



**Agenda Item 2: Review of global and CAR/SAM CNS/ATM developments**

**The Federal Aviation Administration Surveillance Broadcast Services Program**

*(Presented by United States of America)*

**SUMMARY**

The attached briefing presents information on the Federal Aviation Administration's Surveillance and Broadcast Services Program, including overall strategy, implementation status, rulemaking status and collaborative efforts with aviation community.

<b>ICAO strategic objectives:</b>	<i>A - Safety</i> <i>D - Efficiency</i>
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**1. Introduction**

1.1 The attached briefing presents information on the Federal Aviation Administration's Surveillance and Broadcast Services Program, including overall strategy, implementation status, rulemaking status and collaborative efforts with aviation community.

**2. Discussion**

2.1 The following areas of the FAA's Surveillance and Broadcast Services Program are contained in the presentation:

- a) Strategy
- b) Program Status
- c) Rulemaking Status
- d) Risk
- e) Next Steps

**3. Conclusion**

3.1 States are invited to take into account the information presented in the attached briefing to better understand the United States plans and strategy for surveillance and broadcast services.

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# Surveillance and Broadcast Services

## GREPECAS CNS/ATM/SG/1

### Status Update

Robert Novia, FAA, Surveillance and Broadcast Services, Operations Lead

March 2010



Federal Aviation Administration



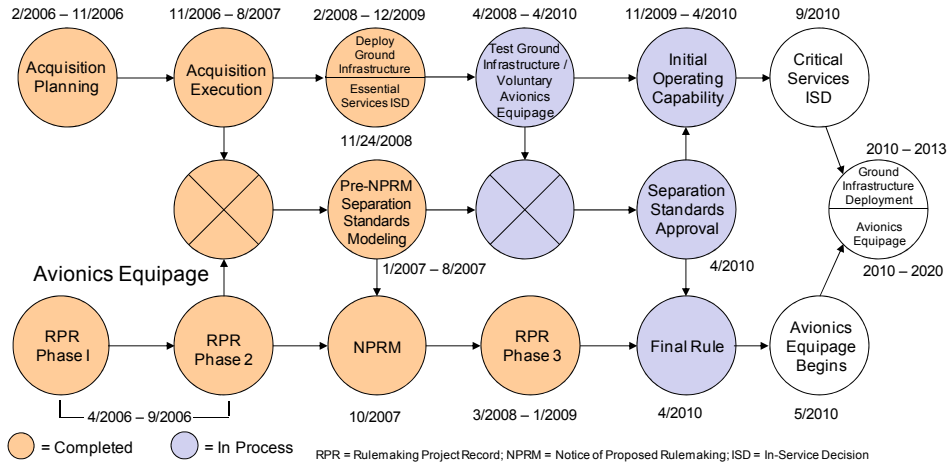
## Agenda

- **Strategy**
- **Program Status**
  - ESA Key Site Status
  - CSA Key Site Status
    - AWOS Information
  - WSA Key Site Status
- **Rulemaking Status**
- **Risks**
- **Next Steps**



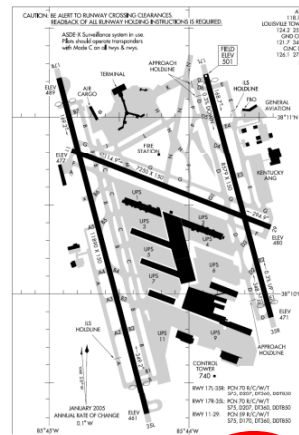
# Strategy

## Ground Infrastructure



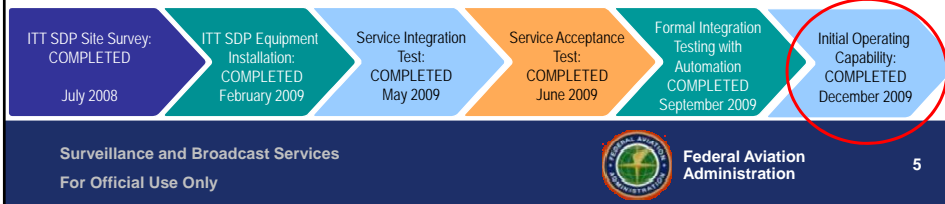
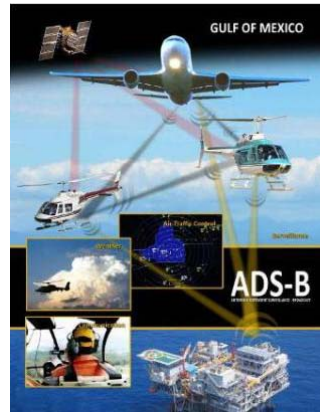
## Critical Services: Louisville 'Key Site'

- Louisville Terminal Service Volume (#85) / Surface Service Volume (#211)
- 2 Radios for Terminal; 2 Radios for Surface
- SDP: Louisville TRACON / SDF ATCT
- Automation: CARTS
- Essential Services Activated: October 2009
- Initial Operating Capability: November 2009



## Critical Services: Central Service Area Key Site

- Gulf of Mexico Service Volumes (#179 & #180)
- SDP: Houston ARTCC - Automation: HOST
- Critical Services Installations as of December 2009 IOC:
  - VHF Communications: 7
  - ADS-B: 18
  - AWOS: 21
- **Post IOC Activity:**
  - VHF - Communications
    - 2 remaining sites (Key West in June 2010, Bullwinkle in August 2010)
  - ADS-B - Surveillance
    - 3 remaining sites planned for May 2010
  - AWOS - Weather Installations
    - 3 Planned for February 2010 (1 Complete)
    - 2 Planned for April 2010
    - 2 Planned for May 2010
    - 5 TBD



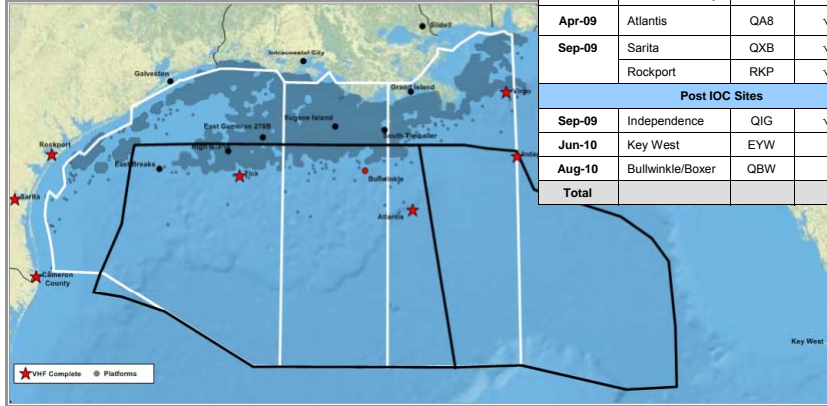
## Upcoming AWOS Certification Schedule

Month	Site	ID	Status
<b>IOC Sites</b>			
12-09	Innovator	MYT	✓
	East Breaks 165	EMK	✓
	Ship Shoal 178	SPR	✓
	Independence	IPN	✓
	Gunnison	GUL	✓
	Magnolia	GBK	✓
<b>Post IOC Sites</b>			
03-01-10	Front Runner Spar	GRY	
03-02-10	Mississippi Canyon 311	MDJ	
03-02-10	West Delta 27	DLP	
03-15-10	Eugene Island 215	EJR	
03-16-10	East Cameron 278B	EHC	
03-22-10	Vermilion 26	VNP	
03-22-10	South Marsh 268A	SCF	
03-29-10	Sabine Pass 13	VBS	
03-29-10	West Cameron 368B	CRH	
03-29-10	High Island 376B	HQI	
03-30-10	Boomvang	VAF	
04-02-10	Galveston 424C	GVX	
04-03-10	Mustang Island 85A	MZG	
04-03-10	Brazos 451	BZX	
04-04-10	Mustang Island 31	MIU	
04-05-10	North Padre 975	OPM	
	Main Pass 140	MIS	
	Brazos 133B	BBF	
	Nakika	IKT	
	East Cameron 47JP	CMB	
	Salsa	GHB	
	South Timbalier 301	STZ	
	Atlantis	ATP	
	Hoover-Diana	HHV	
	Vermilion 331		
	Viosca Knoll 203		
	Mobile 821		
	Galveston 255		
	Matterhorn		

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# Gulf of Mexico VHF Communications Deployment Plan

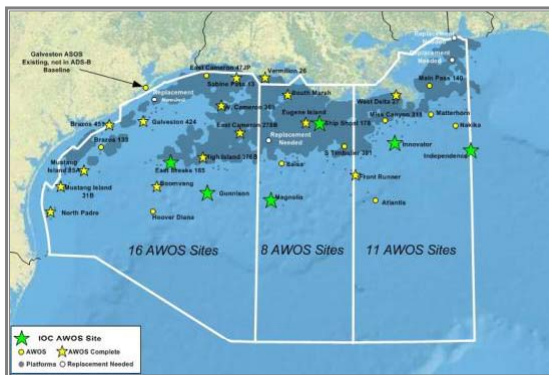


Air-To-Ground (VHF) Communications				
Month	Site	ID	Status	Total
<b>IOC Sites</b>				
Mar-09	Tick	QTC	√	3
	Virgo	QVO	√	
	Cameron County	QCM	√	
Apr-09	Atlantis	QA8	√	1
Sep-09	Sarita	QXB	√	2
	Rockport	RKP	√	
<b>Post IOC Sites</b>				
Sep-09	Independence	QIG	√	1
Jun-10	Key West	EYW		1
Aug-10	Bullwinkle/Boxer	QBW		1
<b>Total</b>				<b>9</b>

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# Gulf of Mexico Weather - AWOS Deployment Plan



AWOS				
Month	Site	ID	Status	Total
<b>IOC Sites</b>				
May-09	Innovator	MYT	√	1
Jun-09	East Breaks 165	EMK	√	1
Sep-09	Ship Shoal 178	SPR	√	2
Nov-09	Independence	IPN	√	2
	Gunnison	GUL	√	
Nov-09	Magnolia	GBK	√	2
<b>Post IOC Sites</b>				
Mar-09	West Delta 27	DLP	√	1
Jun-09	Vermilion 26	VNP	√	2
	Galveston 424C	GVX	√	
Jul-09	Mustang Island 31	MIU	√	2
	Front Runner Spar	GRY	√	
Aug-09	East Cameron 278B	EHC	√	2
	Sabine Pass 13	VBS	√	
Sep-09	Eugene Island 215	EIR	√	1
Oct-09	North Padre 975	OPM	√	3
	South Marsh 268A	SCF	√	
	Brazos 451	BOQ	√	
Nov-09	Mustang Island 85A	MZG	√	2
	West Cameron 368B	CRH	√	
Dec-09	High Island 376B	HQI	√	2
	Boomvang	VAF	√	
Feb-10	Mississippi Canyon 311	MDJ	√	3
	Main Pass 140	MIS		
	Brazos 133B	BBF		
Mar-10	Nakika	IKT		2
	East Cameron 47JP	EMB		
Apr-10	Salsa	GHB		2
	South Timballer 301	STZ		
May-10	Atlantis	ATP		2
	Hoover-Diana	HHV		
Total	Vermilion 331			5
	Viosca Knoll 203			
	Mobile 821			
	Galveston 255			
	Matterhorn			
<b>Total</b>				<b>35</b>

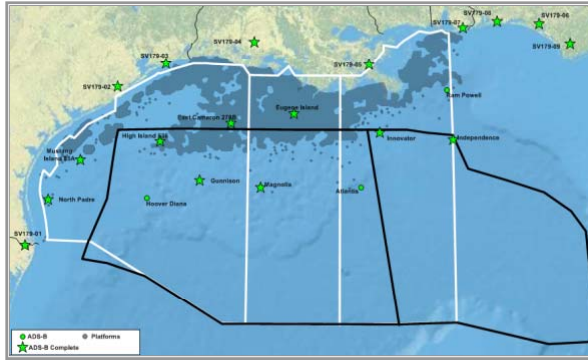
- Vermilion 311 – replacement candidate ATP VR410 (coverage analysis underway)
- Viosca Knoll 203 – replacement candidate Petronius VK786A (Site survey results good)
- Mobile 821 – replacement candidates MP289C or VK817A (Site survey results good, option being evaluated)
- Galveston 255 – replacement candidate HI179A (Site survey scheduled for 2/26)

• Specific site deployment is dynamic and changes regularly (weekly) based on platform availability and deployment agreements between ITT and platform owner

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## Gulf of Mexico Surveillance - ADS-B Deployment Plan



Note: White Border – Low Altitude Sector Boundaries  
Black Border – High Altitude Sector Boundaries

- Specific site deployment is dynamic & changes weekly based on platform availability & deployment agreements between ITT and platform owner

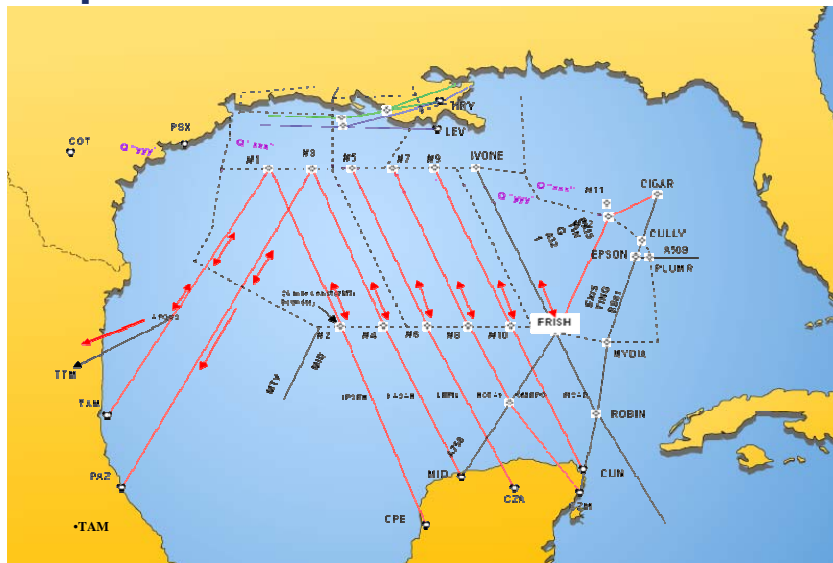
ADS-B				
Month	Site	ID	Status	Total
<b>IOC Sites</b>				
May-09	Innovator	MYP	✓	4
	Steelfield Road (6)	FD35	✓	
	Navarre (8)	NKL	✓	
	White City (9)	A51	✓	
Jun-09	Jack Edwards Airport* (7)	JKA	✓	6
	Brazoria Airport (2)	LBX	✓	
	Crown (3)	T90	✓	
	Vanguard (4)	13LS	✓	
	Pl. Ala Hache (5)	7LA1	✓	
	Brownsville Airport* (1)	BRO	✓	
Aug-09	High Island 536C	OHI	✓	2
	East Cameron 278B	ECH	✓	
Sep-09	North Padre Island 975	OPM	✓	4
	Independence	IPN	✓	
	Mustang Island 85A	MZG	✓	
	Eugene Island 215	EIR	✓	
<b>Post IOC Sites</b>				
Oct-09	Gunnison	GUL	✓	1
Nov-09	Magnolia	GBK	✓	1
May-10	Atlantis	ATP	✓	3
	Ram Powell	QRR	✓	
	Hoover Diana	HHV	✓	
<b>Total</b>				<b>21</b>

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## Proposed GOMEX Route Structure

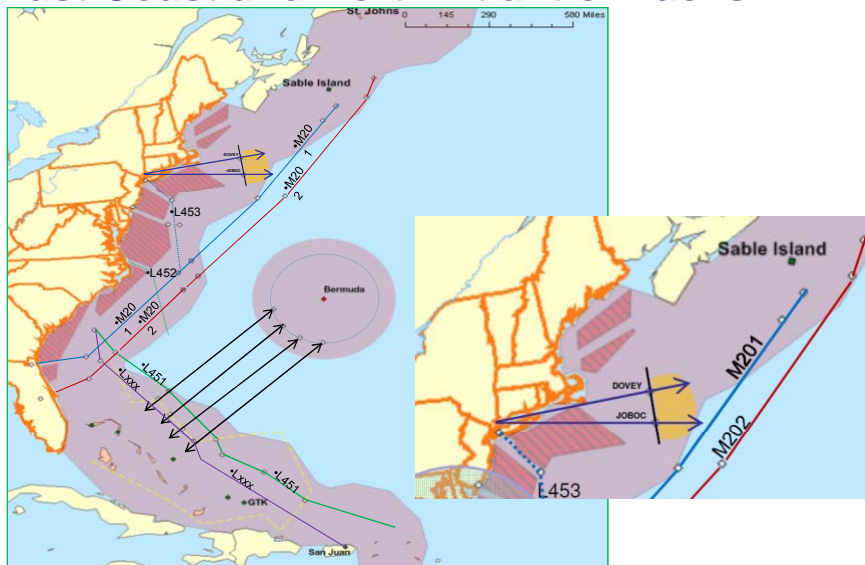


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## East Coast and North Atlantic Tracks



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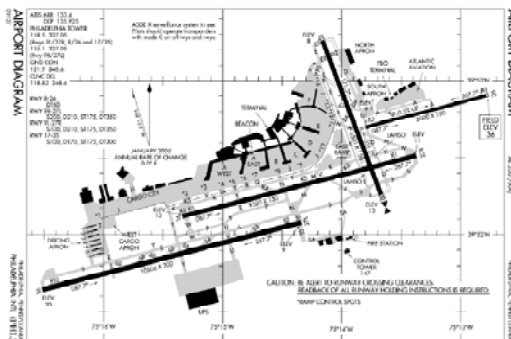


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## Critical Services: Philadelphia 'Key Site'

- Philadelphia Terminal Service Volume (#28) / Surface Service Volume (#207)
- 5 Radios for Terminal; 2 Radios for Surface
- SDP: Philadelphia TRACON / Philadelphia ATCT
- Automation: STARS and ASDE-X
- Essential Services Activated: By February 28, 2010



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## Critical Services: Western Service Area

### Juneau En Route Service Volume 178

SDP: Anchorage ARTCC      Automation: MEARTS

- Separation Standards data collection - Complete
- Draft Separation Standards modeling - Complete
- Initial SRMD review – In Progress

Feb Activities

Activities/Issues

- MEARTS- Code changes are required to process ADS-B test messages. Expect defined resolutions by February 26
- Flight Testing & Analysis – March 2010
- OT Quicklook report- March 2010
- OT Regression Testing – March 2010
- Separation Standards/SRMD Approval – April 2010 (medium risk)

Installation

- Four Radio Stations, two operational for IOC
- Sisters Island & AT& T Mile 11 – Complete
- Williams Mountain & Gustavus - installation in progress



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## Rulemaking Next Steps: Schedule to Final Rule

Milestone	Planned Date of Completion	Status / Comments
FAA Rulemaking Team finalizes RPR Phase 3	January 14, 2009	Complete
RPR Phase 3 Submitted to ARM	January 21, 2009	Complete
Rulemaking Council Approval of RPR	January 27, 2009	Complete
Rulemaking Team Drafts Final Rule	May 2009	Complete
Final Rule Economic Assessment	August 2009	Complete
Final Rule Concurrence through Directors	October 2009	Complete
Final Rule Concurrence through Associates	November 2009	Complete
Final Rule Concurrence through Administrator	December 2009	Complete
Final Rule Approved through OST	January 2010	Complete – 2/12/2010
Final Rule Approved through OMB	April 2010	Ongoing
Final Rule Published in Federal Register	May 2010	

RPR = Rulemaking Project Record

TSO-166b and TSO-154c were issued by the FAA on December 2, 2009

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## Program Status: Risks (as of 02/18/10)

- 11 Rated Risks: 4 High, 4 Medium, 3 Low
- 4 Issues
- Next Risk Board: March 4

### High Risks

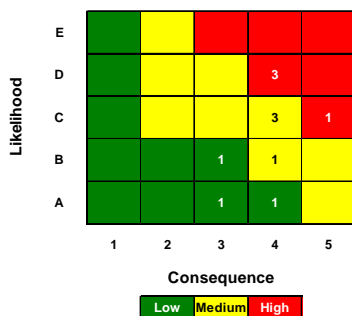
Risk 1: If NAS users demonstrate active opposition to avionics related airspace mandates, there may be delays in required rulemaking activities and/or the program may experience a reduction in benefits.(5C)

Risk 69: If the timeliness and quality of initial submissions and updates to the applicant's applications and design, inspection and testing data and/or Aircraft Certification Service resource constraints do not support the In-Trail Procedures (ITP) team's assumption for the timeline of the STC process for the 747-400 ITP avionics, then the start of the ADS-B ITP Operational Flight Evaluation may be delayed beyond December 2010.(4D)

Risk 77: Based on the SURF-IA SPR requirement for TIS-B integrity, a TIS-B system redesign would have to be considered resulting in costs incurred, or resulting in the loss of benefits if TIS-B system redesign is not viable.(4D)

Risk 93: If the deficiencies, which are required for remedy prior to IOC, are not resolved, then the Surveillance and Broadcast Services (SBS) Philadelphia Initial Operating Capability (IOC) maybe delayed beyond the planned date of February 2010. (4D)

Risk Summary



Source: SBS Risk Database

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## SBS Next Steps

- **Continue to Work Collaboratively with Aviation Community**
  - ICAO
  - RTCA
    - Air Traffic Management Advisory Committee (ATMAC)
    - Special Committee 186 (SC186)
    - Requirements Focus Group (RFG)
  - Aviation Rulemaking Committee (ARC)
  - Customer MOU's
  - Outreach at Association Forums
- **Continue to Meet Major Program Milestones**
  - Integrity / Discipline
  - Transparency
  - Measured Risk Taking
- **Monitor Quality of Service and Adjust Investments**

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