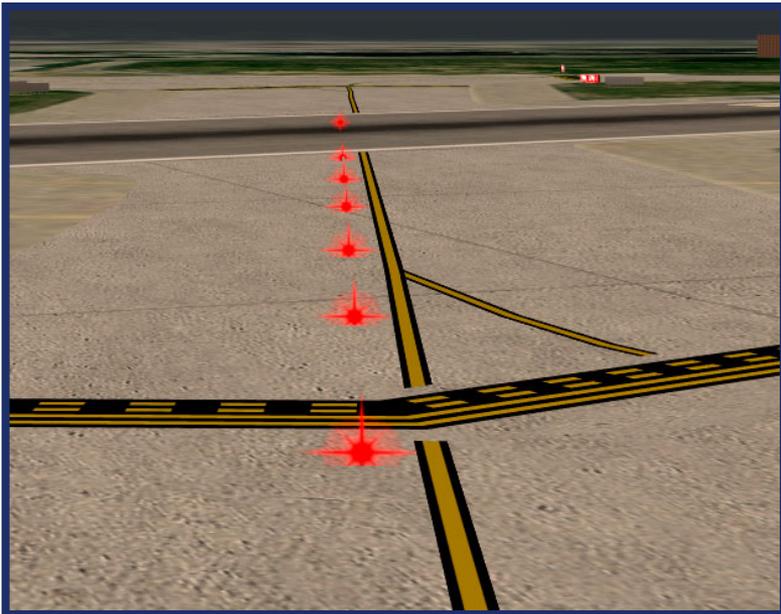


The enhanced taxiway centerline marking begins 150 feet prior to holding position markings and must be installed at all holding positions for runways on the entire airport.

http://www.faa.gov/airports_airtraffic/airports/airport_safety/signs_marking/

Runway Status Lights (RWSL)

RWSL to be installed at 22 ASDE-X airports

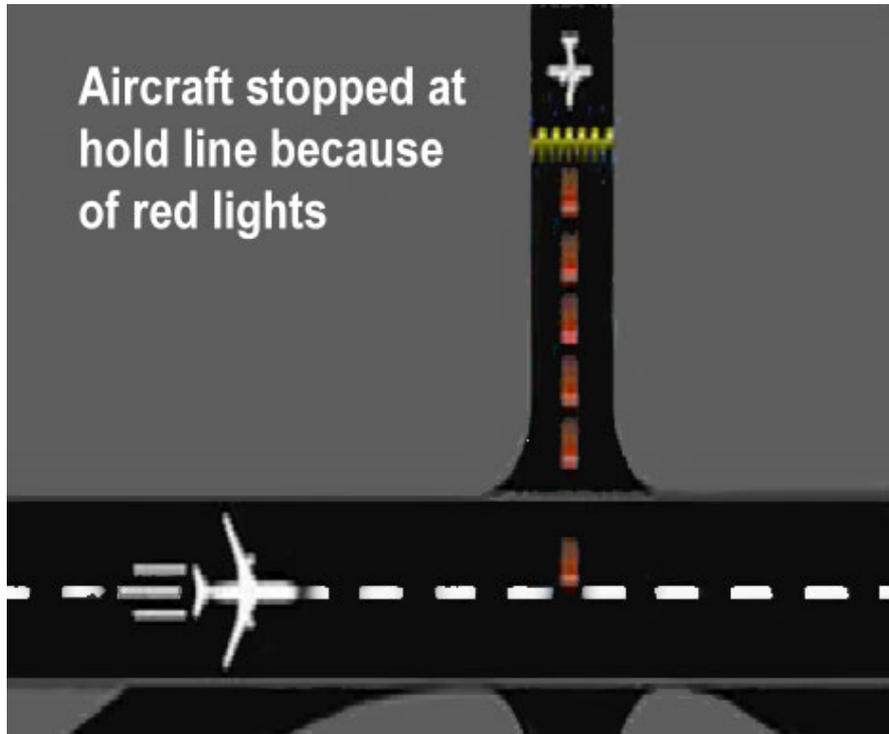


Runway Entrance Lights (RELs)

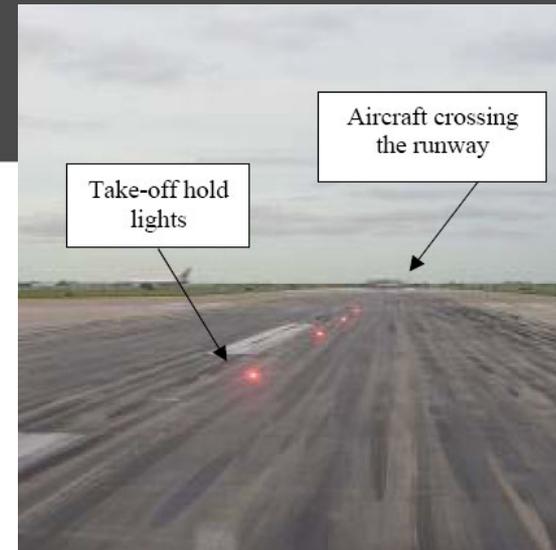


Takeoff Hold Lights (THLs)

RWSL – Runway Entrance Lights (RELs)



RWSL – Take-Off Hold Lights (THLs)



Winter Ops



Updated Winter Operations Advisory Circular 150/5200-30C

- **1 Nil PIREP report
Closes the runway**
- **2 Poor PIREP reports
require action by
airport**
- **Potassium Acetate
Shortage**
- **Pavement excursions –
more than 20 this yr**



Cert Alert for Supertug Vehicles



RSA Improvement program & Public Law 109-115

- Started 2000 to improve RSAs at certificated airports to standard (1,000 ft.) or to the extent practicable. (\$1.2B)
- Started with 454 RSAs
- 327 (70%) RSAs are complete
- Remaining by 2015







RSA Improvement Program: Progress



RSA Improvements:

<u>2000 - 2008</u>	<u>2009 - 2015</u>
327	130

GOAL
454

COSTS

2007 - 2015
\$1.2 BILLION

2000 - 2007
\$240 MILLION / yr

EMAS Installations



Baton Rouge Metropolitan Airport, LA



Roanoke Regional Airport, WV



Little Rock Airport, AR



Greater Binghamton Airport, NY

Photos Courtesy
of ESCO

Successful EMAS Capture



Courtesy: ESCO

**EMAS capture of a Boeing 747 at JFK International Airport, NY
January 2005**

Successful EMAS Capture



**EMAS capture of a Falcon 900 at Greenville Downtown Airport,
SC July 17, 2006**

RJ vs. Ford – ORD, October 2008



RJ vs. Ford – ORD, October 2008





Continental 1404 – DEN, Dec 2008



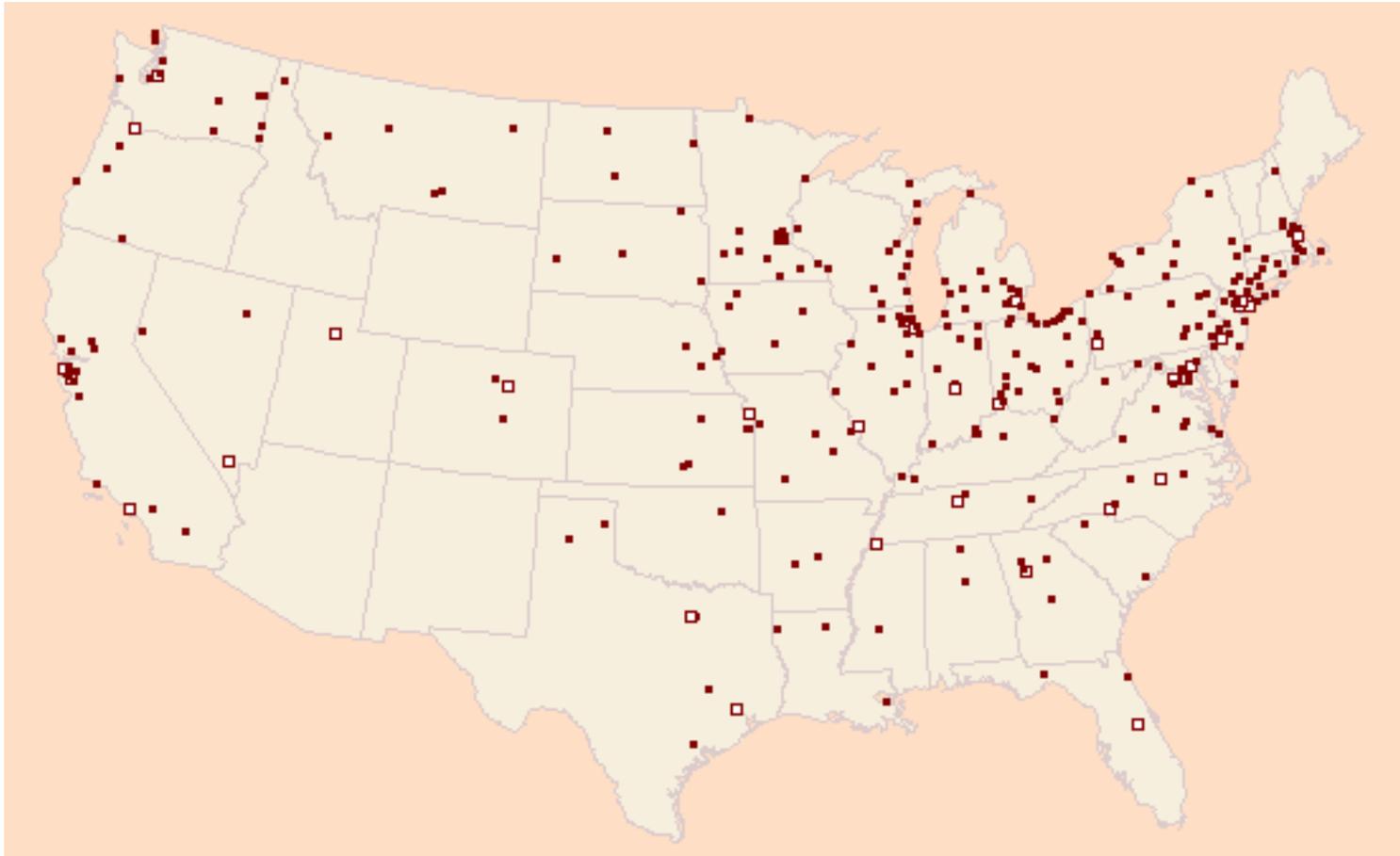
USAIRWAYS Flt 1549 – LGA, Jan 2009



Wildlife Hazard Mitigation



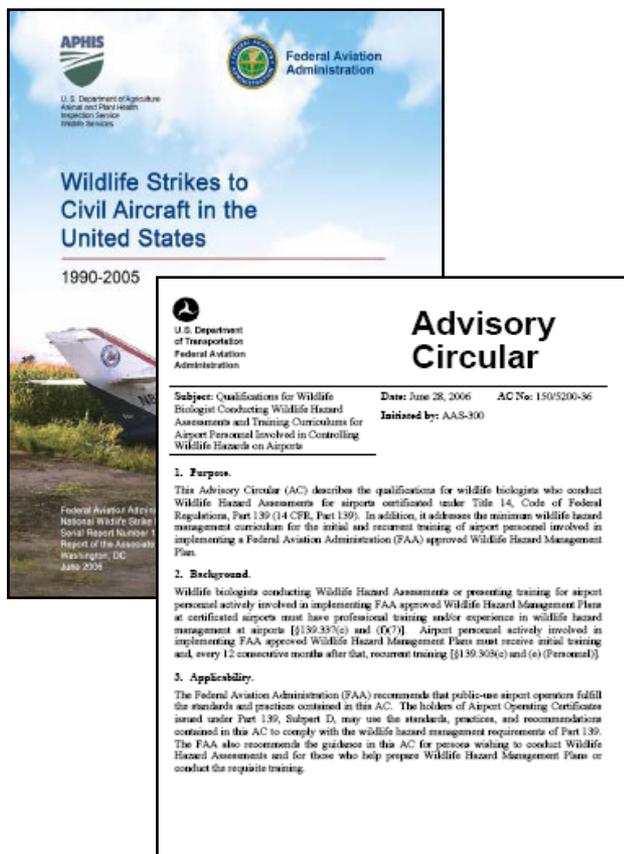
CANADA GOOSE STRIKES, JAN 1990 To: AUG 2008



Number of Wildlife Strikes in US: 1,291

Number of Locations (Airports) Mapped: 357

FAA Wildlife Hazard Mitigation Publications



- **Wildlife Hazard Management at Airports, a Manual for Airport Operators**, (2nd Ed. 2005) (1st ed. 1999 available in English, Spanish, French, Chinese)
- **AC 150/5200-33A Hazard Wildlife Attractants on or Near Airports**, (July 04)
- **AC 150/5200-34A Construction or Establishment of New Landfills Near Public Airports**, (Jan. 06)
- **AC 150/5200-36 Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports**, (June 06)

http://wildlife-mitigation.tc.faa.gov/public_html/index.html

Safety Management System (SMS) Principles



- ICAO required certificated airports to have in operation an SMS by November 24, 2005
- A defined safety policy
- Visible safety architecture
- Scheduled self-inspections
- Dissemination of safety information.

SMS for Airport Operators

Four Pillars of SMS

- Safety Policy
- Safety Risk Management
- Safety Assurance
- Safety Promotion



Safety Management System (SMS) Implementation

- Part 139 Amendment
- New AC for SMS Implementation
- SMS Pilot Programs
- ACRP Research
- Trade group cooperation



SMS Pilot

- **To identify gaps in Part 139 Airport Certification Regulation and ICAO SMS.**
- **To review existing programs and processes that we can use to build SMS on.**
- **Identify how far we have to go to SMS**
- **Use data to develop SMS regulation**
- **Issue Notice of Proposed Rulemaking for SMS for public comment by 2010.**



FAA Airport Technology Research & Development

FAA Technical Center

- \$18 Million in funding per year
- Research Areas:
 - Pavements
 - Planning and design
 - Lighting and marking
 - Rescue and firefighting
 - Wildlife hazard mitigation
 - Runway safety

<http://www.airporttech.tc.faa.gov/>

Airport Cooperative Research Program (ACRP)

- \$10 Million in funding per year
- Over **94** projects underway

<http://www.trb.org/crp/acrp/acrp.asp>

Questions?

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