

Airport Issues in Considering Spaceport Development

Prepared for: Transportation Research Board (TRB)
Annual Meeting
Session 782

Presented by: Elliott Black
Director
Office of Airport Planning and Programming

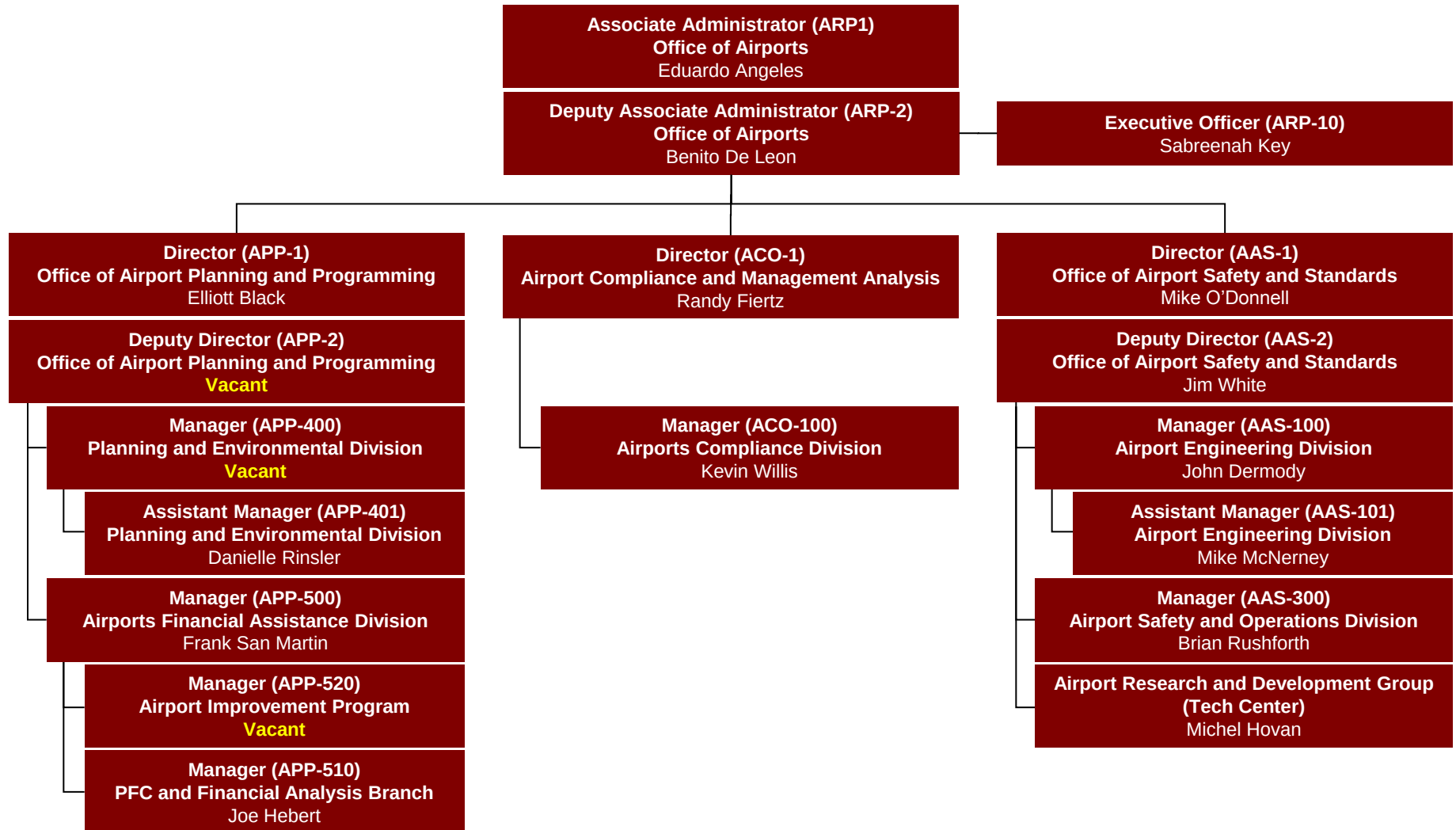
Date: Wednesday, January 14, 2015



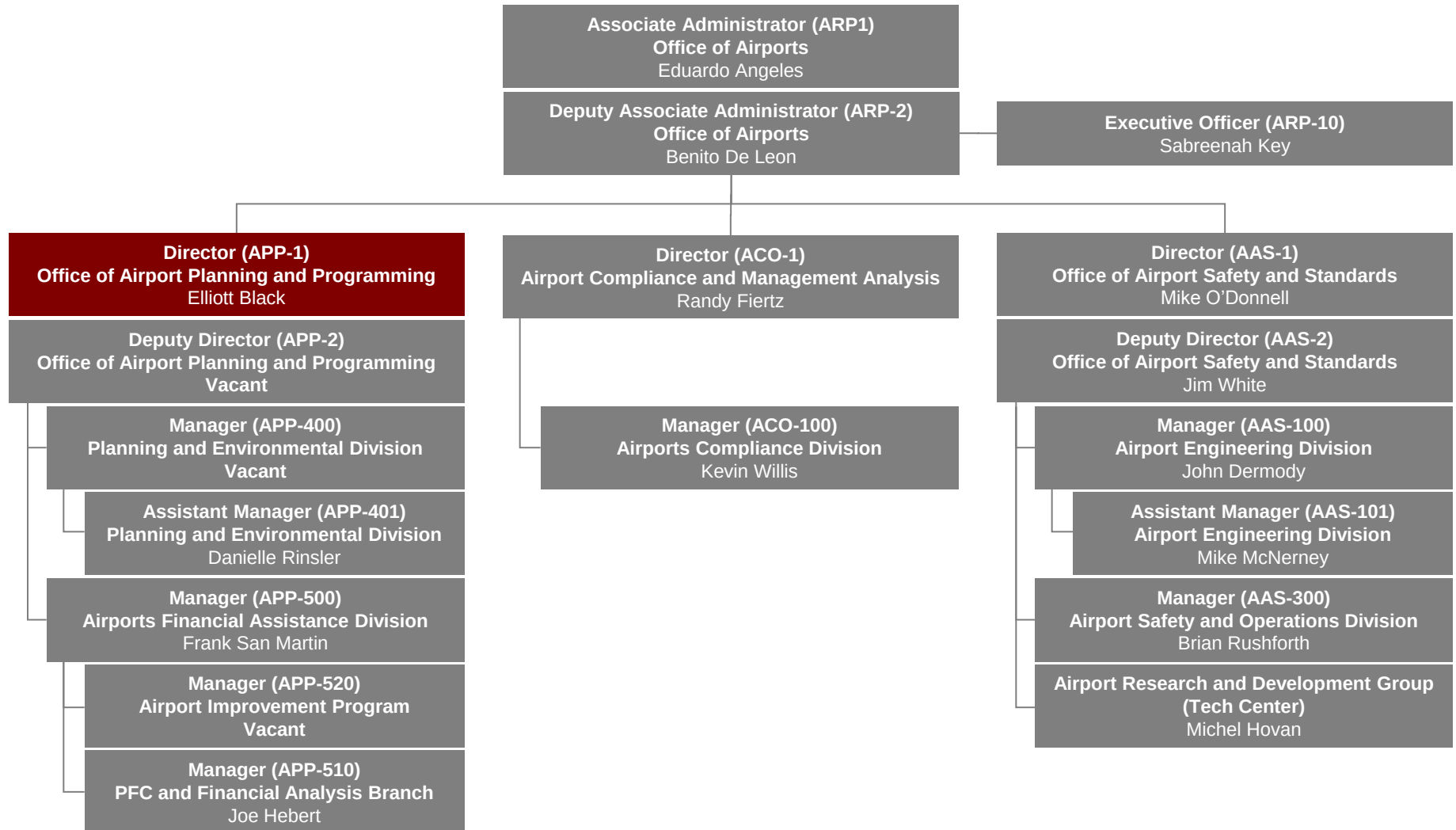
Federal Aviation
Administration



Office of Airports—Headquarters Management Team

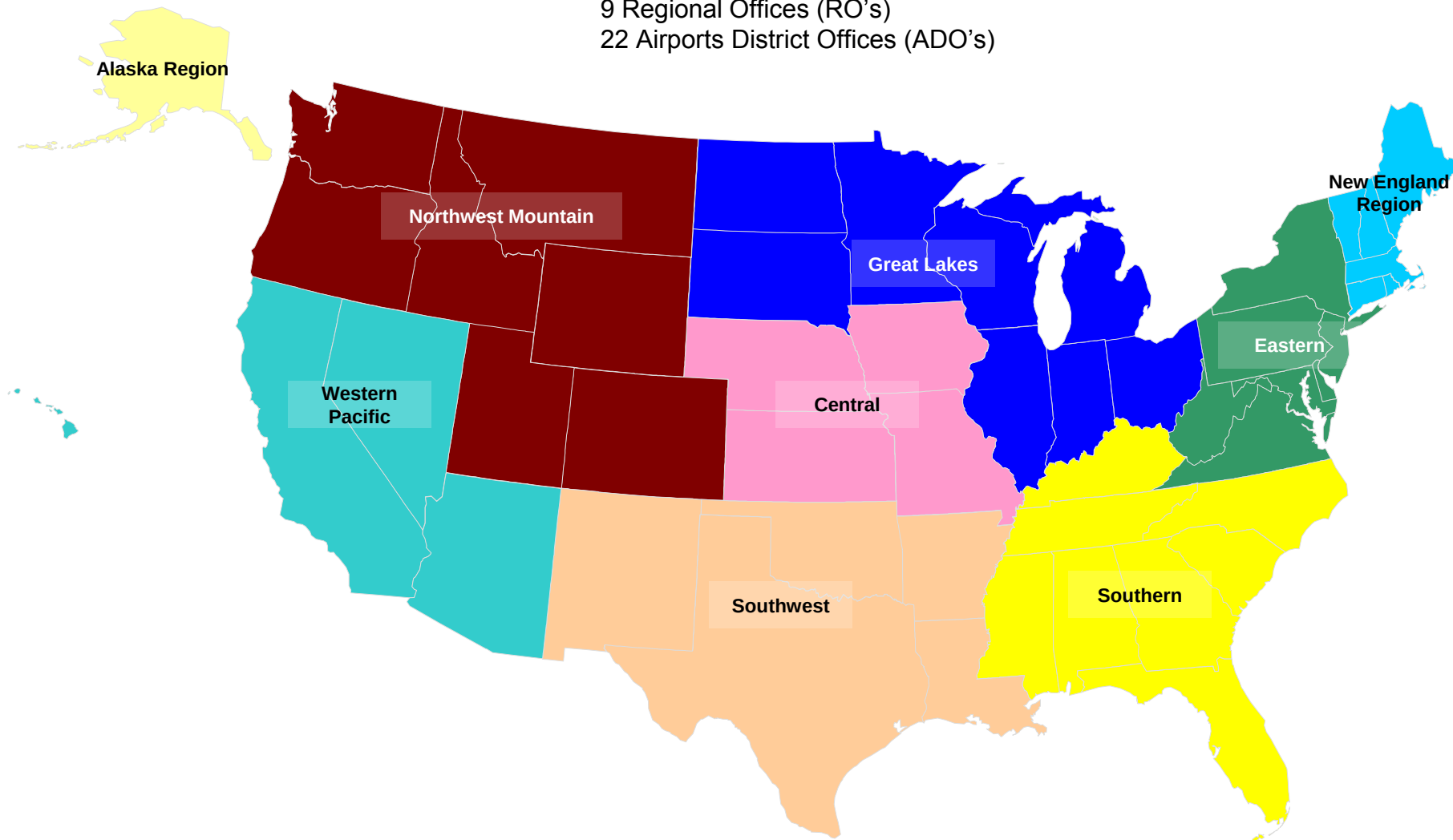


Office of Airports—Headquarters Management Team



Office of Airports—Regional Organization

9 Regional Offices (RO's)
22 Airports District Offices (ADO's)



Context: The U.S. system of airports

as of September 30, 2014

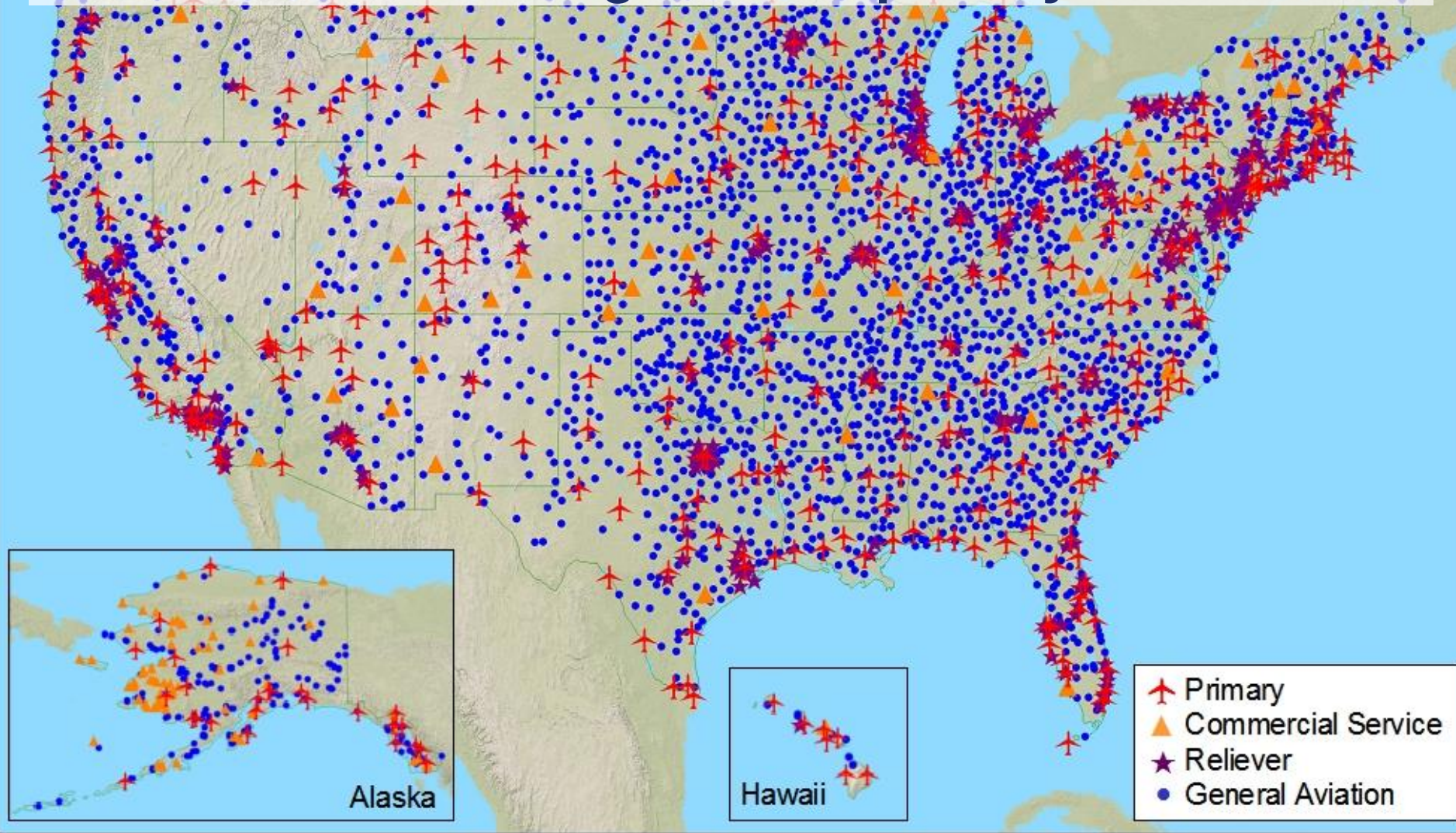
- **19,360** airports overall
- **14,212** airports designated as private-use
- **5,148** airports open to the public
- **3,331** existing airports in the National Plan of Integrated Airport Systems (“NPIAS”)
- **544** airports certificated under Part 139 (commercial service by aircraft with 9 or more seats)
- **389** primary airports (scheduled commercial service with at least 10,000 annual enplanements)

National Plan of Integrated Airport Systems (NPIAS)

	Airport Type	Number of Airports	% of U.S. Enplanements	Examples
Primary	Large Hub (>1.0% of all enplanements)	30	72.2%	DFW, Houston, Atlanta, LAX, Denver, etc.
	Medium Hub (0.25 - 1.0% of all enplanements)	33	16.0%	Anchorage, Omaha, Memphis, Burbank, etc.
	Small Hub (0.05 - 0.25% of all enplanements)	71	8.3%	Atlantic City, Fresno, Little Rock, etc.
	Non-Hub (>10,000 enplanements, but less than 0.05% of all enplanements)	259	3.4%	Topeka, Hyannis, Missoula, Roswell, Monterey, etc.
	Subtotal—Primary airports	393		
Nonprimary	General Aviation—National	82		Van Nuys, Teterboro
	General Aviation—Regional	457		Frederick, MD
	General Aviation—Local	1,268		Ocean City, MD
	General Aviation—Basic	880		Luray, VA
	General Aviation—Unclassified	251		Everglades Airpark
	Subtotal—Nonprimary airports	2,938	0.1%	
	Total—existing NPIAS airports	3,331		

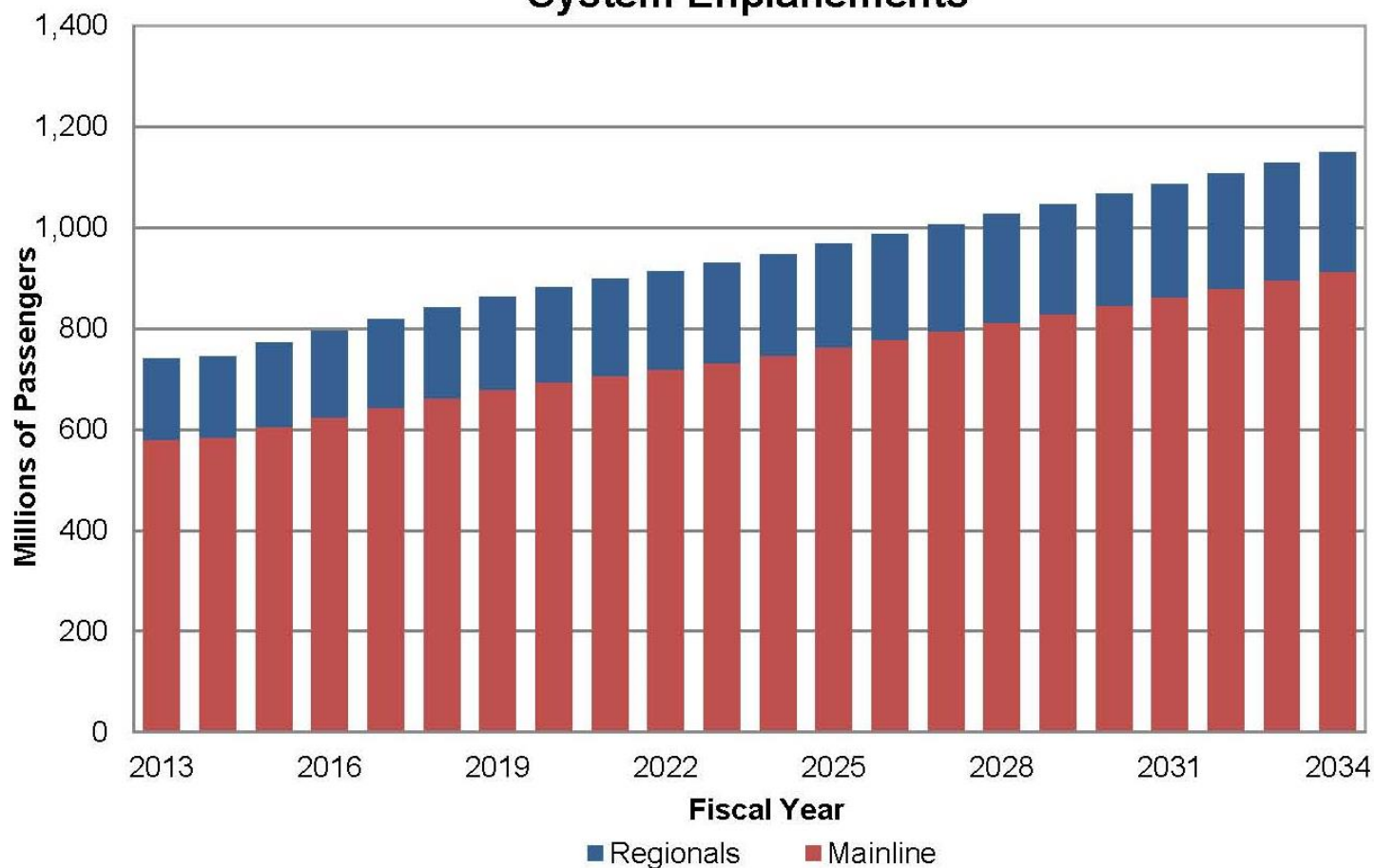
As of September 30, 2014

National Plan of Integrated Airport Systems (NPIAS)



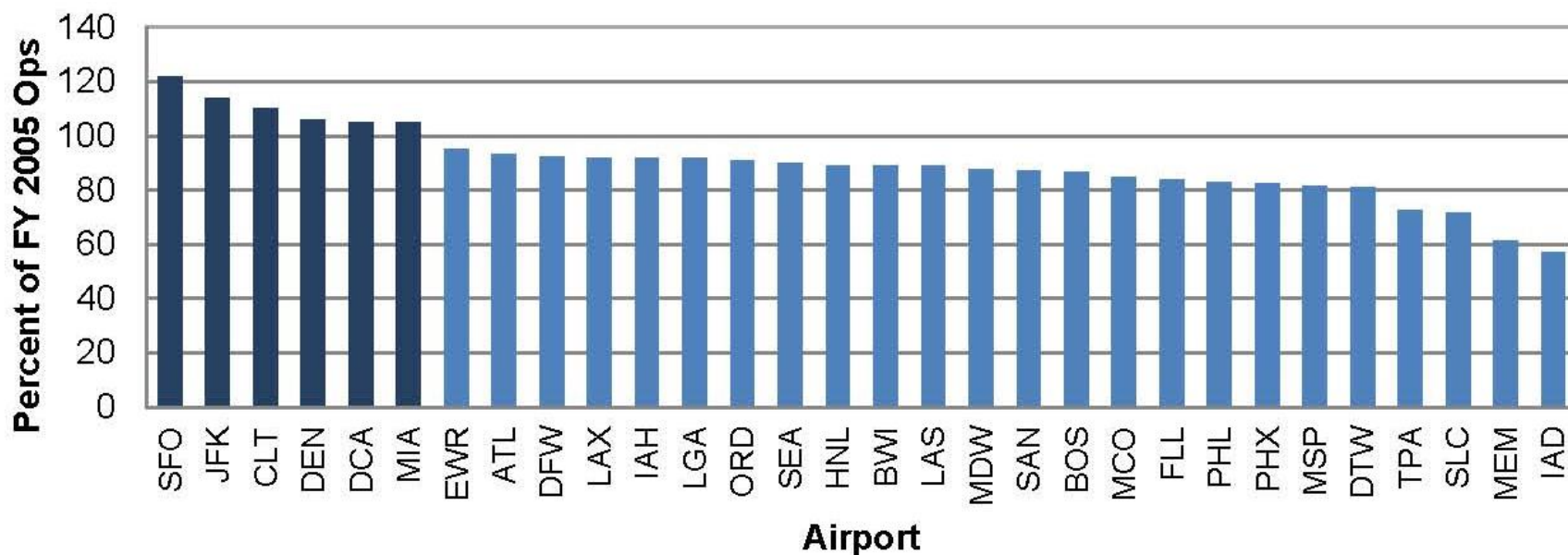
From the Aerospace Forecast

U.S. Commercial Air Carriers System Enplanements

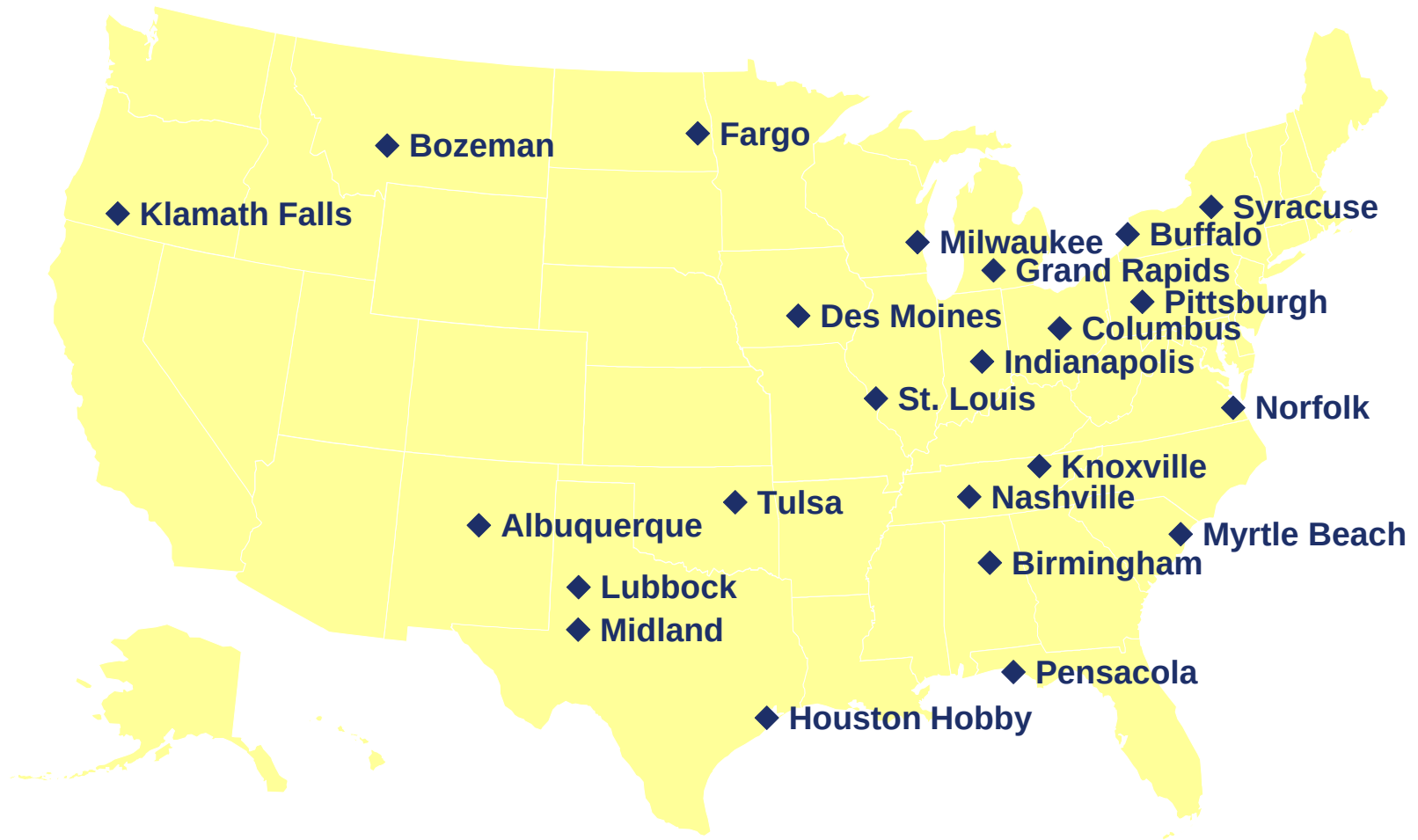


From the Aerospace Forecast (cont'd)

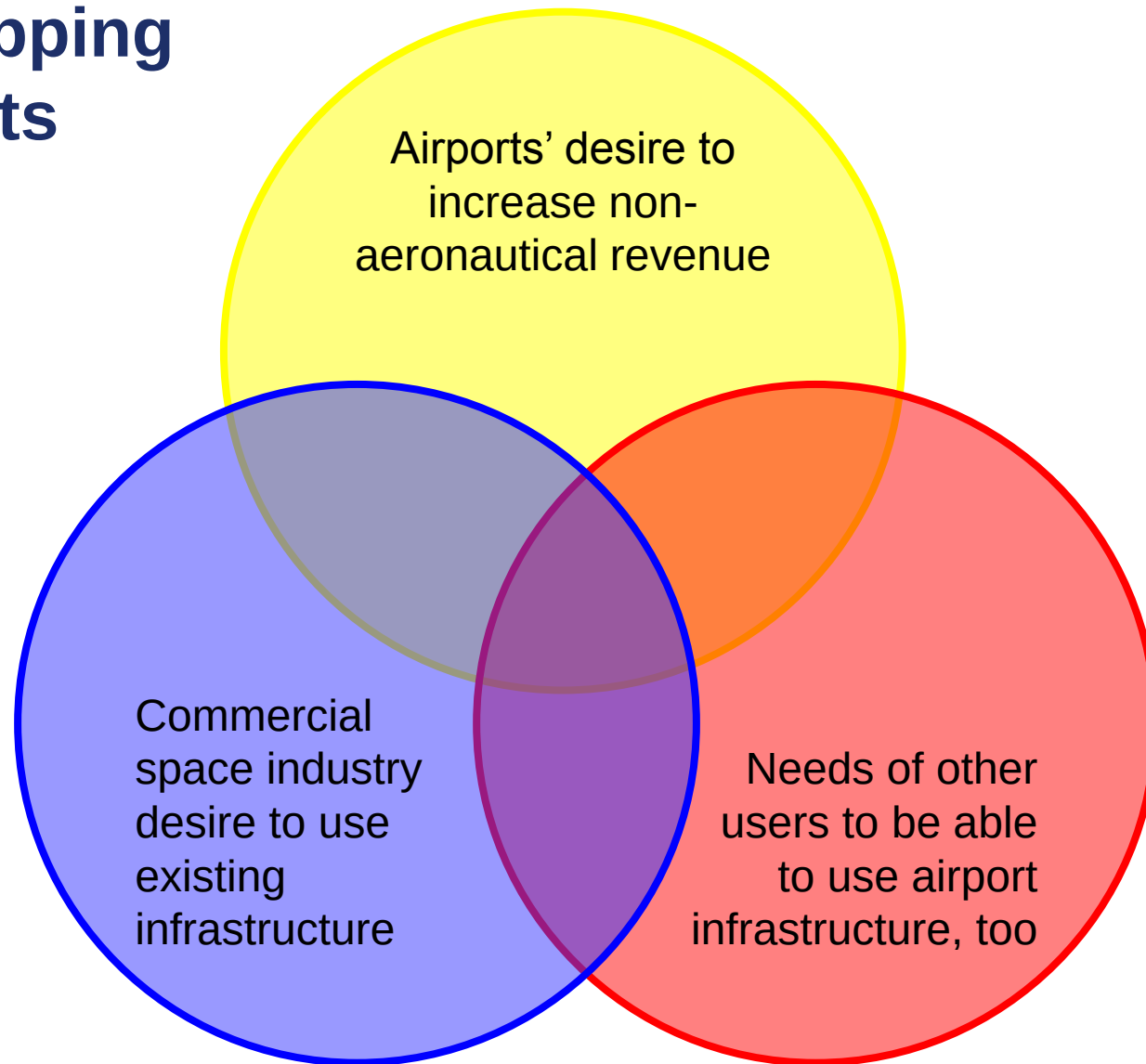
**Only Six of Core 30 Airports
are above 2005 Activity Levels
FY 2013 VS. FY 2005 Commercial Activity**



30 Days (July 2 to August 2, 2014)



Overlapping Interests





Federal Aviation Administration

MEMORANDUM

Date: October 20, 2014

To: Regional Airports Division Managers
610 Branch Managers
620 Branch Managers
Airports District Office Managers

From: *Glenn Beck*
Director, Office of Airport Planning and Programming (APP-1)
Mr. Smith
Director, Office of Airport Compliance (ACO-1)
Mr. [unclear]
Director, Office of Airport Safety and Standards (AAS-1)

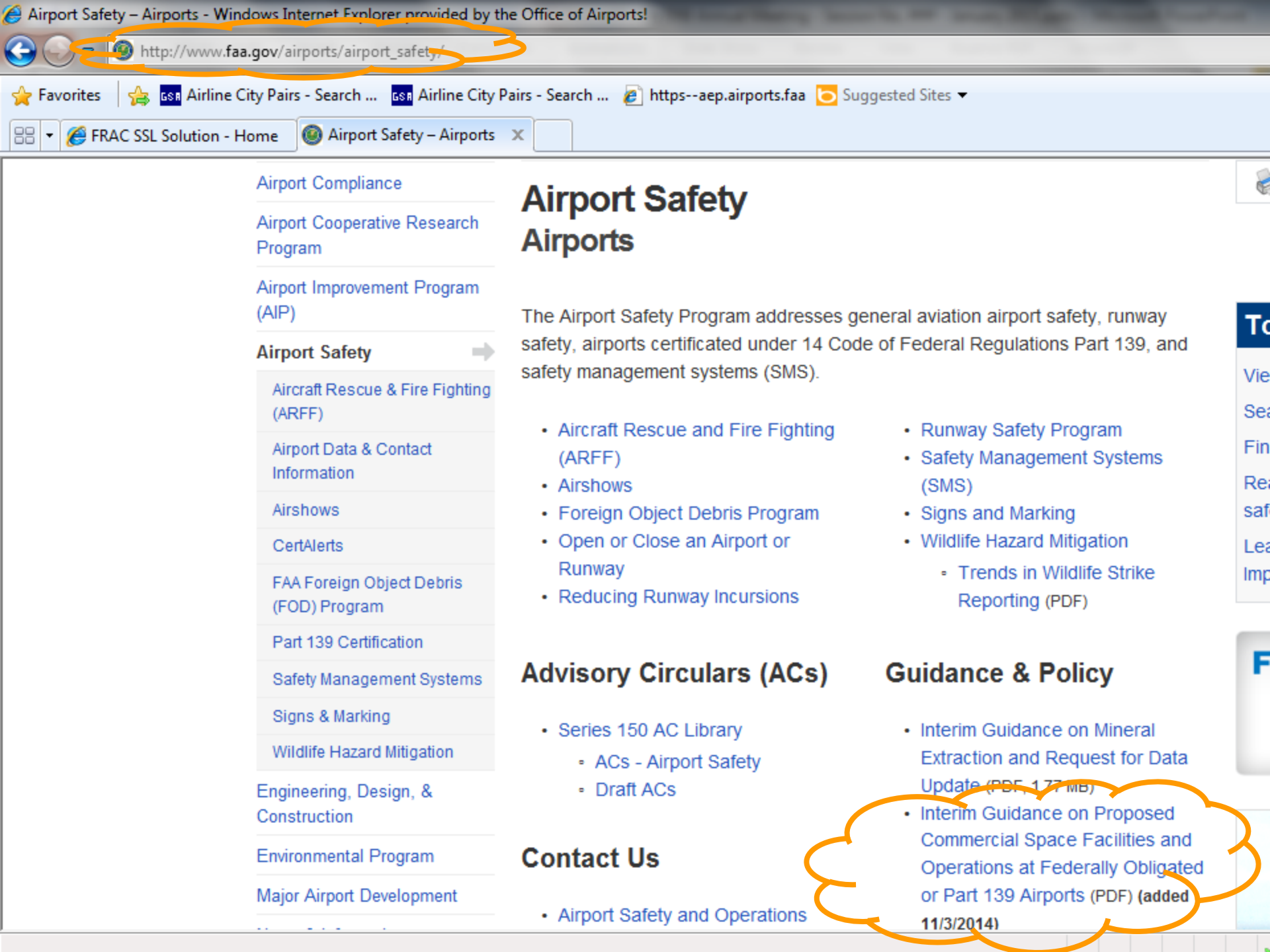
Subject: **Proposed commercial space facilities and operations at Federally-obligated or Part 139 airports**

The FAA is receiving an increasing number of inquiries from both private industry and airport operators to establish commercial space launch sites at or near Federally-obligated airports, including general aviation airports and airports certificated under 14 CFR part 139.

The Office of Airports (ARP) is working with the FAA's Office of Commercial Space Transportation (AST) and other parts of the FAA to establish processes to facilitate coordinated agency-wide reviews of such proposals.

This memorandum provides summary-level guidance for both FAA personnel and airport operators on requirements that airport operators (and the FAA's Office of Airports) must consider when evaluating such proposals in a manner consistent with existing statutes, regulations, and policy. We encourage personnel in the Regional offices to convey this memorandum to all Federally obligated airports and any that are certificated under Part 139. This memorandum will also be available on the FAA's public website.

Regional Offices and ADOs will notify AST, APP, AAS and ACO when they are contacted by any entity considering a proposed spaceport facility or any such proposed operations at Federally obligated or Part 139 airports.



[Airport Compliance](#)

[Airport Cooperative Research Program](#)

[Airport Improvement Program \(AIP\)](#)

Airport Safety →

[Aircraft Rescue & Fire Fighting \(ARFF\)](#)

[Airport Data & Contact Information](#)

[Airshows](#)

[CertAlerts](#)

[FAA Foreign Object Debris \(FOD\) Program](#)

[Part 139 Certification](#)

[Safety Management Systems](#)

[Signs & Marking](#)

[Wildlife Hazard Mitigation](#)

[Engineering, Design, & Construction](#)

[Environmental Program](#)

[Major Airport Development](#)

Airport Safety Airports

The Airport Safety Program addresses general aviation airport safety, runway safety, airports certificated under 14 Code of Federal Regulations Part 139, and safety management systems (SMS).

- [Aircraft Rescue and Fire Fighting \(ARFF\)](#)
- [Airshows](#)
- [Foreign Object Debris Program](#)
- [Open or Close an Airport or Runway](#)
- [Reducing Runway Incursions](#)
- [Runway Safety Program](#)
- [Safety Management Systems \(SMS\)](#)
- [Signs and Marking](#)
- [Wildlife Hazard Mitigation](#)
 - [Trends in Wildlife Strike Reporting \(PDF\)](#)

Advisory Circulars (ACs)

- [Series 150 AC Library](#)
 - [ACs - Airport Safety](#)
 - [Draft ACs](#)

Contact Us

- [Airport Safety and Operations](#)

Guidance & Policy

- [Interim Guidance on Mineral Extraction and Request for Data Update \(PDF, 1.77 MB\)](#)
- [Interim Guidance on Proposed Commercial Space Facilities and Operations at Federally Obligated or Part 139 Airports \(PDF\) \(added 11/3/2014\)](#)

Major sections of the guidance

- Standards
- Safety and operations
- Planning
- Environmental review
- Funding questions
- Compliance issues



Key points: Standards

“Although many launch vehicles have characteristics similar to traditional aircraft (including horizontal takeoff), their potential impact to airport design standards (e.g., pavement, signage, marking, lighting, etc.) is not yet fully understood. As the industry evolves and more data becomes available, ARP will continue to evaluate whether these vehicles can be accommodated within existing design categories.”

Key points: Safety and operations

“The FAA will have to evaluate the compatibility of specific proposed spaceport operations with Part 139 operations, and there are specific issues that an airport operator would have to address in their Airport Certification Manual (ACM) and Airport Emergency Plan (AEP). Airport operators must coordinate with the designated Airport Certification Safety Inspector in the appropriate Regional Office.”

Key points: Planning

“All Federally-obligated airports are required to maintain a current Airport Layout Plan (ALP) that is subject to approval by ARP. The approval is predicated on compliance with FAA design standards and the enduring safety, efficiency and utility of the airport. Airports must work with the appropriate Airports District Office (ADO) or Regional Office (RO) to review any proposed changes in facilities or operations.”

Key points: Environmental

“All Federally obligated airports must comply with Federal, state and local environmental laws, regulations and ordinances.”

“In addition, proposals to change the ALP are federal actions subject to environmental review in accordance with the National Environmental Policy Act (NEPA).”

“AST will be the lead office, within FAA, for conducting the NEPA review for (1) licensing commercial space launch site operations, and (2) associated changes to the ALP arising from a proposed commercial space launch site at a Federally obligated airport. AST will coordinate with ARP to ensure the proper scope and timing of the environmental reviews relating to connected actions and cumulative impacts. “

Key points: Environmental (cont'd)

“Because spaceport operations at airports may have different types of noise sources (e.g. aircraft, RLVs, ELVs), the Office of Environment and Energy must be consulted on the acceptability of the proposed noise model and methodology.”

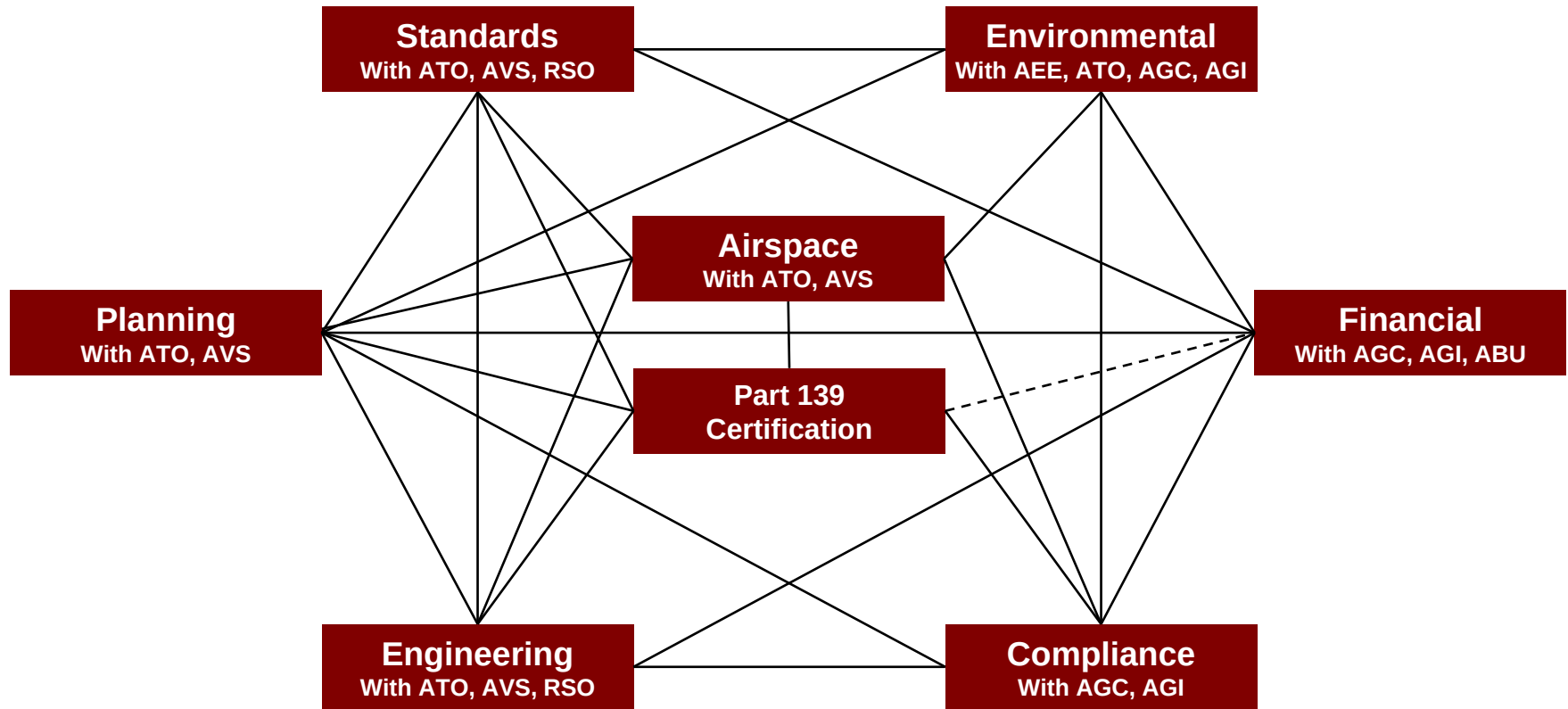
Key points: Compliance

“At this time, commercial space represents a rapidly evolving industry and the FAA has not yet made a determination as to what specific types or aspects of spaceport operations might eventually be considered ‘aeronautical activity’.”

“For the moment, therefore, the most important consideration is to identify the extent to which proposed spaceport operations could affect aeronautical uses and users, either at the specific airport in question, at nearby airports and/or in the airspace.”

Cross-disciplinary coordination

(broadly applicable—not limited to spaceport issues)



Questions?



Federal Aviation
Administration



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