



## **HELICOPTER SAFETY ADVISORY CONFERENCE**

**October 4, 2012**

**Sheraton North Houston**

**Houston, Texas**

## **MINUTES**

### **INTRODUCTION**

- Chairman Mark Fontenot called the meeting to order at 08:30 and welcomed members and guests.
- Read Antitrust Statement
- Introduction by Attendees

### **HSAC WORK GROUP COMMITTEE REPORTS**

#### **Recommended Practices (RP) / Safety Committee – Terry Kaufman**

- Josh Simar, PHI, presentation on Aviation Fuel Quality Assurance ([attachment #1](#)) and Work Group appreciative of his efforts.
- Seminar on fuel quality and transportation suggested. Gary Tucker will contact Walter Chartrand.
- Discussion on a centralized NOTAM system
  - PHI is currently clearing house for GOM NOTAMS for operators.
- Discussion on tool for Human Factors
- Energetic discussion on mentoring and Short Service Employee (SSE) programs
- Discussion on communicating and legal requirement

#### **Flight Following / ADSB – Terry Gambill**

- Flight Following / ADSB Committee Notes ([attachment #2](#))
- ADS-B outage after Hurricane Isaac
- Frequency Card will be green with black print. Need changes by Thanksgiving
  - Hospital coordinates remove from card?
  - Remove coordinate for AWOS locations
  - Interactive frequency card update
- John Beckman, FAA: Flight Plan
- Super Bowl in New Orleans - Special Procedures



Minutes  
October 4, 2012  
Page 2

### **Technical Committee – Pat Roberts**

- RP – Quality Control in progress ([attachment #3](#))

### **Aerial Observation Committee (AOC) – Cort Andrews**

- Expand on Fatigue Management RP
- Tom Buchner: Safety Statistics ([attachment #4](#))

### **HSAC Committee Reports**

- Treasurer's Report ([attachment #5](#))
  - Email Joe Gross for information on direct deposit
- Vice Chairman's Report
  - Bob Hall introduced Albert Skiba, *OPITO* ([attachment #6](#))

### **Safety – Terry Kaufman**

- Dr. Anthony Ciavarelli, "Assessing Organizational Safety Effectiveness as an Integral Components of a Safety Management System (SMS)" ([attachment #7](#))

### **Government Liaison – Steve Smeltzer**

- Mike Webb, FAA, ([mike.webb@faa.gov](mailto:mike.webb@faa.gov)): Update on Helicopter Instrument Criteria ([attachment #8](#))
- Bob Craig, FAA: HAZMAT- air transport
  - FAA inspects carrier and shipper
  - "If it is on the aircraft, the rules apply."
  - Enforcement is by inspection
    - Records: (1) Training in records. (2) Retained shipping papers – air carrier just retain for one year.
  - Special Permit and Security plans
- Training necessary: "Know what you are doing and train to what you need."
- [hazmat.dot.gov](http://hazmat.dot.gov) for training material
- Training Records, documentation required:
  - Who was taught?
  - What was taught – Awareness, Safety, Function specific, and Security
  - Who did the training? Instructor qualified – reasonable and prudent?
  - When were than training (specific date)
  - Certification: Attest to the fact of training, documentation



Minutes  
October 4, 2012  
Page 3

- ORMD is going away and becoming “Limited Quantity.” There will be a transition period.
- Contacts for questions on HAZMAT:
  - [James.R.Craig@faa.gov](mailto:James.R.Craig@faa.gov) // 832.642.4735
  - [Bill.Streb@faa.gov](mailto:Bill.Streb@faa.gov) // 979.637.7978
  - In Louisiana: David Evans (225) 413-0524 // [david.evans@faa.gov](mailto:david.evans@faa.gov)
  - In Texas: Ryan Pohlke (210) 238-6090
  - In AL or MS: Debra Kennedy (404) 305-6831

#### **Heliport and Airways – Ken Kersker**

- Bob Williams: Update on RP2L
- Dr. Leverton will assist with technical writing

#### **Industry Liaison – Larry Lippert**

- Tim Taylor: FreeFlight Systems
- Toney Randal, Bell Helicopters
  - Polycarbonate windscreen: Bounding structure on the outer edge should be the solution.
  - STC 1<sup>st</sup> quarter of 2013 then production in for the BH407
  - Bowed windscreen will not contact pilot
  - ([attachment #9](#))

#### **ADS-B Program Update – Tim Schroeder, FAA Program Manager** ([attachment #10](#))

- Allan Overbey stepping back to Avionic
- Glenn Meir replacing Allan.

#### **Fish Spotters – Joe Fain; Omega Protein; (337.258.5552); [j\\_c\\_fain@yahoo.com](mailto:j_c_fain@yahoo.com)**

- Concerns that helicopters are not cooperating on altitudes and radio calls.
- Need to enforce RP

<b>Next HSAC Meeting will be January 23<sup>rd</sup> and 24<sup>th</sup>, 2013 – Four Points by Sheraton; 541 Bourbon Street; New Orleans, LA 70130 (800) 535-7891</b>
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# Aviation Fuel Quality Assurance

Implementation of a Standardized  
Method for Identifying Fuel  
Transporter Fill & Expiration Dates

# Standardized Fuel Transporter Fill Date & Expiration Markings

## ➤ Improving Aviation Fuel Quality Assurance

- How can we maintain the same standard of fuel quality that is delivered to the dock while awaiting shipment to or upon receipt at an offshore location?
- What are the weak points in ensuring fuel quality while stored in fuel transporters?
- What steps can we take to implement fuel quality control procedures away from fixed operating heliports or primary control facilities?
- Can we create or enhance existing procedures for marking fuel totes with fill and expiration dates?
- What is our current level of exposure and liability?
- Would implementation of a marking scheme designed to identify the fuel transporter's fill date and fuel expiration date enhance existing quality control procedures by creating awareness for dock and offshore personnel?

# Standardized Fuel Transporter Fill Date & Expiration Markings

## ➤ Background:

### ■ Quality Control

- Helicopter Operators have implemented extensive quality control measures for ensuring the quality of aviation fuel at their operating bases, but have minimum control over fuel tote rotation thus increasing the probability of fuel stagnation or contamination at customer docks and offshore fuel locations.

### ■ Tracking Fuel Transporters

- Current “serialized” or GPS tracking systems do not provide adequate information to assist dock workers and offshore personnel in the proper rotation and distribution of fuel totes.

### ■ Non-Standardized Markings

- Marking schemes, if utilized, vary between Helicopter Operators
- Inconsistency between Helicopter Operators contributes to confusion, non-compliance, and in-efficiencies in proper fuel tote rotation.

### ■ Fuel Contamination

- Filled fuel totes that are allowed to sit for longer than 90-120 days are susceptible to increased accumulation of water or other contaminants and pose an increased risk to dirty fuel making its way into offshore fuel systems and aircraft.

# Standardized Fuel Transporter Fill Date & Expiration Markings

## ➤ Background:

### ■ Improper Rotation

- The last totes to arrive at the dock are typically the first totes shipped due to ease of accessibility for dock workers and the absence of a standardized system to aid in identifying fuel tote fill and expiration dates.
- Fuel totes that have been refilled but remain in the “back of the line” are left to sit for extended periods.
- Fuel totes arriving at offshore locations are placed in the “front of line” in the fuel tote staging area, which means they are the first to be emptied into the fuel system. Unmarked totes with aging fuel remain tucked away in the back of the staging area which significantly increases the chance for contamination.

### ■ Liability & Cost

- Helicopter Operators are ultimately responsible for ensuring the quality of our fuel – both onshore and offshore.
- Due to an absence of adequate and standardized visual markings on our fuel totes, we are faced with the cost of wasted fuel, suspended operations or reduced operational capability due to contaminated offshore fuel systems, as well as the increased potential for an aircraft mishap.

# Standardized Fuel Transporter Fill Date & Expiration Markings

## ➤ Proposal

- GOM Helicopter Operators adopt a standardized system for marking fuel totes to identify the most recent fill and corresponding expiration dates in an effort to improve fuel quality management at customer dock and offshore locations.
- HSAC incorporates this standardized marking proposal, or a version thereof, in an amendment to HSAC RP #2004-02, Revision 1 (Jet Fuel Quality Control Procedures), dated 24 May 2012.



# Standardized Fuel Transporter Fill Date & Expiration Markings



## Part 1 of 2 – Color Chart

1. Printed Color Chart would be distributed to all Customer dock locations and offshore fueling sites.
2. The chart is designed to provide a visual aid to Dock Workers and Offshore Personnel in identifying the last fill date of the fuel totes and priority of fuel tote utilization.
3. The oldest colored tag should be loaded/shipped to offshore fuel locations and used first when transferring to an offshore fuel system.
4. A 12"x12" Color Chart could also be attached to the fuel tote as metal or vinyl decal for use as a quick reference guide.

# Standardized Fuel Tote Fill Date & Expiration Markings

## Part 2 of 2 – Colored Tags

1. 9" x 9" vinyl, colored decals adhered to fuel totes would indicate the safe period for fuel tote use.
2. Fuel inside totes would be restricted to a 90 day period (+/- 15 days) of use. Fuel totes filled prior to the 15<sup>th</sup> of the month would utilize the current month's colored tag (see example #1). Fuel totes filled after the 15<sup>th</sup> of the month would utilize the next month's colored tag (see example #2).
3. Colored tags would also include text with directions to "DO NOT USE" beyond the day and month indicated.

*Example 1 : Fuel tote filled on January 10<sup>th</sup>. Current month's tag color (January) is adhered to the fuel tote.*



*Example 2 : Fuel tote filled on June 21<sup>st</sup>. The next month's colored tag (July) is adhered to the fuel tote.*



# Standardized Fuel Tote Fill Date & Expiration Markings

## ➤ Implementation

- Helicopter Operators would acquire decals through a local vendor. Or, decals could be made “in-house” in accordance with the established design guidelines.
- If acquired through a vendor, each decal would be assigned a part number specific to the monthly color and Helicopter Operator.
- During transporter refills, the old “USE BY” decals would be removed, and a new “USE BY” decal appropriate to the fill date would be adhered to two opposite sides of the tank for easy reference by dock and offshore personnel.



*A decal would be adhered to two sides of the fuel transporter. Forklift side is preferable to improve awareness of loading coordinators and forklift operators, as well as offshore personnel.*

**Last Filled – January**



**DO NOT USE PAST  
March 31<sup>st</sup>**

Company Name (555) 123-4567

# Standardized Fuel Transporter Fill Date & Expiration Markings

## ➤ Benefits & Cost

- By standardizing fuel tote markings, we can...
  - Increase awareness of dock workers and offshore personnel
  - Develop and maintain a GOM wide system to facilitate the proper rotation of fuel transporters
  - Improve quality of fuel at offshore fueling facilities thereby ensuring usability
  - Reduce fuel contamination and wasted deck space required to accommodate rejected fuel transporters
  - Minimize down time for Customer operations due to fuel system quality control issues
  - Mitigate risk and liability associated with fuel system contamination
- The cost of ensuring quality fuel is available at offshore locations includes:
  - Added workload for fuel personnel and increased time at the dock to accomplish the removal and addition of decals
  - Material costs to include the labor cost associated with an “in-house” production of the Color Chart graphic and Colored Tags
    - Local vendor pricing for the vinyl decals:
      - 12” x 12” Color Chart = ~ \$2.90/decals
      - 9” x 9” Colored Tag = ~ \$1.50/decals

# Standardized Fuel Transporter Fill Date & Expiration Markings

## ➤ Proposed Action Items

- Helicopter Operators should conduct an internal review of this proposal and discuss ideas.
- Provide feedback detailing revisions and/or objections to the marking scheme.
- Once a solution has been agreed upon, a finalized version of the proposal will be submitted to HSAC for inclusion as a Recommended Practice.
- Helicopter Operators implement the marking schematic per the developed HSAC RP.

# ATTACHMENT #2

## HSAC ADS-B/Flight Following Workgroup Agenda

October 3, 2012

### Welcome and Overview of Agenda

### Introductions

### Aeronautical Frequency Committee Items

**ICAO** – The search for bandwidth for broadband use continues to be a concern for civil aviation. An “independent” group, which is dominated by mobile carriers, is searching for spectrum. AFC is trying to get aviation representation on this group.

It was also mentioned that Primary radars are being interfered with by broadband systems, and that the FAA is now using Secondary radars for enroute traffic and maintaining primary Radars for DOD use only.

**FAA** – FAA plans to clear the band 136.000 through 136.475 MHz in support of the DataComm program.

**NOTE:** The contract for the DataComm program was awarded to the Harris Corporation.

**RTCA** – They are looking for satellite spectrum to support UAV command and control beyond line of sight distances on a worldwide basis.

**NOTE:** One of HSAC’s concerns was that UAV operators would not see our helicopters, and we were told that the UAV would always be operated in the sight of the controller. How will this be addressed?

**FCC** – LightSquared is continuing to explore other spectrum alternatives to support their system. The filed with the FCC on September 24, to be allowed to extend their deadlines to provide the planned services.

**Member Roundtable** – Interest was shown in receiving more information about the Iridium Joint Venture. Iridium will be at the AFC meeting the week of October 15, to provide this information. Inmarsat will be invited to a future meeting.

It was mentioned that ASRI inspectors are experiencing problems in the field with identifying the points of contact for radio locations. This is especially a problem with the many airlines that have merged over the past few years.

The AFC Chairman mentioned that there is interest in setting up an RF technician training and certification program, and that it may be applicable or of interest to airlines and other operators.

It is our understanding that the Iridium Joint Venture would include ADS-B capability.

### **Radio Station Inspection Problems**

Additional radios found on frequencies that were not included on the station license.

Radios licensed, but not being used and need to be decommissioned.

Transmitters not marked with the frequency.

Radios found that were on, but are not licensed and nobody knows who they belong to.

<b>Future AFC Meetings:</b>	Charleston, SC	October 16-18
	Reno, NV	February 12-14

### **ADS-B**

#### **Frequency Cards**

#### **Houston ARTCC Presentation on ICAO Flight Plan 2012**

#### **Southeast Louisiana Frequency Congestion**

Frequency 123.0 is the CTAF frequency for Venice/Boothville, and Galliano. It is also the Unicom frequency at Bay St. Louis. There have been complaints about congestion, when aircraft are trying to communicate on these frequencies. It has been requested that the committee look at possible fixes for this problem.

### **Member Roundtable**

## ATTACHMENT #3



### HSAC – RP – 2012-3 Quality Control

#### **Background**

Each operator should have a Quality Control process to ensure that the acceptance and airworthiness of aircraft parts and components meet industry standards and company guidelines.

#### **Recommended Practices**

1. **The following guidelines cover areas which may be considered when developing a Quality Control program.**
  - Quality Assurance and Quality Control departments should be separate and independent with reporting lines only to senior management within the organization.
  - A process that ensures regulatory compliance is maintained
  - Continuous improvement of maintenance and inspection process should be driven by the QC department.
  - The QC department should be responsible for the status of all applicable publication's.
  - A precision tool calibration process is over seen by the QC department
  - Accurate recording keeping of all life limited parts along with maintenance / inspection schedules, and manufactures bulletin's
  - Documented procedures to ensure that parts that are received have gone through a qualified inspection program prior to acceptance

Information pertaining to Quality Control procedures and self-verification procedures may be found at the Aviation Suppliers Organization.

<http://www.aviationsuppliers.org/Accreditation-Steps>

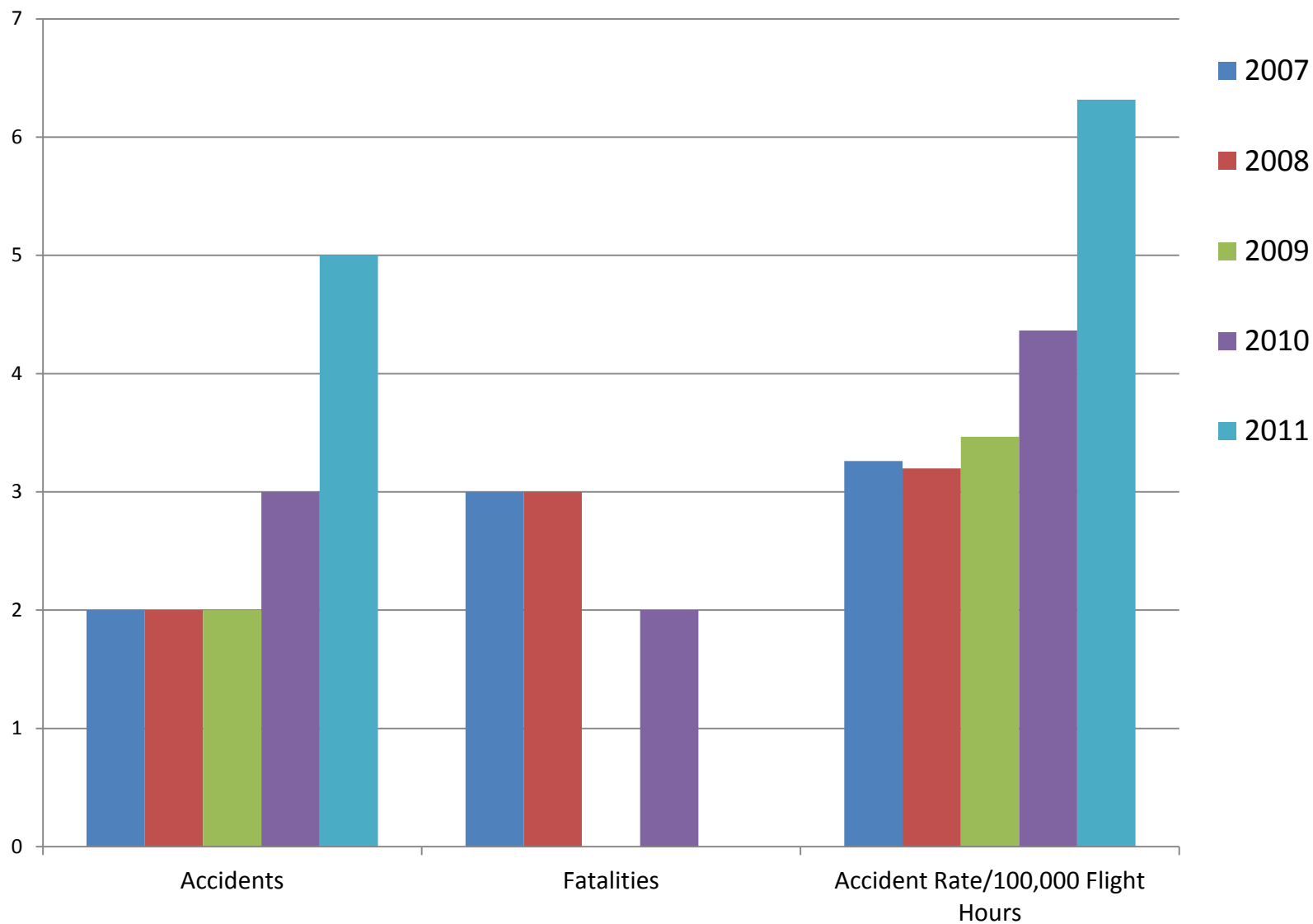


# 2011 Preliminary Statistics U.S. Aviation

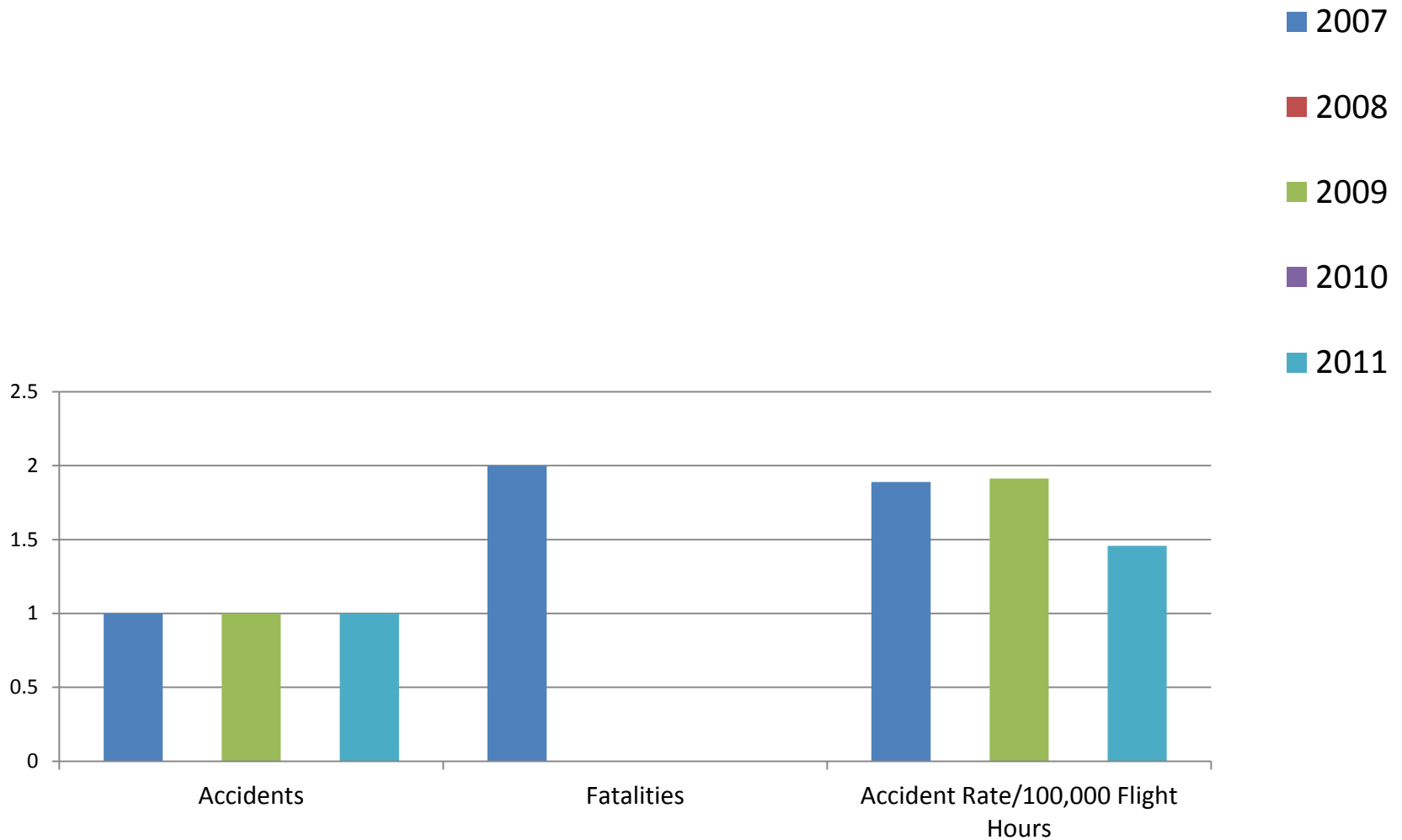
Table 1. Accidents, Fatalities, and Rates, 2011 Preliminary Statistics U.S. Aviation

	Accidents		Fatalities		Flight Hours	Departures	Accidents per 100,000 Flight Hours		Accidents per 100,000 Departures	
	All	Fatal	Total	Aboard			All	Fatal	All	Fatal
U.S. air carriers operating under - 14 CFR 121		-	-	-	-	-	-	-	-	-
- Scheduled	28	0	0	0	17,285,000	8,910,000	0.162	-	0.314	-
- Nonscheduled	3	0	0	0	471,000	151,000	0.637	-	1.987	-
U.S. air carriers operating under - 14 CFR 135		-	-	-	-	-	-	-	-	-
- Commuter	4	0	0	0	307,000	560,000	1.303	-	.714	-
- On-Demand	50	16	41	41	3,325,000	-	1.50	0.48	-	-
U.S. general aviation	1,466	263	444	433	22,514,000	-	6.51	1.17	-	-
U.S. civil aviation	1,550	279	485	474	-	-	-	-	-	-
Other accidents in the U.S.	-	-	-	-	-	-	-	-	-	-
- Foreign registered aircraft	10	2	4	4	-	-	-	-	-	-
- Unregistered aircraft	9	4	5	5	-	-	-	-	-	-

# 2011 Aerial Patrol Accidents & Rate – Industry Wide



# 2011 Aerial Patrol Accidents & Rate – HSAC Participants Only





## HSAC Contributors – 2012

Airborne Energy Solutions ( <b>2009</b> )	\$1,000
Apache Corporation	\$ 1,000
Blue Sky Innovations, LLC	\$ 500
Chevron Aircraft Operations (2011)	\$1,000
Chevron Aircraft Operations (2012)	\$1,000
Dart Sales Inc.	\$500
Gulf Fish Spotter Safety Committee	\$500
Petrobras Americas, Inc. ( <b>2010</b> )	\$1,000
PHI, Inc.	\$ 1,000
Skynet Communications	\$750
Suncor Energy	\$2,000
Energy Transfer	\$1,000

Total: \$ 11,250



## **2012 HSAC Bank Account Activity**

### **1 Jan – 30 Sep**

<b>Opening Year Balance</b>	<b>\$ 40,098.05</b>
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<b>Contributions</b>	<b>\$ 11,250.00</b>
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<b>Expenditures</b>	<b>\$ 5,726.06</b>
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<b>To Date Balance</b>	<b>\$ 45,621.99</b>
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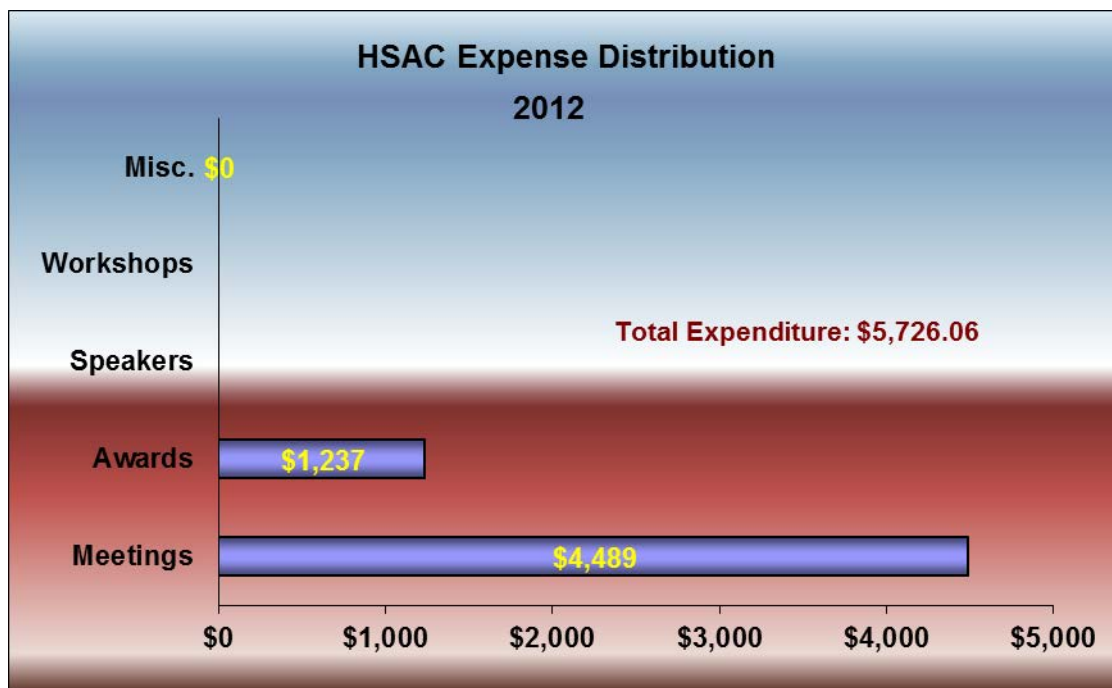
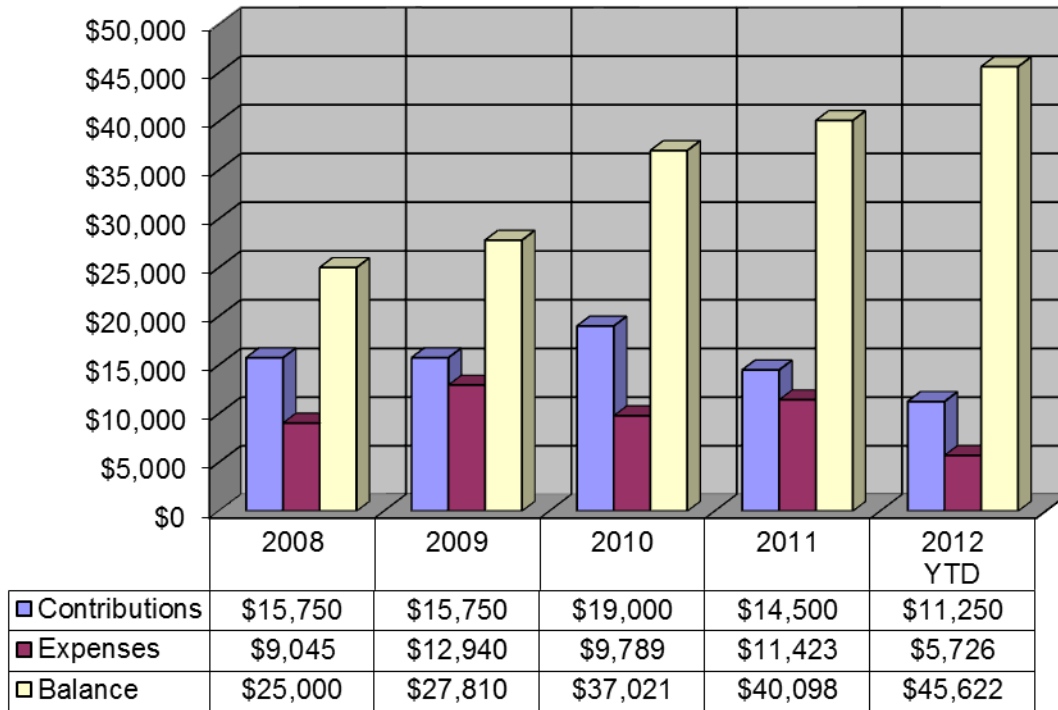
<b>Net Difference</b>	<b>+\$ 5,523.94</b>
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# 2012 Summary

## 1 Jan – 30 Sep

### HSAC Contributions vs. Expenses





**One World, One Industry, One Standard**

**Albert Skiba OPITO  
September 4, 2012**

# Our Defining Moment

## Piper Alpha - Lessons learned and shared





# Piper Alpha - FACTS

- 167 Offshore Workers Perished
  - Investigation found a catalogue of preventable errors
    - Lack of competence in managing the emergency
    - Ineffective systems
    - Uncoordinated response teams
    - Lack of basic offshore survival skills & knowledge
    - Falsified training records/certificates
- The disaster led to major changes in the way the industry prepared its workforce to respond in the event of an emergency
- Safety, Skills and Competence are now the highest priority in our industry

# The OPITO organization

## **A totally unique Global industry organisation**

- Originally born in the UK
  - 30 Years Old
  - Not for profit and owned by the oil and gas industry employers
  - Wholly Independent and self sustaining
  - Stewardship and governance by the industry
- **2011**
    - **Offices in Dubai, Houston, Kuala Lumpur and Aberdeen**
  - **Driven by industry demand, we facilitate the development and maintenance of industry standards in:**
    - Emergency Response (basic survival to managing a major emergency)
    - Hazardous activities (lifting operations, deck operations)
    - Occupational competence ( process maintenance, drilling, well care)



# The OPITO Organisation

- **OPITO standards are delivered in 40 countries**
  - 100 QA Approved world class training centres
  - Over 200,000 people per year are trained to the OPITO standards
- **We also advise on workforce development structures and frameworks**
  - National Governments, IOC's and NOC's
- **We work in partnership with like minded organizations**
  - With an aim to deliver a sustainable, safe and competent workforce through common world class standards and globally recognised qualifications



## Our Belief

**“Every oil and gas worker has the right to go to work and come home safely”**

OPITO is committed to working with global partners to help ensure people have the right skills to:

1. Do their job safely and competently
2. Respond effectively in the event of a workplace Emergency

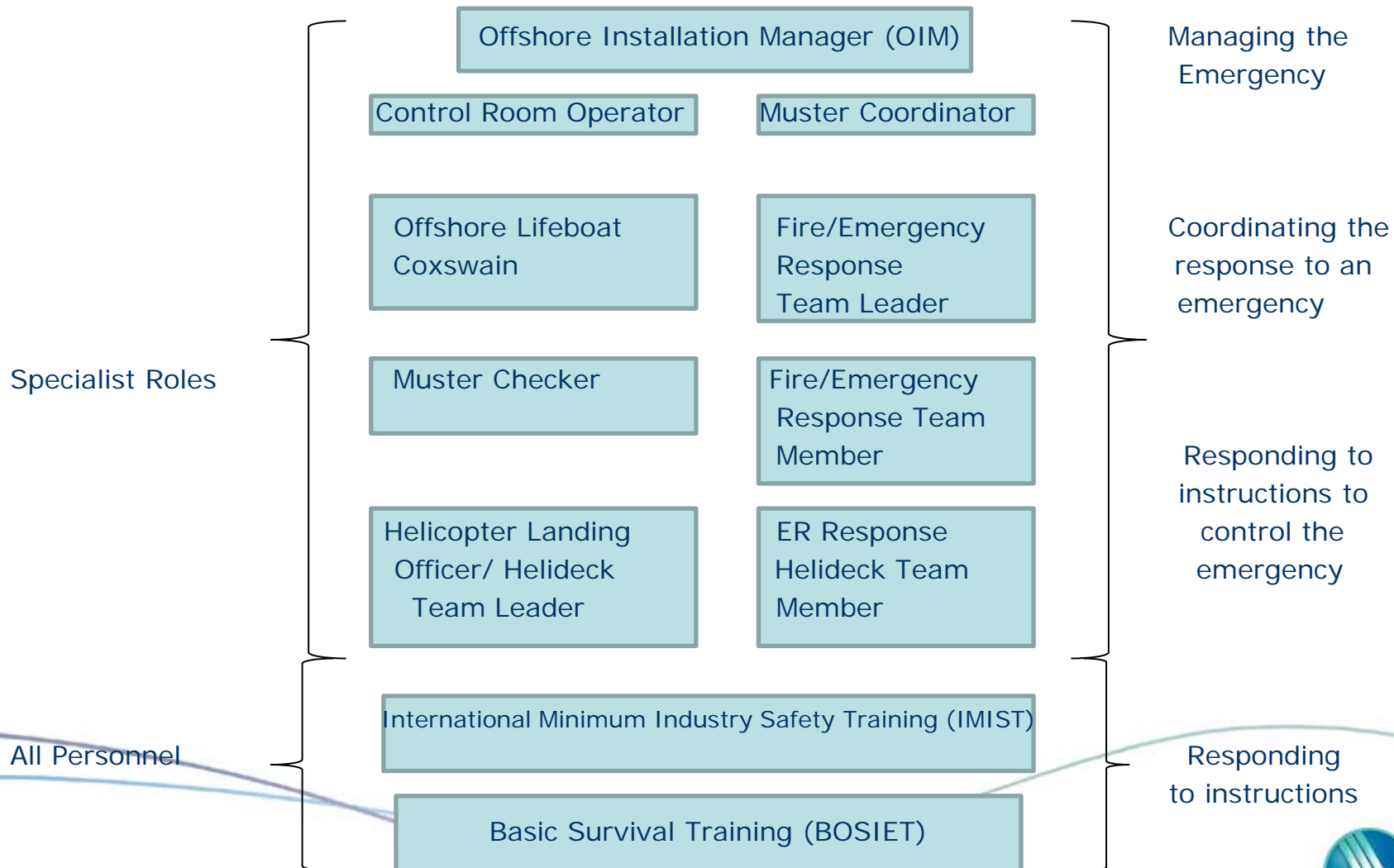


# One World, One Industry, One Standard

- **Industry working collectively and collaboratively with OPITO has a proven record of success**
- **Common industry standards drive a virtuous (moral excellence) cycle of improvement**
  - Competence levels are understood
  - Skills and safety needs are driven by the needs of the business
  - Skills development is planned, structured and increases personal safety and business efficiency
  - Globally recognised qualifications
- **Our People are our most prized assets – we should always do everything possible to give them the right skills and keep them safe**



# Emergency Response Framework for an Offshore Installation



# IMIST — International Minimum Industry Safety Training Standard

- International MIST standard aligned to OPITO's Training Standards for workplace competence.
- On-line training and competency assessment.
- The course assesses basic safety knowledge in nine subject areas:
  - Module 1: Introduction to the Hazardous Environment
  - Module 2: Working Safely
  - Module 3: Understanding the Risk Assessment Process
  - Module 4: Tasks that Require a Permit to Work
  - Module 5: Personal Responsibility in Maintaining Asset Integrity
  - Module 6: Using Manual Handling Techniques Every Day
  - Module 7: Controlling the Use of Hazardous Substances
  - Module 8: Knowledge and Processes of Working at Height
  - Module 9: Being Aware of Mechanical Lifting Activities



# Training Center Certification

## EMERGENCY RESPONSE TRAINING AND COMPETENCE AMERICAS

OPITO Approved Training Centres	BOSIET	FOET	OERTM	OERTL	HTM	COX	TEBS	HLO	OIM	CRO	BRIDGE	TBOS	TFOE	BOAT	H <sup>2</sup> S	MEMIR
Falck Alford, Houma T: +1 985 868 1860 F: +1 985 223 3712 E: <a href="mailto:patp@alfordservices.com">patp@alfordservices.com</a> W: <a href="http://www.alfordservices.com">www.alfordservices.com</a>	✓	✓					✓				✓	✓	✓			
Falck Alford, Houston T: +1 985 868 1860 F: +1 985 223 3712 E: <a href="mailto:training@falckalford.com">training@falckalford.com</a> W: <a href="http://Falckalford.com">Falckalford.com</a>	✓	✓														
Falck Alford, Maurice T: +1 985 868 1860 F: +1 985 223 3712 E: <a href="mailto:patp@alfordservices.com">patp@alfordservices.com</a> W: <a href="http://www.alfordservices.com">www.alfordservices.com</a>	✓	✓					✓				✓	✓	✓			
Falck Alford and TDD (Training Devt Delivery Ltd) T: +1 985 868 1860 F: +1 985 223 3712 E: <a href="mailto:training@falckalford.com">training@falckalford.com</a> W: <a href="http://www.alfordservices.com">www.alfordservices.com</a>									✓	✓						

### KEY

BOSIET	-	Basic Offshore Safety Induction & Emergency Training
FOET	-	Further Offshore Emergency Training
OERTM	-	Offshore Emergency Response Team Member (Including further practice)
OERTL	-	Offshore Emergency Response Team Leader (Including further practice)
HTM	-	Offshore Emergency Helideck Team Member (Including further practice)
COX	-	Offshore Lifeboat Coxswain (Including further practice)
TEBS	-	Tropical Emergency Breathing System
HLO	-	Helicopter Landing Officer (Including further practice)
OIM	-	OIM Controlling Emergencies
CRO	-	Control Room Operator
BRIDGE	-	BOSIET Bridging Elements
TBOS	-	Tropical Basic Offshore Safety Induction & Emergency Training
TFOE	-	Tropical Further Offshore Emergency Training
BOAT	-	Travel Safely by Boat
H <sup>2</sup> S	-	Basic H <sup>2</sup> S Training
MEMIR	-	Major Emergency Management Initial Response Training





# OPITO in the USA

- 8 Training Centers Certified in the Houston/Louisiana area.
- Averaging 1000 registrations per month. Primarily BOSIET courses.
- August 2012 there was the first TPAG Training Provider Advisory Group meeting held in Houston.
- Mapping of IMIST/BOSIET to SafeGulf is currently being performed.
- Center for Offshore Safety



# OPITO Certified Training Providers US

Falck Alford  
Houston, Texas

Occupational Safety Training  
Brookshire, Texas (2011)

Falck Alford  
Houma, Louisiana

Petrofac Training  
Houston, Texas

Falck Alford  
Maurice, Louisiana

Petrofac Training  
Marine Survival Training Center  
Lafayette, Louisiana

Hi-Con Training  
NASA Buoyancy Lab  
Houston, Texas (2012)

Weatherford International  
Houston, Texas



# Vantage – Central Register

- An industry central register which holds the personal details of all those who have successfully completed industry approved (OPITO) training
- A robust and protected verification tool for employers to check and confirm an individual's training and competence records.
- Used globally by employers to manage compliance and ensure the right people, with the right skills, go to the right place.



# Summary

- OPITO has 30 years of learning to share
- We are the custodians of industry standards in emergency response and competence assurance
- We are a unique organisation in the oil and gas industry with a globally recognised QA process
- We exist solely to improve workforce safety and competence

***We want to bring the OPITO values to the Gulf of Mexico by engaging with government, industry and the workforce***



- Questions?

*HFA*  
Human Factors  
Associates

Assessing Organizational Safety Effectiveness as an Integral  
component of a  
Safety Management System (SMS)



Anthony Ciavarelli, Ed.D

October 2012

*HFA*  
Human Factors  
Associates

## AGENDA

- The Organizational Accident Concept and Examples
- Sources of Human Error
- High - Reliability Organizations
- Organizational and Safety Culture
- Assessing Safety High - Reliability "culture" – and safety management effectiveness
- High Reliability Safety Culture - Status of Aviation and Aerospace
- Helicopter Operations Risk Analysis
- Achieving a High Reliability Safety Culture

# Surveillance and Broadcast Services

## SBS Program Update

Presented to: HSAC

By: Tim Schroeder, Program Manager, Central US

Date: October 4, 2012



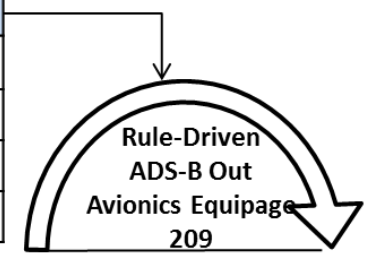
Federal Aviation  
Administration

ATTACHMENT #8

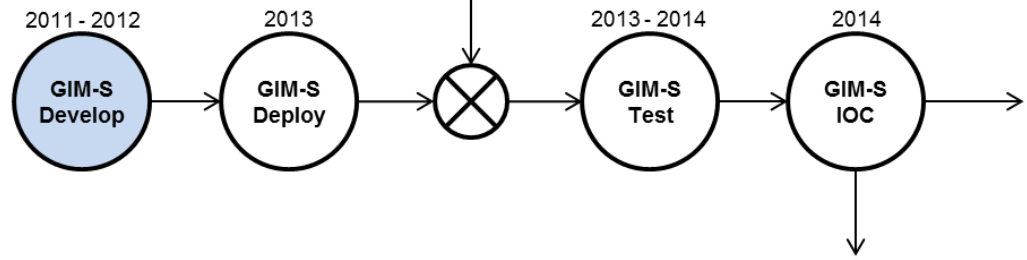




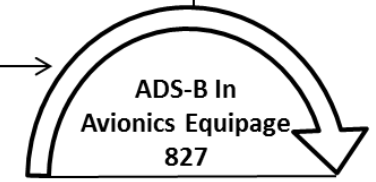
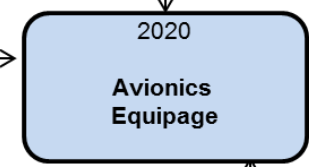
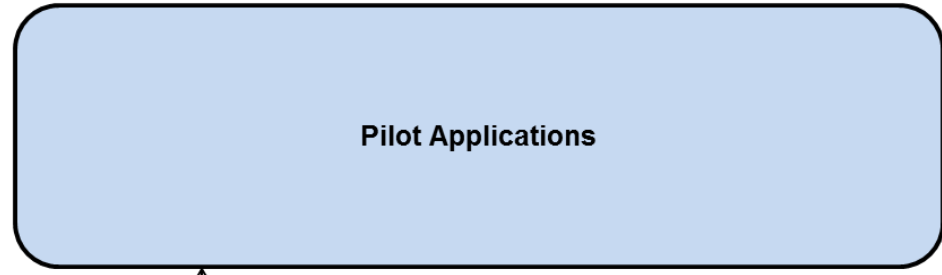
Service Delivery Points for ATC Separation Services									
	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	Operational
En Route	2	0	4	15	3	0	0	0	2 of 24
Terminal	2	1	16 of 16	45	52	43	0	0	19 of 159
Surface (Advisory)	2	0	14 of 14	15	5	1	5	2	16 of 44



**ATC Spacing Services**  
*Ground-Based Interval Mgmt - Spacing (GIM-S) (En Route only)*



*Flight Deck Based Interval Mgmt-Spacing (FIM-S)*  
*In Trail Procedures (ITP)*  
*Traffic Situation Awareness with Alerts (TSAA)*



**TIS-B  
FIS-B  
ADS-R**

Pilot Advisory Services								
	FY08	FY09	FY10	FY11	FY12	FY13	FY14	Actual / Planned
Radio Station Installations	11	43	211	101	131 of 134	184	46	497 of 730
Operational Radio Stations	418							



As of 9-26-2012



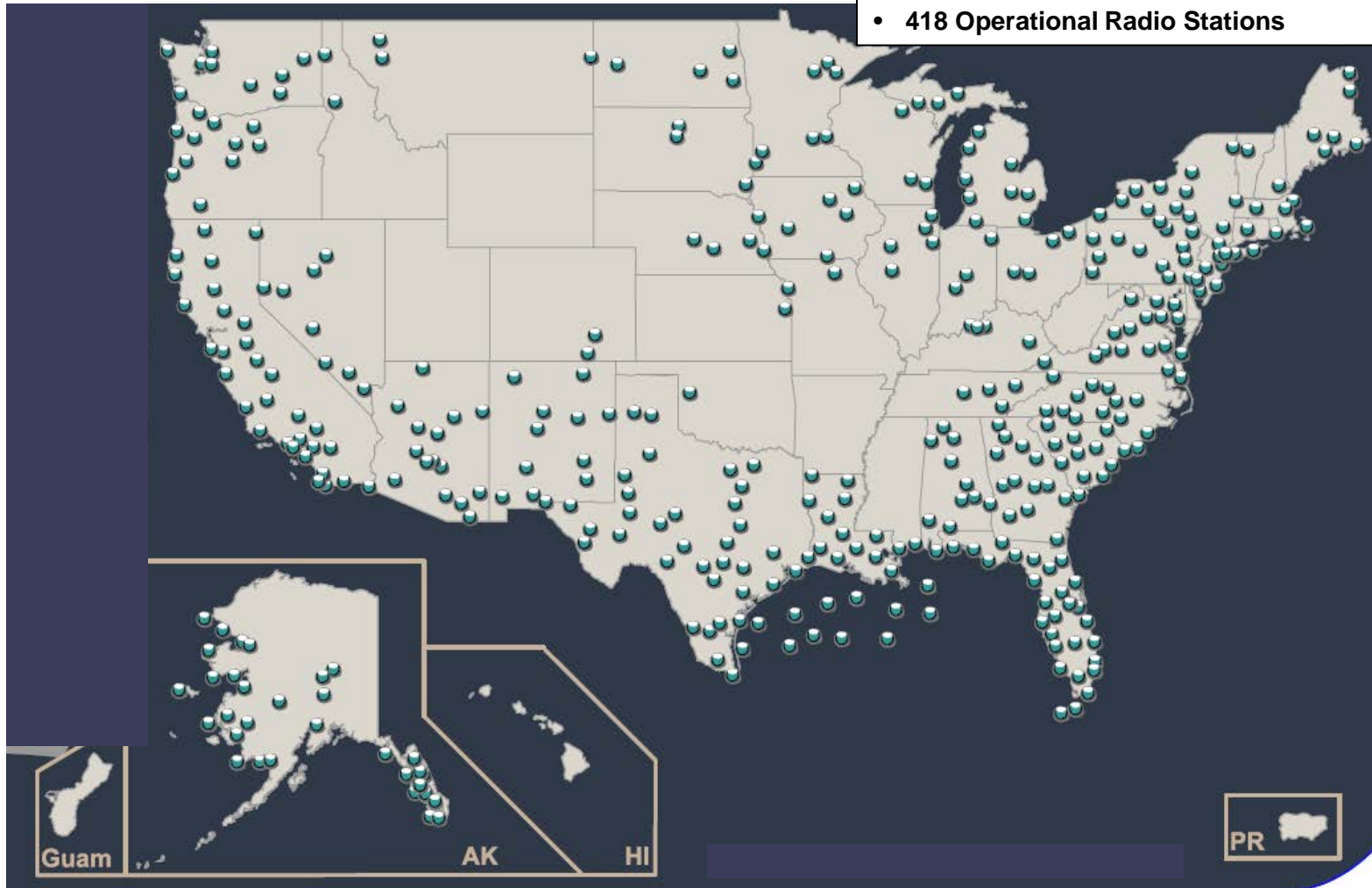


# Implementation Status

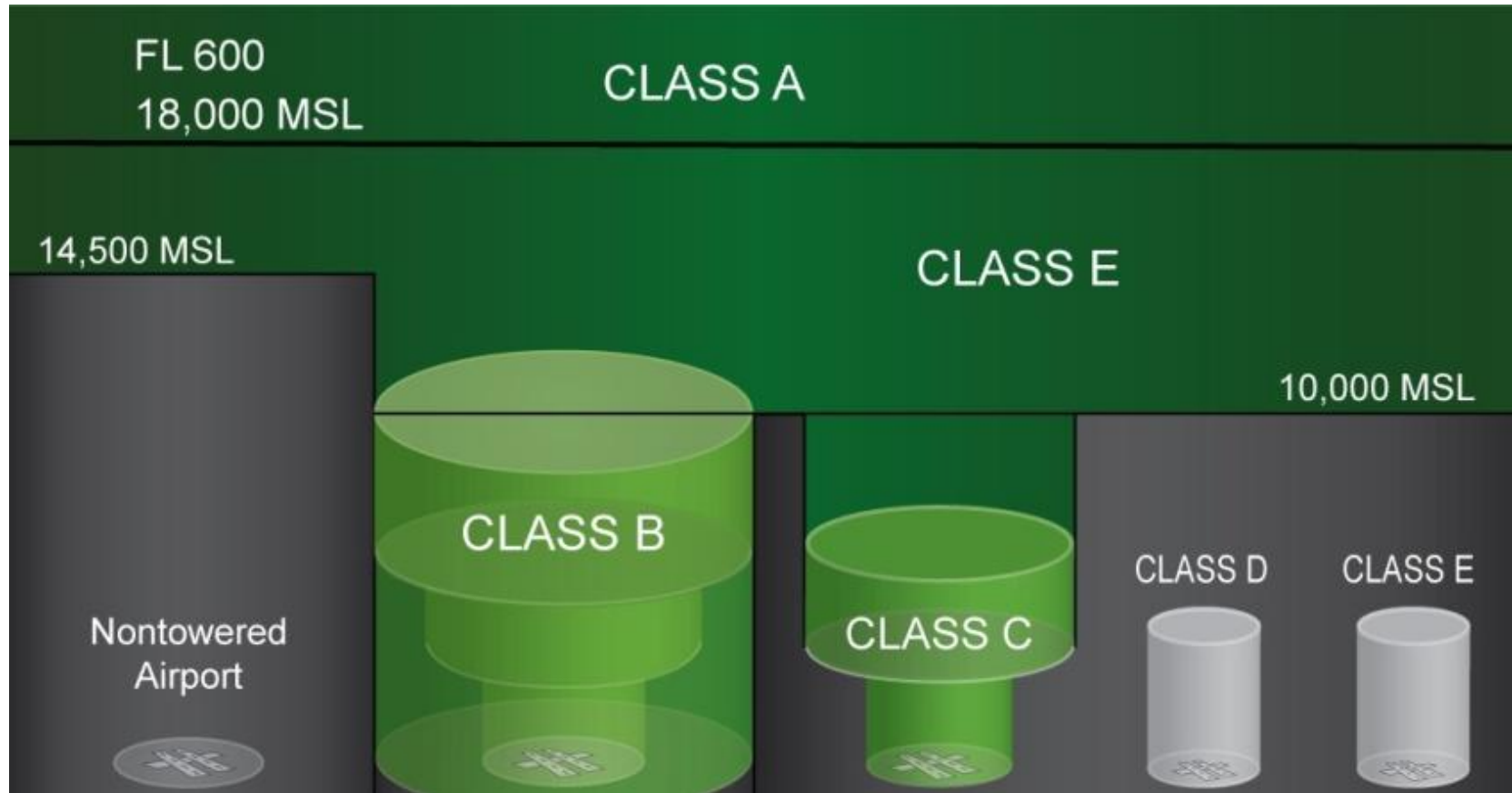
September 26, 2012

<http://www.faa.gov/nextgen/flashmap/>

- Fiscal Year-End Plan for 2012 – 500 Radio Stations (467 in CONUS; 33 AK)
- 418 Operational Radio Stations



# Required ADS-B Airspace (In Green)



- The rule mandates performance requirements for ADS-B ‘Out’ effective January 1, 2020
- Equipage required in the Gulf of Mexico above 3,000’ MSL beyond the shoreline to 12NM
- This rule does not mandate ADS-B cockpit displays

# ADS-B Integration in Regional Air Traffic Control Facilities

- Houston (I90) TRACON - 3/28
- Houston Center (ZHU) - 4/14
- New Orleans (MSY) TRACON - 7/2
- Shreveport/Barksdale (BAD) - 9/12
- Lafayette (LFT) – TBD
- Lake Charles (LCH) – TBD



# Gulf of Mexico FAA / Industry Partnership

Signed May 2011

xx Total  
Partners

## New Partners

- W&T Offshore – Bought VK823 (QVO)
- Transcontinental Pipeline – Installed BA538 AWOS
- **Transportation**
- 170 total trips year to date
  - 159 Helicopter, 11 Boat
  - Three dedicated aircraft from Oil Companies

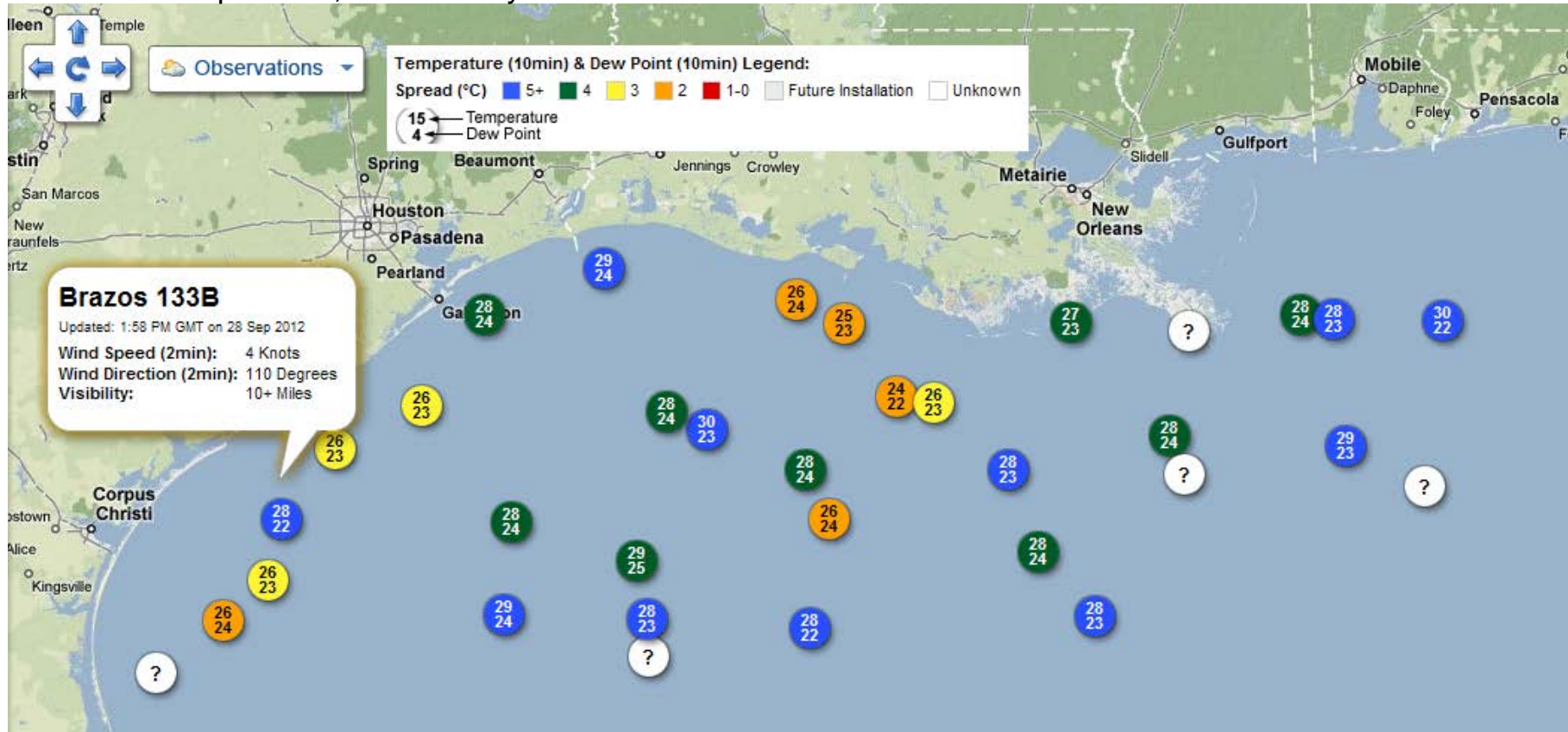
ADS-B





# Graphical Weather

- AWI Product
- Provided to MOA Transportation Providers:
  - Combined Current Observations: Wind Speed-Direction-Gusts, Temperature
  - Individual Observations: Altimeter, Clouds, Dew Point, Humidity, Rainfall Current Hour, Temperature, and Visibility



# Equipment Availability

- First Test of Major Hurricane Since Implementation
- Systems Off Line When Abandoned, Quickly Available When Power Restored

- **Hurricane Isaac**

- Sites Affected During Storm
  - ADS-B: 4 Shore and 5 Platform
  - AWOS: 10 systems
- Automatically Restored
- One Site Had UPS Failure Affecting Restart of ADS-B and AWOS
- One Land-Based ADS-B Flooded



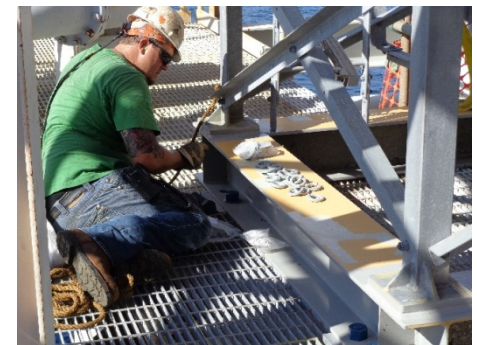
# FAA Equipment Updates (AWOS)

- Brazos 538 Replaced Brazos 451 (BQX)—Awaiting FCC Approval of VHF—FAA Commissioning Expected in Oct or Nov
- Mississippi Canyon 474 / Na Kika Platform (IKT) Commissioned on July 31
- West Delta 27A (DLP) Temporarily Removed and Reinstalled to Accommodate Drill Rig—FAA Commissioning Expected in Oct
- High Island 179A (XIH) VHF changed to 124.775 MHz
- Ship Shoal 354 to Replace South Timbalier 301B (STZ)—Installation Planned in December
- East Cameron 47JP (CMB) Shut Down—Platform in Abandonment – Evaluating Potential Replacement Sites



# FAA Equipment Updates (Communication)

- South Timbalier 164C ATC Communication Facility (TZL) to be Moved —FAA Building Needs Replacing—Platform Longevity A Factor—Evaluating Potential Replacement Sites
- Garden Banks 189 (QTC) and Eugene Island 215B (VUW) in process of being sold—future unknown
- One Installation Remaining—Green Canyon 19/Boxer Platform (QBW)
  - Projected Completion Date—November
    - FAA Building and Antenna Tower installed
    - Site Preparation and construction in progress
    - FAA mobilizing in October to complete electronics installation, checkout, test and commissioning







# Gulf of Mexico Helicopter Upgrades

- **SBS Program Office supporting efforts to promote migration to Version 2, rule compliant ADS-B well ahead of the 2020 mandate**
  - Rockwell Collins Project: Upgrade TDR-94D Mode S transponder to V2 and qualify for unknown helicopter vibration to benefit appropriate medium and large helicopter operators
  - AW139 Project: Install DO-282B UAT ADS-B 'out'—STC awarded June 14, 2012
  - Auburn University Project: Install UAT ADS-B 'out' in Cessna 172
  - Alaskan Upgrade Project: Upgrade fixed wing and small helicopters with UAT ADS-B 'out' and 'in'
- **Current FAA TSO certified ADS-B transmitters**
  - Trig Avionics Mode S (DO-260B) transponder
  - FreeFlight Systems RANGR-T (DO-282B)





# ADS-B Installation Policy

- AC 20-165 furnishes guidance for installation of ADS-B technologies—Rev A currently in circulation for public comment
- Existing policy requires ADS-B ‘Out’ Systems to be approved through a:
  - Type Certificate (TC)
  - Amended Type Certificate (ATC)
  - Supplemental Type Certificate (STC)
- Policy update will allow Field Approvals under certain conditions



# HSAC Support/Feedback

- Business/Technical Performance Measures
- Operational Statistics/anecdotal feedback
- PIREPs on AWOS Equipment outages
- Periodic cleaning of AWOS sensors





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ATTACHMENT #9

# HSAC, HOUSTON 10-4-12

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MIGRATORY BIRD  
SEASON UPON US

# Bird Strike Hazards

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- Strike hazards exist throughout the world with higher threats near migration routes or favorable environments.
- More than half at less than 100 feet above the ground, highest reported strike at 37,000 feet, highest reported bird sighting at 54,000 feet.00'
- Only 1% of GA strikes occur above 2500'

# Bird Strike Hazards

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- Birds can weigh in excess of 40 pounds, but most North American bird strikes involve birds weighing 4 pounds or less.
- July and October are known to be most active for migratory bird activity.

# Bird Strike Hazards

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- Over 219 people have been killed world-wide as a result of bird strikes since 1988.
- Bird and other wildlife strikes cost US civil aviation over \$650 million/year, 1990-2010.
- About 5,000 bird strikes were reported by the U.S. Air Force in 2010.
- Over 9,600 bird and other wildlife strikes were reported for US civil aircraft in 2010.



# Bird Strike Hazards

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- Waterfowl (31%), gulls (25%), raptors (18%), and pigeons/doves (7%) represented 81% of the reported bird strikes causing damage to US civil aircraft, 1990-2010.

# Bird Strike Hazards

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- The North American non-migratory Canada goose population increased almost 4 times over, from 1 million birds in 1990 to greater than 3.5 million in 2010. About 1,300 Canada geese strikes with civil aircraft have been reported in USA, 1990-2010; 42% of these strike events involved multiple birds.

# Bird Strike Hazards

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- About 90% of all bird strikes in the U.S. are by species federally protected under the Migratory Bird Treaty Act.
- From 1990-2010, 431 different species of birds and 36 species of terrestrial mammals were involved in strikes with civil aircraft in the US that were reported to the FAA.

# Bird Strike Hazards

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- Report all known or suspected bird strikes to the FAA utilizing the Bird/Wildlife Strike Report.

# FAA Helicopter Instrument Criteria Update



**Federal Aviation  
Administration**

ATTACHMENT #10

Presentation to: Helicopter Safety Advisory Conference  
(HSAC)

Name: Mike Webb, AFS-420, Program Analyst  
FAA Flight Standards  
Washington, DC

Date: October 4, 2012

HSAC  
October 4, 2012



# Overview

- **FAA Helicopter Criteria Status**
- **FAA Helicopter Future Work FY13**
- **Goal**



# FAA Helicopter Instrument Criteria

- **FAA Order 8260.42B, United States Standard for Helicopter Area Navigation (RNAV)**
  - This is the FAA Helicopter Instrument Approach, Departure and Helicopter Route Criteria
  - Finalizing Change 1
    - Adds clarification of “automation”
    - Adds Point in Space Departure Criteria
    - Adds Point in Space Localizer Precision Approach with Vertical Guidance Criteria
    - Will be submitting for FAA Flight Standards for Approval in 2012

# Additional Helicopter Instrument Guidance

- **AC 90-80B, Approval of Offshore Standard Approach Procedures, Airborne Radar Procedures, and Helicopter Enroute Descent Areas**
  - Last revision 1999



# FAA Helicopter Future Work

- **Migrate FAA Order 8260.42B into FAA Order 8260.58, United States Standard for Performance Based Navigation**
  - Include current FAA Order 8260.42B and Change 1
  - Harmonize it with the fixed wing PBN criteria
- **Revise AC 90-80B**
  - Merge with FAA Special Instrument Approach Order and Advisory Circular
  - Add possible new technology

# Goal

- **FAA to work with HSAC as the AC 90-80B is revised**
- **Evaluate and if possible include recommended changes based on HSAC member's operational experience**

# FAA POCs

- **FAA AFS-420**

- Mike Webb, [mike.webb@faa.gov](mailto:mike.webb@faa.gov), 202-385-4603

- **FAA AFS-460**

- Thayer Rabei, [thayer.rabei@faa.gov](mailto:thayer.rabei@faa.gov), 405-954-0438