



HELICOPTER SAFETY ADVISORY CONFERENCE

October 17, 2013

**Sheraton North Houston at IAH
Houston, TX**

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 COMMITTEE REPORTS

Treasurer's Report – Joe Gross

- Joe is no longer with BHP; however, checks are being sent to his former BHP address. Address all correspondence and contributions to HSAC at **P.O. Box 53777; Lafayette, LA 70505.**
- Report: see *Attachment #1*

Secretary's Report – Ron Domingue

- Regular Members were asked to remain at the break for discussion on election of Chairman and Treasurer for the 2014 to 2016 term.

Vice Chairman's Report – Robert Hall

- Briefing on “Rig Approach” by Ron Doeppner, Project Pilot – Sikorsky
 - Local FAA was okay with the project, until they spoke with the “Big” FAA in Washington. “Automated rig approach had never been done before so the FAA had no basis on which to compare it.”
 - The Rig Approach: (1) Increases situational awareness; (2) Decreases pilot work load; and (3) Improves approach stabilization.
 - <http://www.flyingmag.com/news/sikorsky-aims-increase-offshore-safety>

Safety – Terry Kaufman

- Attended Fuel Symposium presented by Walter Chartrand
- Review fatal accident
- Discuss changing weather patterns
- Birds are beginning migration South



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HSAC WORK GROUP COMMITTEE REPORTS

RP Committee – Gary Tucker

- Unannounced landings on helidecks and Committee working on “Green Deck” RP
- Discussed Helicopter Rapid Refueling. Send copies of training programs
- Pilot distractions in the cockpit
- Ken Kersker reviewed RP2013-01.
- **Chairman, Mark Fontenot**, announced the Executive Committee had accepted the final draft of HSAC RP 2013-01, “Gulf of Mexico Parking Area Design Guidelines and Markings.” Suggested development of training document for pilot and legend to define the meaning of the markings.

Heliport and Airways Committee – Ken Kersker

- Introduced Tony Randall, Bell Helicopters
 - “We’re this close” to the 407 polycarbonate windscreen.
 - May be available for sale the first quarter of 2014
 - 20-pound weight increase
 - Standard on future production line aircraft

Flight Following / ADSB – Terry Gambill

- Minutes: **Attachment #2**
- HSAC Frequency Card: Forward changes before Thanksgiving Day to David Robinson, ERA.
- INMARSAT selling to RIGNET

Technical Committee – Pat Robert

- Walter Chartrand – Aviation Fuel Handling
 - New equipment and changes to fuel system technology
 - Importance of proper documentation: “You receive what you ordered.”
 - Record retention: Keep document for a least a year, longer if possible
 - Auditing procedures: Properly checking the fuel
 - Inspection of fuel system
 - Clean and clear fuel from airport systems



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Aerial Observation Committee – Tim Doty

- Minutes: **Attachment #3**
- Thanks to Cort Andrews for his three years of service
- Tom Buchner prepared Aerial Patrol Flight Hour and Accident Statistics. **Attachment #4**
- Reviewed RPs
 - Discussion on electronic aids in the cockpit. “Fancy new toys” distract the pilots
 - Work together with RP Committee
 - Discussed relation to HSAC verses API. Logical place to be is here at HSAC. Leslie Fanguy will be the API liaison for HSAC

ELECTION OF CHAIRMAN AND TREASURER

- The Secretary asked the Regular Members to remain during the break.
- The Regular Membership was informed that the incumbent Chairman and Treasurer, Mark Fontenot and Joe Gross, have volunteered to run for another two year term beginning January 1, 2014.
- The Secretary asked for nomination from the floor. There were no nominees.
- Gary Tucker requested the nominations be closed.
- Glenn Girard seconded the nomination.
- Mark Fontenot and Joe Gross were unanimously re-elected.

FAA Interface Committee – Paul Perkins

- AC90-80B Presentation: **Attachment #5**

FAA ADS-B Program – Allan Overbey

- 600 ADS-B sites across the U.S.
- New surveillance standards now worldwide
- January 1, 2020 there will be 160 radar sites shutdown in the U.S.
- Presentation: **Attachment #6**

Fish Spotters

- Changes in the Fish Spotters’ community for owners/operators
- No aviation department in Omega Protein



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Next HSAC Meeting will be January 22nd and 23rd – Four Points by Sheraton French Quarter – New Orleans; 541 Bourbon Street; New Orleans, LA 70130 (504) 524-7611

Submitted by: Ronald L. Domingue Date: 01/19/2014
Ronald L. Domingue, Secretary

Approved: Mark Fontenot Date: 22 Jan 2014
Mark Fontenot, Chairman



HSAC Contributors – 2013

All American Aviation LLC (2012 prorated)	\$83.33
Apache Corporation	\$1,000
Arbys Consulting Ltd. (Nigeria)	\$1,000
Blue Sky Innovations LLC	\$500
Bristow U.S. LLC	\$2,500
Cenergy International Services, LLC	\$1,000
Chevron NA E&P (API RP2L contribution)	\$10,000
Chevron NA E&P (Dues 2012 – 2013)	\$2,000
Energy Transfer	\$1,000
ENI US Operating Co., Inc. (Direct Deposit)	\$1,000
Era Helicopters LLC	\$1,000
ExxonMobil Corporation	\$1,000
Island Operating Company, Inc.	\$1,000
Mayeux Flying Service (2012 & 2013)	\$1,500
Metro Aviation, Inc.	\$1,000
PHI In. (API RP2I rewrite contribution)	\$2,000
PHI, Inc	\$1,000
RLC, LLC. (2012 & 2013)	\$2,000
Trans Canada Pipelines, Ltd.	\$1,000

Total: \$31,583.33



2013 HSAC Bank Account Activity 1 Jan – 15 May

Opening Year Balance	\$ 43,840.11
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Contributions	\$ 31,583.33
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Expenditures	\$ 42,046.94
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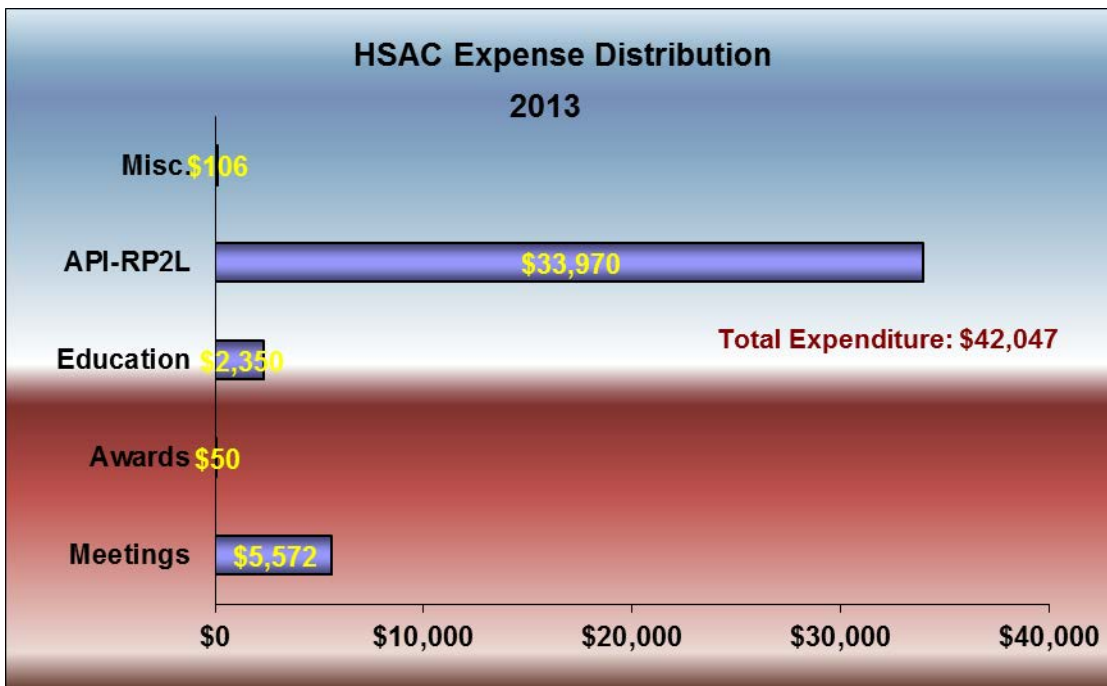
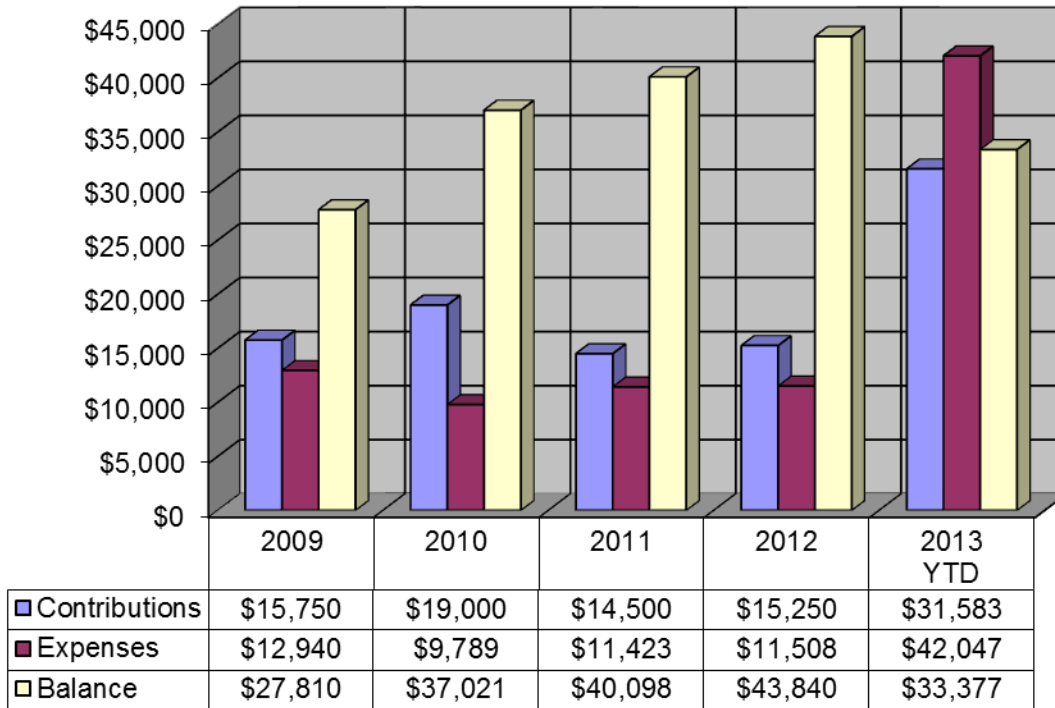
To Date Balance	\$ 33,376.50
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Net Difference	– \$ 10,463.61
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2013 Summary 1 Jan – 30 Sep

HSAC Contributions vs. Expenses



HSAC ADS-B/Flight Following Workgroup ATTACHMENT #2

Meeting Minutes

October 16, 2013

Aeronautical Frequency Committee Meeting – June 18-19, 2013

1. The Aeronautical Frequency Committee continues to work to protect aviation interests from those who seek to obtain frequency spectrum and bandwidth at the expense of aviation.
2. Radio Inspection Issues included:
 - a. Use of unlicensed frequencies
 - b. Frequencies not marked on transmitters
 - c. Radios are in an area that does not restrict access by unauthorized people.
 - d. Power levels out of tolerance.
3. VDLMode2 is the replacement for ACARS which could possibly have capabilities for use in the low-level Gulf of Mexico environment.
4. HSAC holds a position on the AFC Committee, with three operators as active contributors.
5. Upcoming meetings:
 - a. San Antonio, TX – November 5-7, 2013
 - b. Charleston, SC – February 11-13, 2014

Frequency Use RP

1. The workgroup developed an HSAC Recommended Practice for frequency use.
2. The RP addresses use of en-route, ground, CTAF, Fish-Spotter, and Offshore Air-to-Air frequencies.
3. See the RP attached to the minutes.

HSAC Frequency Cards

1. All changes and additions to the card for the 2014 issue need to be turned in by Thanksgiving.
2. Send changes and additions to drobinson@erahelicopters.com

Houston Center

1. Work is being done to bring Jacksonville Center into the Gulf of Mexico helicopter operations community.
2. Jacksonville has no knowledge of low level operations in the Gulf, and will be receiving a presentation from some of the operators concerning the amount of activity in the Gulf, how the procedures work, and the Grid system.
3. The IFR Grid System has been expanded to include Pensacola, Destin, and Panama City lines, with the farthest east line, (the Panama City Romeo line) running south from the Apalachicola area.
4. Jacksonville Center representatives were supposed to be at the Houston HSAC, but the government shutdown prevented their attendance. We will strive to get them to New Orleans in January.



HSAC

Helicopter Safety Advisory Conference

Safety Through Cooperation
Since 1978

HSAC Aerial Observation Committee Minutes

ATTACHMENT #3

Sheraton North Houston, Houston, TX, Wednesday, October 16, 2013

08:30: Introductions, change of leadership

Tim Doty - ExxonMobil Corp

08:40: Safety Moment- Post-Maintenance safety actions

Greg Reeves - Barr Air Patrol

- Suggestion: Email presentation to group

08:50: Safety Statistics

Tom Buchner - Energy Transfer

- Discussion on what company hours to include in HSAC hours

- Review of 2012 and known 2103 accidents

09:20: Break

09:40: Action Plan discussion

Tim Doty - ExxonMobil Corp

Cort Andrews - Barr Air Patrol

- Radio frequencies - information only

- Pilot/Observer Training (RP) - Waiting placement on HSAC website

- Patrol in Mountain Terrain (RP) - Finished January 2010 and published

- Crew Size - remains open for future discussion

- Low Level Waiver Process - Leave for further discussion

- API Workshop (REMOVE)

- Identification of flight hours (accuracy and who/what to include)

- Preflight risk assessment (RP done - CLOSED)

- OGP Aerial Surveillance Recommendations - remains open for further discussion

- FDM

- Interface with API (CLOSE)

- Cold Weather Flying (information only) - CLOSED

- Bird Strikes (information only) - CLOSED

- Call for presenters - send email to Tim if there is any industry/vendor we would like to see

- RP 061/062 presented and closed

- Fatigue Management RP discussion - remains open for further discussion, draft RP developed, discuss again in January

- Software presentation (information only)

- RP 063 - no changes

10:05: Discussion - attendance, topics, possible future RPs

Tim Doty - ExxonMobil Corp

- How do we attract more attendees, greater discussion and pertinent RP development



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10:10: New Business

Tim Doty - ExxonMobil Corp

- AOC leadership- again led by energy company; will this increase attendance?
- Possible new topics:
 - Use of personal electronic devices/tablets in the cockpit
 - CRM/Tasking?
 - Insurance discussion?
 - ADS-B?
 - Group Attendance

10:35: Break

10:45: Special Presentation: spidertracks aircraft tracking

Jerry Lee - spidertracks

- Airborne Satellite Tracking Technology
 - Two major components: GPS and Iridium Satellites
 - GPS: US system. 24 satellites with on-orbit spares. Alternatives Exist:
 - GLONASS: Russian
 - Galileo: EU, certain Asian and Middle Eastern partners
 - COMPASS: Regional (SE Asia)
 - IRNSS: Region (Indian Subcontinent)
 - Sat phones:
 - Iridium (global), 66 satellites in low earth polar orbits plus spares
 - Globalstar (poor coverage near poles)
 - INMARSAT
 - Orbcomm (microsat)
 - Astro Broadband(EU)
 - Solaris (EU)
 - OnAir
 - Intersputnik
 - Google maps
 - Amazon (server space)
- spidertracks combines iridium and GPS for position reports and place on Google Earth. Amazon provides server space.
- Have not found an aircraft that would not work with spidertracks
- Texting, SOS, position reporting, and takeoff/landing automated reports

12:00: Meeting Adjourned. Next meeting January 2014 @ New Orleans



HSAC

Helicopter Safety Advisory Conference

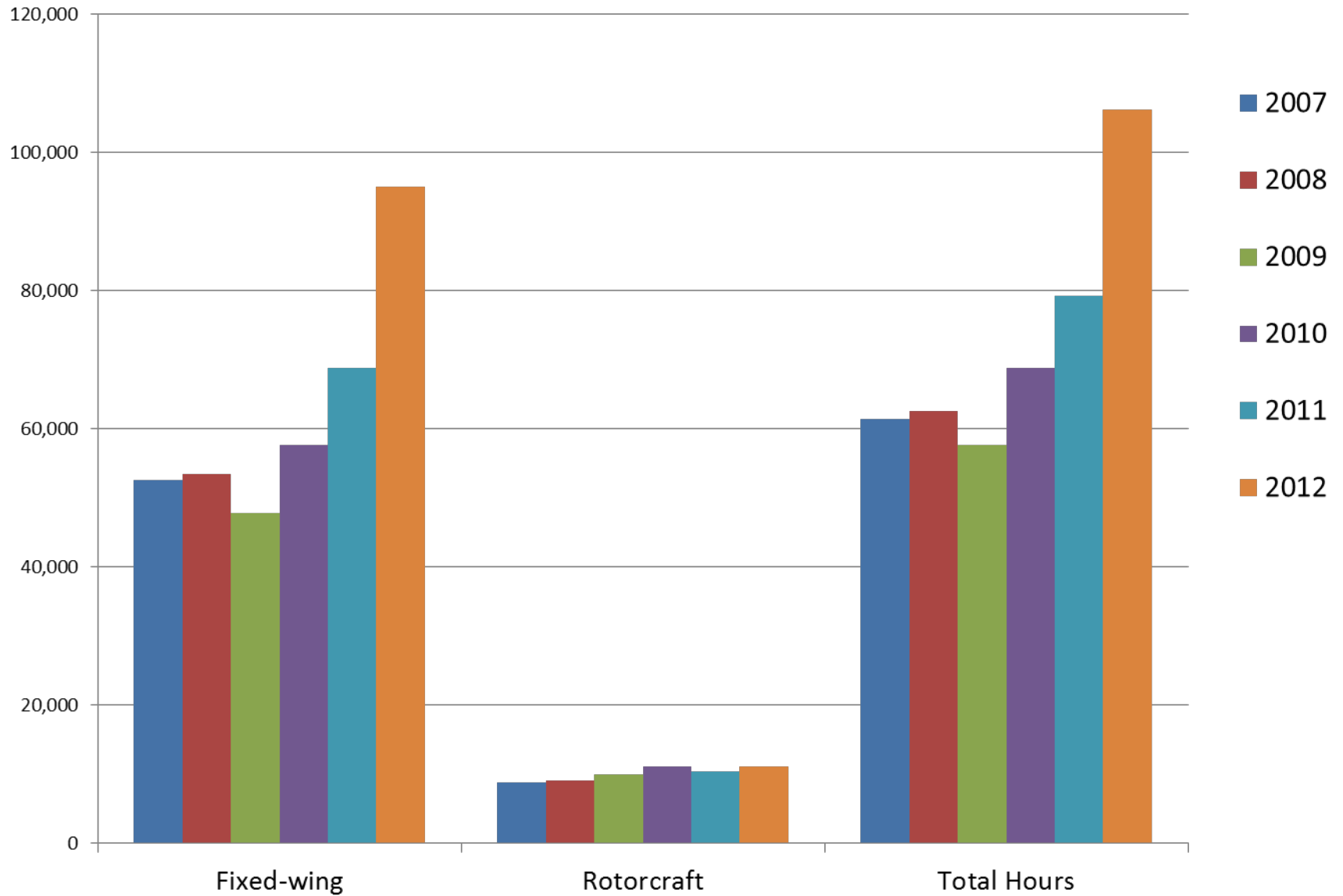
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Aerial Observation Committee

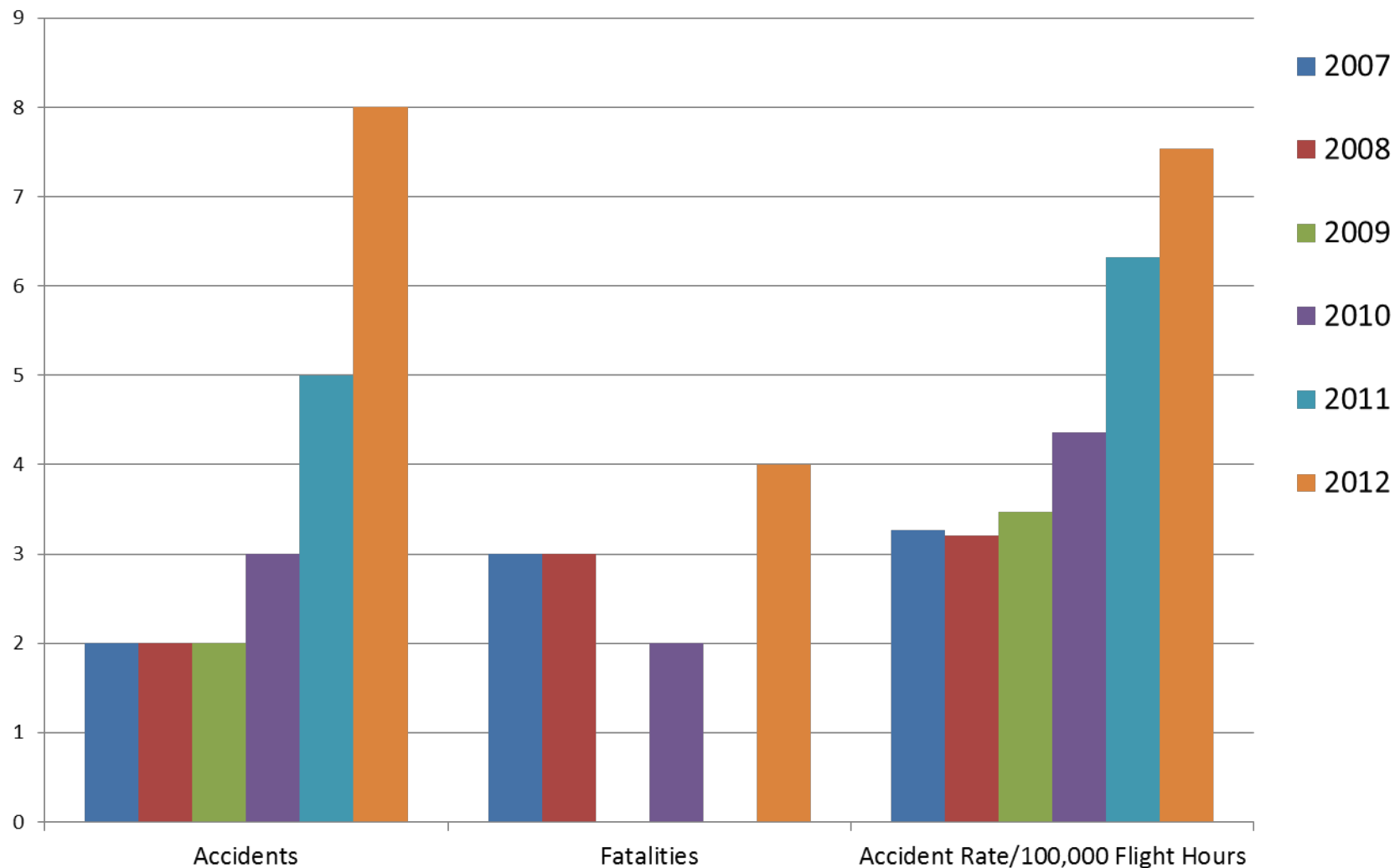
Accidents, Flight Hours, and Stats

October 16, 2013
Houston, TX

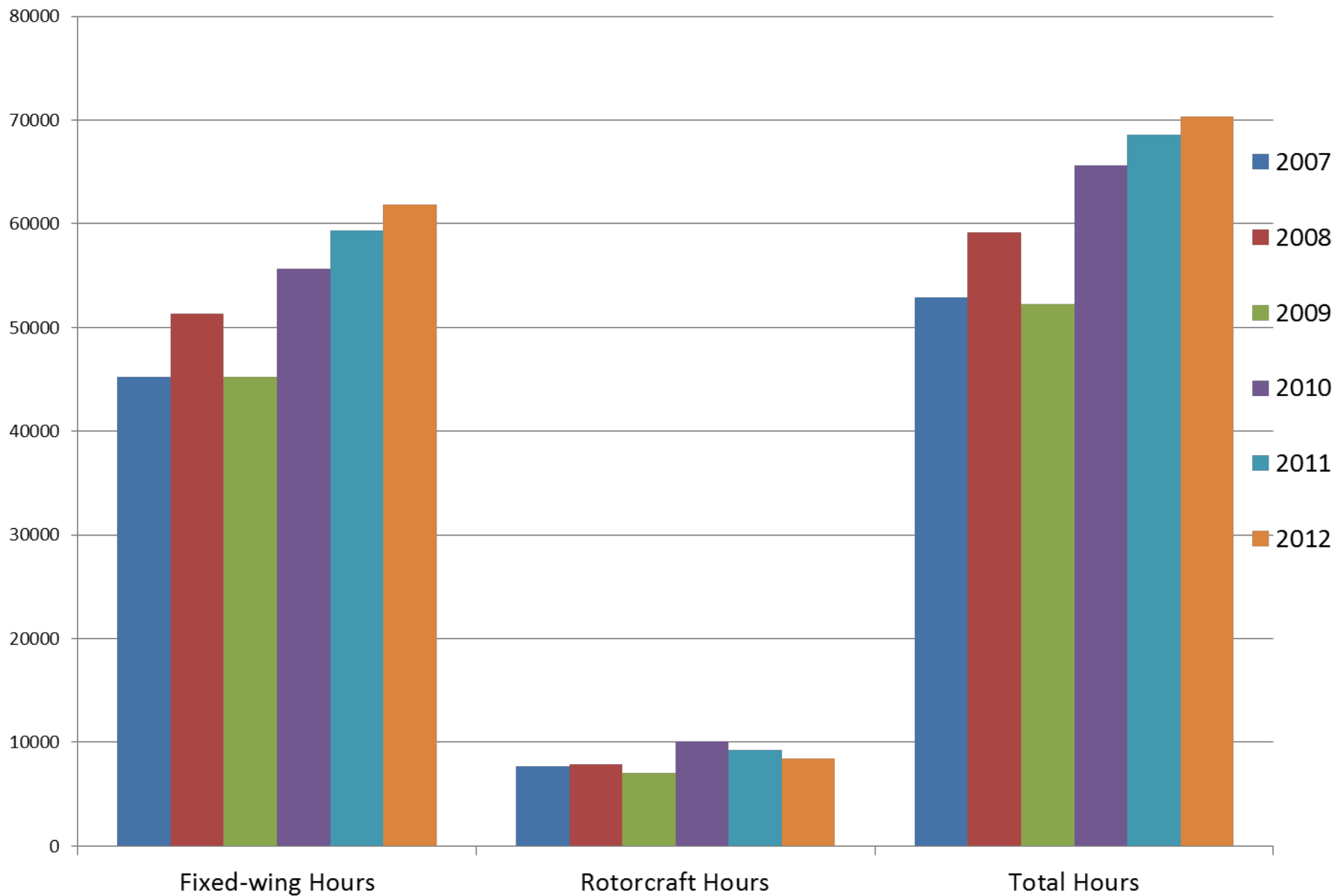
2012 Aerial Patrol Flight Hours – Industry Wide



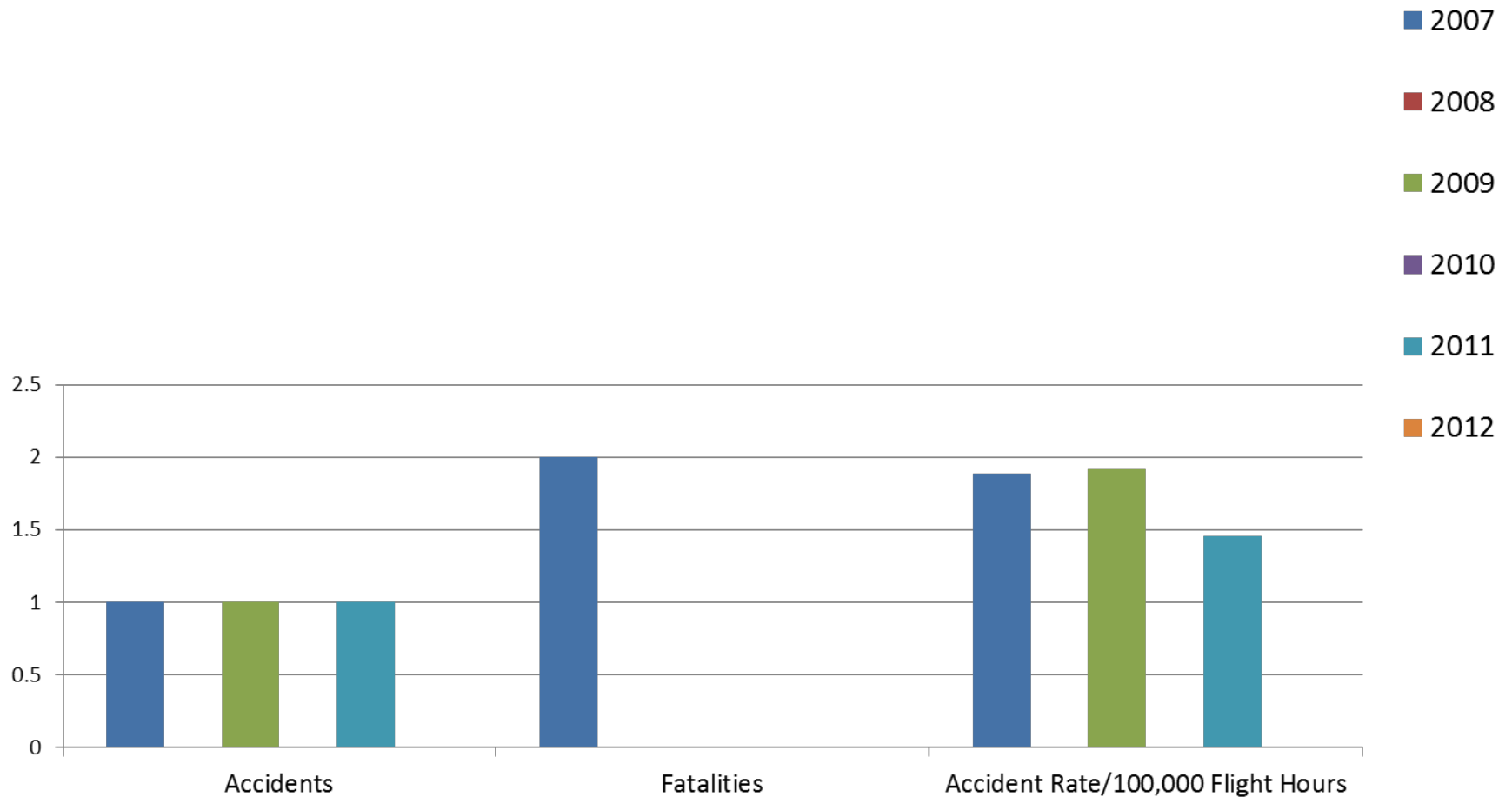
2012 Aerial Patrol Accidents & Rate – Industry Wide



2012 Aerial Patrol Flight Hours – HSAC Participants Only



2012 Aerial Patrol Accidents & Rate – HSAC Participants Only



FAA INTERFACE COMMITTEE

AC 90-80B REVISION WORKGROUP



PARTICIPANTS



HSAC

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Bristow

Chevron

ERA

PHI

FAA

ACTION ITEM LISTING

Assigned Action Item	Responsible Party	Due Date	Status
Provide listing of items to be considered for inclusion into the revised AC90-80	Bristow	4/15/2013	Complete
Provide listing of items to be considered for inclusion into the revised AC90-80	Chevron	4/15/2013	Complete
Provide listing of items to be considered for inclusion into the revised AC90-80	ERA	4/15/2013	Complete
Provide listing of items to be considered for inclusion into the revised AC90-80	PHI	4/15/2013	Complete
Present listing of items to workgroup	PHI	4/20/2013	Complete
Consolidate items into document for review	PHI	4/25/2013	Complete
Present draft document for workgroup review	PHI	4/29/2013	Complete
Review draft document for final revision and return	Bristow	5/2/2013	Complete
Review draft document for final revision and return	Chevron	5/2/2013	Complete
Review draft document for final revision and return	ERA	5/2/2013	Complete
Review draft document for final revision and return	PHI	5/2/2013	Complete
Incorporate changes from final review into draft document	PHI	10/20/2013	Pending
Forward completed draft document to AFS 420 for FAA review	PHI	10/21/2013	Pending

WHY THE REVISION?

Out of date/changes to references

- Delete any reference to 8260.3 and 8260.19 TERPS
- Delete any reference to LORAN
- Insert TSO C-194 for TAWS and C-145 and 146 for WAAS PG 11

Automated Type Approach technology introduction

- Change offset distances to the FAA certified MOA
- Add language for future Automated Approach Systems to follow
- Provide structure for other OEM's to base future development

WHY THE REVISION? (CONTINUED)

Items needing added, not embedded in rule based documents

- The addition of the 60nm X 80nm “Weather Box”
- Departure with 1/2sm visibility during offshore operations (Deviation to 135.213)
- WAAS & Onshore SIAP Approaches authorized as approved alternates

Improvements/Additions to current Training Programs

- Establish a training program that captures appropriate credit for current training
- Captures improvements in technology

REMAINING ACTIONS

Complete final draft

- We are reviewing the final draft
- Will have team review once complete

Present to the FAA

- AFS200, AFS400, AFS420, and AFS470 will review and provide any technical clarification prior to submission
- Requested Workgroup submittal by 18 October 2013

FDM SEGMENT



Surveillance and Broadcast Services

ADS-B Final Rule and Avionics Update

Presented to: HSAC

By: Allan Overbey

Date: October 17, 2013



Federal Aviation
Administration



Final ADS-B Rule Overview

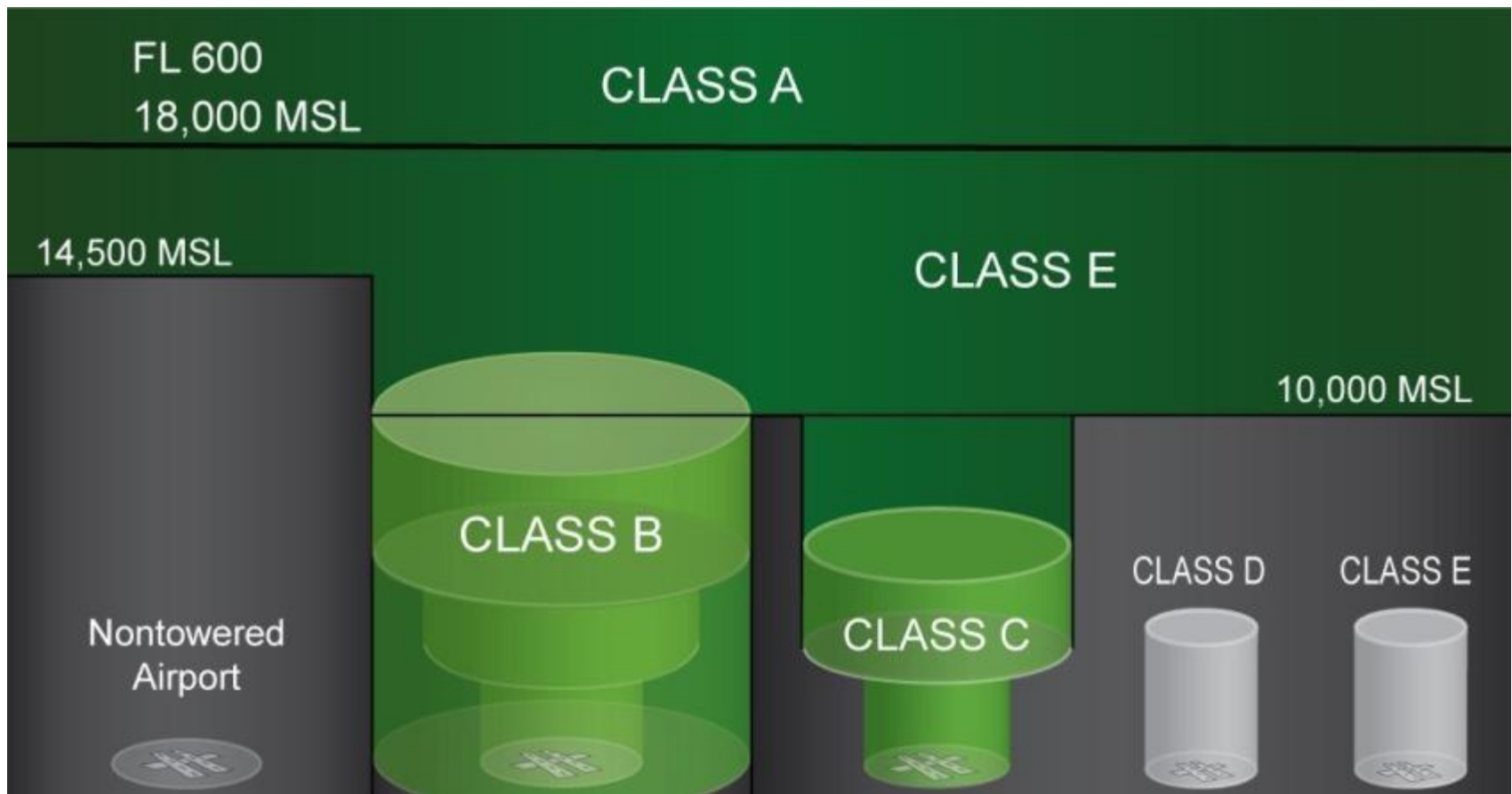
- **On May 27, 2010, the FAA published the Final Rule for ADS-B Out equipage**
 - This rule mandates performance requirements for ADS-B avionics that will be required to fly in certain airspace
 - ADS-B Out transmits location information received from the GNSS from the aircraft to ADS-B ground stations and to other aircraft equipped to receive ADS-B broadcasts
 - This rule does not mandate ADS-B In
- **The final rule establishes 2020 as the date by which all aircraft flying in the designated airspace must be equipped with ADS-B Out avionics**

Dual ADS-B Frequencies

- **Two frequencies have been designated for ADS-B transmissions in the National Airspace System:**
 1. 1090 Extended Squitter MHz (1090ES) for commercial aircraft
 2. Universal Access Transceiver 978MHz (UAT) for general aviation and airport vehicles. This frequency is needed because of the high-bandwidth required to transmit the weather data that is most beneficial for general aviation aircraft.
- **The rule does not preclude aircraft from equipping with both the 1090ES MHz and 978MHz or general aviation equipping with 1090ES MHz**



Required ADS-B Airspace (In Green)



Note: Applies to airspace over the Gulf of Mexico at and above 3,000' MSL within 12 NM of the coastline of the US

FAA-Approved V2 ADS-B Out Avionics, 1 of 3

as of Sep-2013

- * multiple STC dates; only earliest shown

Surveillance Manufacturer	Model #	Approved Position Source(s)	Aircraft	Approval Date	AML Approved
ITT Exelis / FreeFlight	FDL-978-TXG		VEHICLE	May 2012	Massport
ACSS	XS-950	RCI GLU-925	B767, B747	STC Jan 2012	Yes
Honeywell	XS-852	CMC CMA-4024-1 SBAS	N/A	Jan 2012	No
Trig-Avionics	TT-31	FreeFlight WAAS 1201, Garmin GNS400W/500W family, Accord Technology NexNav™ Mini GPS unit	Mooney M20B-M20G, M20J & M20K	STC May 2012*	Yes
FreeFlight	FDL-978-TX	FreeFlight WAAS 1201	Agusta Westland 139	STC Jun 2012	No
ACSS	XS-950	RCI GLU-920 (A320), Thales TLS8755-01-0101A/0102B (A330)	A320, A330	STC Jul 2012*	No
Honeywell	ISP-80A.1	Honeywell ADIRU Part#'s HG2030BE02, BE03 or BE04	A380	EASA TC Jul 2012	Yes via Production
Trig-Avionics	TT-22	FreeFlight WAAS 1201	King Air C-90A, Aviat/Pitts (aerobatic) S-76C	STC Nov 2012*	No (King Air) Yes (Aviat/Pitts) No (S-76C)

Note: "N/A" indicates equipment has received TSOA, but has not received any other certification



FAA-Approved V2 ADS-B Out Avionics, 2 of 3

as of Sep-2013

• * multiple dates; only earliest shown

Surveillance Manufacturer	Model #	Approved Position Source(s)	Aircraft	Approval Date	AML Approved
Garmin	GDL-88 GTX-23 GTX-33x w/ES GTX-330x GTX-3000 (GTX models require appropriate S/W rev)	Garmin GTN 625/635/650, GTN 725/750, GPS 400W, GNC 420W/420AW, GNS 430W/430AW, GPS 500W/530W (w/ or w/o TAWS) (all require appropriate S/W rev)	King Air C-90	STC Dec 2012*	Yes
FreeFlight	FDL-978-TX	FreeFlight WAAS 1201	Cessna 172S	STC Dec 2012	Yes
ACSS	XS-950	RCI GLU-920	A300/MD11	STC Jan 2013	Yes
Honeywell	MRC XPDR w/ADS-B Out	CMC CMA-3024 SBAS GNSSU MK II and CMA-4024 SBAS GNSSU	Agusta Westland 139	EASA TC Feb 2013	Yes via Production
Honeywell	XS-858B Transponder, P/N 7517402- 970	Honeywell GPS module (made by CMC), P/N 245-604067-100 (TSO-C145c /146c)	Gulfstream 450/550	TC amendment Feb 2013	Yes via Aircraft Service Change (ASC)
FreeFlight	FDL-978-XVR	FreeFlight WAAS 1201 (either external or integrated in FDL-978 box)	N/A	Jul 2013	No

Note: "N/A" indicates equipment has received TSOA, but has not received any other certification

FAA-Approved V2 ADS-B Out Avionics, 2 of 3

as of Sep-2013

• * multiple dates; only earliest shown

Surveillance Manufacturer	Model #	Approved Position Source(s)	Aircraft	Approval Date	AML Approved
NavWorx			N/A		No

Note: "N/A" indicates equipment has received TSOA, but has not received any other certification



FAA-Sponsored Projects that will result in Version 2 ADS-B Out Avionics

Surveillance Manufacturer	Model #	Planned Position Source(s)	Aircraft	Planned STC Availability	Operator
Rockwell	TDR-94D-550	Universal UNS-1Fw	Sikorsky 76/92	S76 STC Q4 2013 S92 STC Q1 2014	Various
FreeFlight	FDL-978-XVR	FreeFlight WAAS 1201	Bell 206B	STC Q4 2013	University of North Dakota
Rockwell	TPR 901-205	RCI GLU 925-001 RCI GLU 925-330	737-700/800/900 (aka "737NG")	Boeing Service Bulletin Q2 2014*	United
FreeFlight	FDL-978-XVR	FreeFlight WAAS 1201 (either external or integrated in FDL-978 box)	Various	Fixed-wing AML STC Q4 2013 Rotorcraft MML STC Q4 2013	Various (approximately 400 fixed-wing aircraft and rotorcraft; most in Alaska)

* Boeing has provided United with a Service Bulletin to wire the 737NG avionics bay for ADS-B Version 2; all 737NGs after Line Number 4522 have wiring provisions installed for ADS-B Version 2

FAA-Approved Version 2 ADS-B In Avionics

as of Sep-2013

Note: "N/A" indicates equipment has received TSOA, but has not received any other certification

Manufacturer	Model #	Aircraft	STC Date	AML Approved
Honeywell	TPA-100B	B747-400	June 2011	No
Honeywell	TPA-100B	A330/340	Dec 2011*	Yes via Production
ACSS	TCAS3000SP	A330/340	Dec 2011*	Yes via Production
Honeywell	TPA-100B	A318/319/320/321	Feb 2012*	Yes via Production
ACSS	TCAS3000SP	A318/319/320/321	Feb 2012*	Yes via Production
ACSS	TCAS3000SP	B767-300	May 2012	No
Garmin	GDL-88	King Air C-90	Dec 2012	Yes
ACSS	TCAS3000SP	A330	Jan 2013	No
FreeFlight	FDL-978-XVR	N/A	Jul 2013	No

* Airbus ATSAW (with and without ITP) received EASA approval in May 2011 as TC amendment; all A330/340s produced since Jan 2011 and all A320s produced since mid-2011 are ATSAW/ITP-capable



FAA-Sponsored Projects that will result in Version 2 ADS-B In Avionics

Manufacturer	Model #	Aircraft	Display	Planned STC Availability	Operator
FreeFlight	FDL-978-XVR	Bell 206B	Garmin 430/530 and wi-fi to T-PED	Q3 2013	University of North Dakota
FreeFlight	FDL-978-XVR	Various		Q3 2013	Various (approximately 400 fixed-wing aircraft and rotorcraft; most in Alaska)