

Flight Standards Service Pilot Deviations

To: EBACE 2008

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**Federal Aviation
Administration**

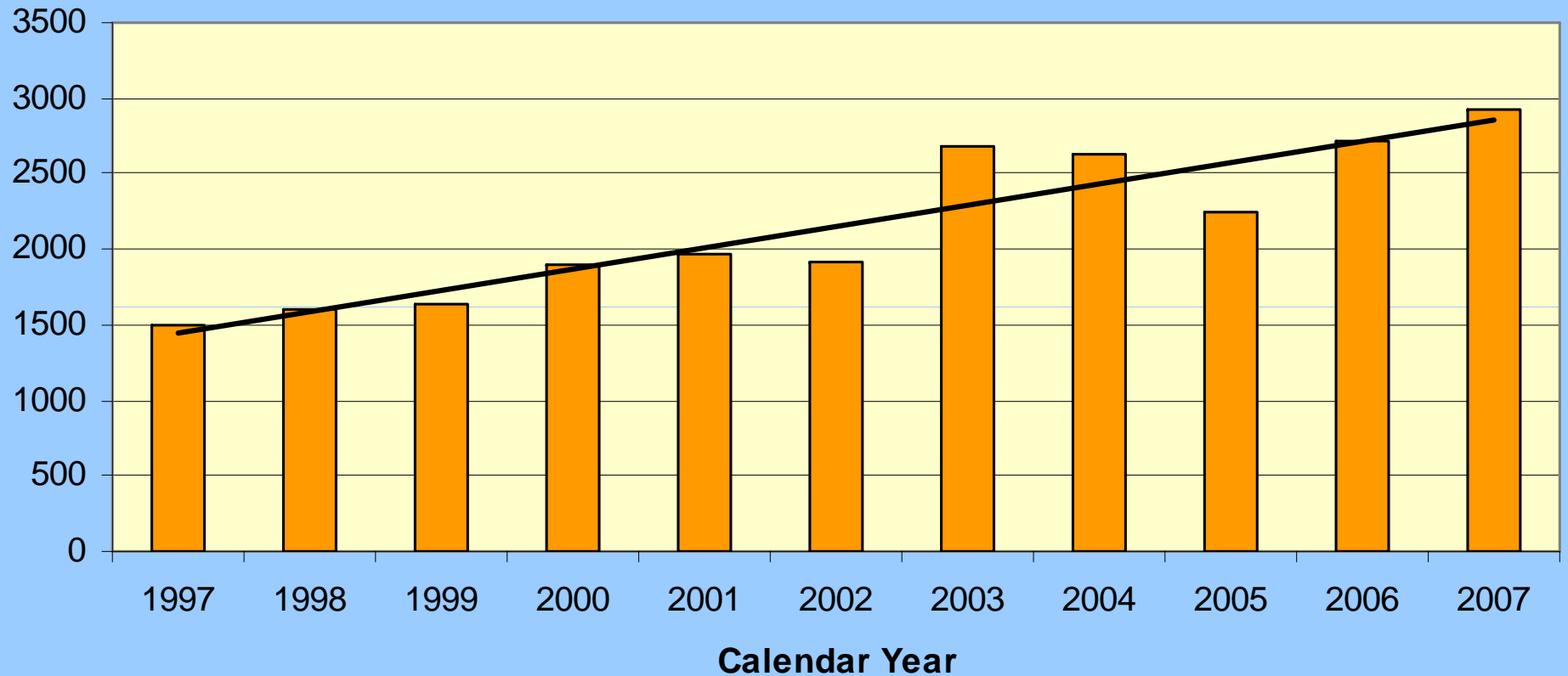


Agenda

- **Current Status**
- **What we have done**
- **Next steps**



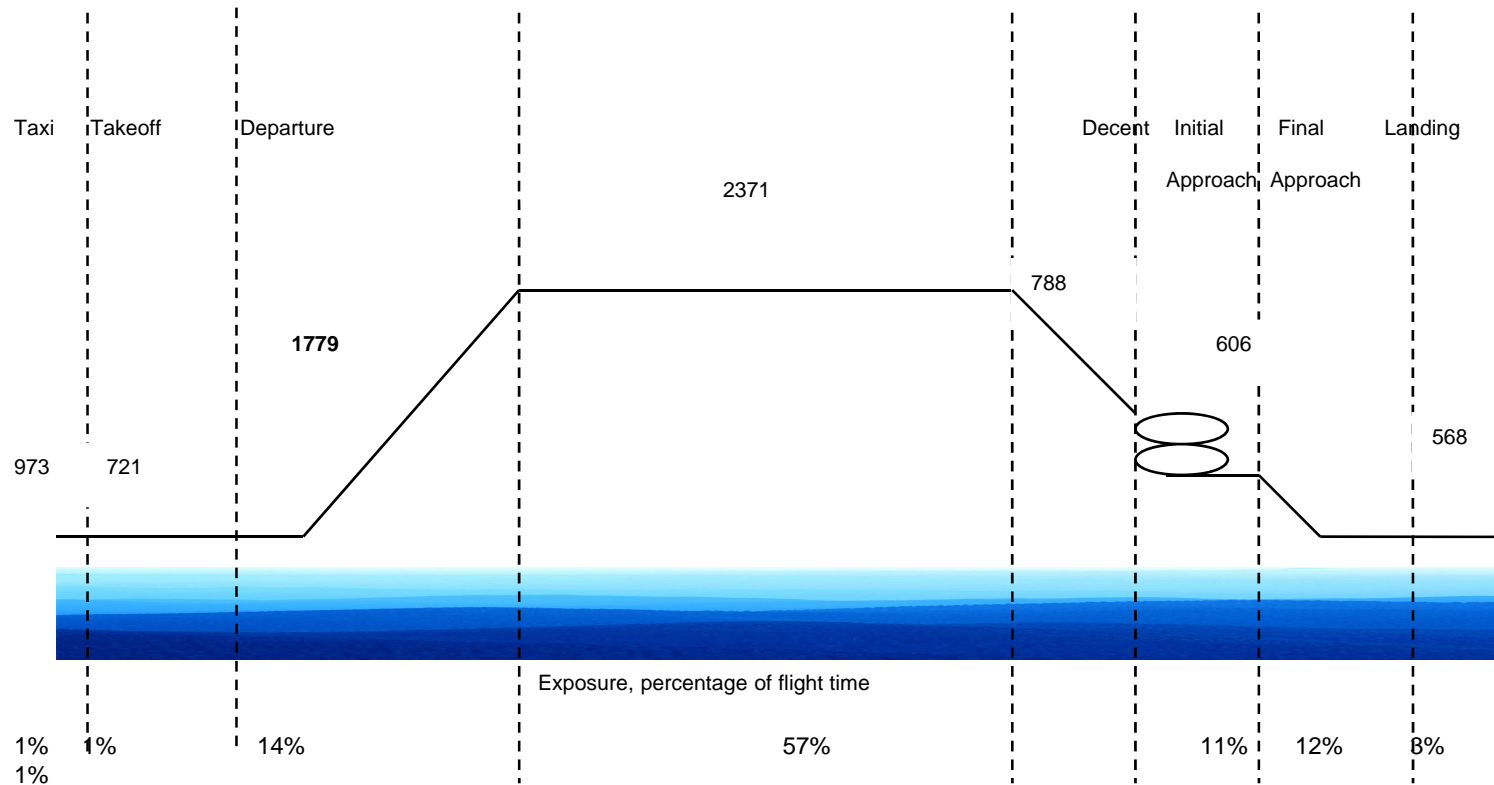
Number of Pilot Deviation Reports 1997-2007



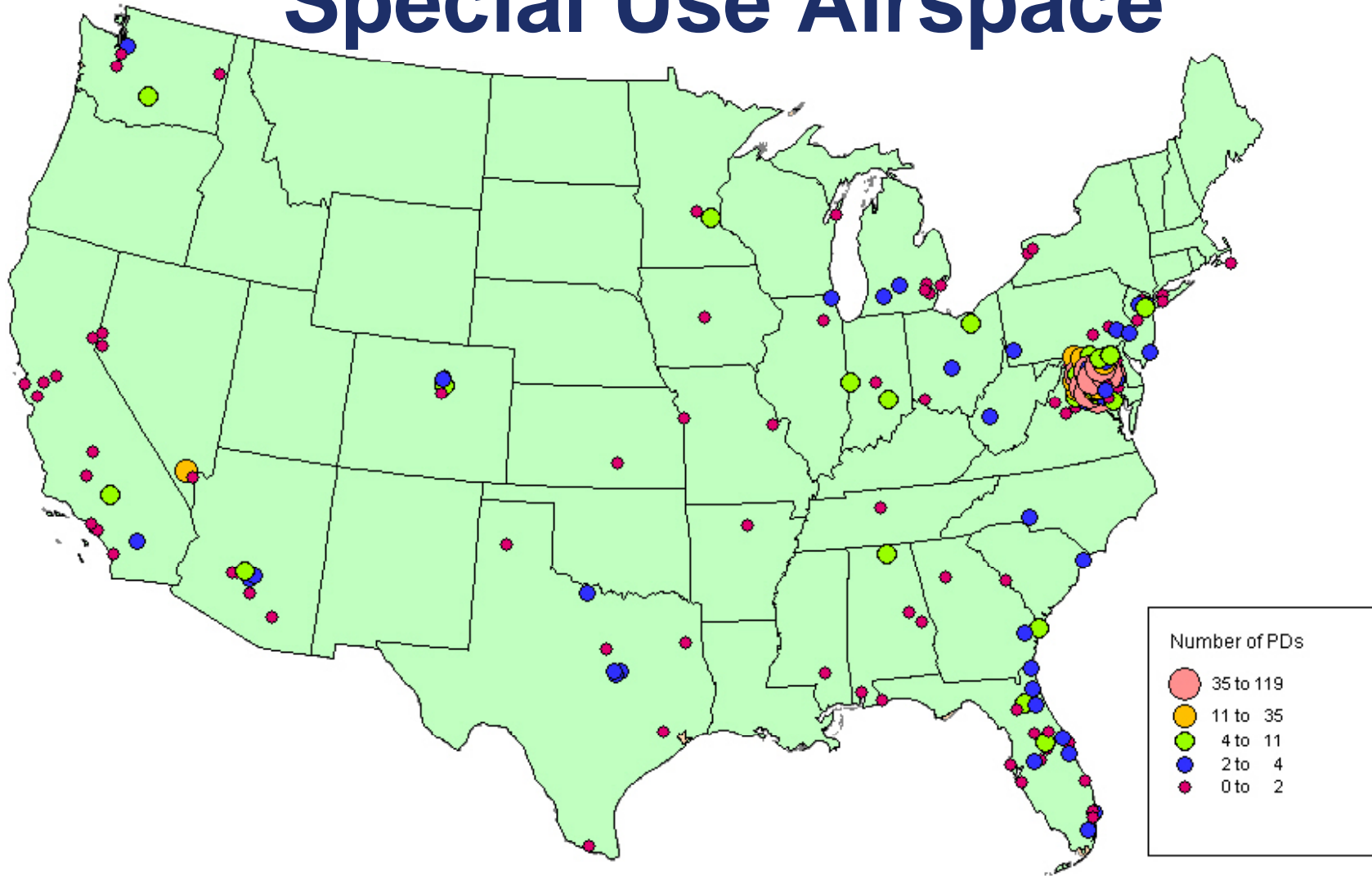
Number of Pilot Deviation Reports — Linear (Number of Pilot Deviation Reports)



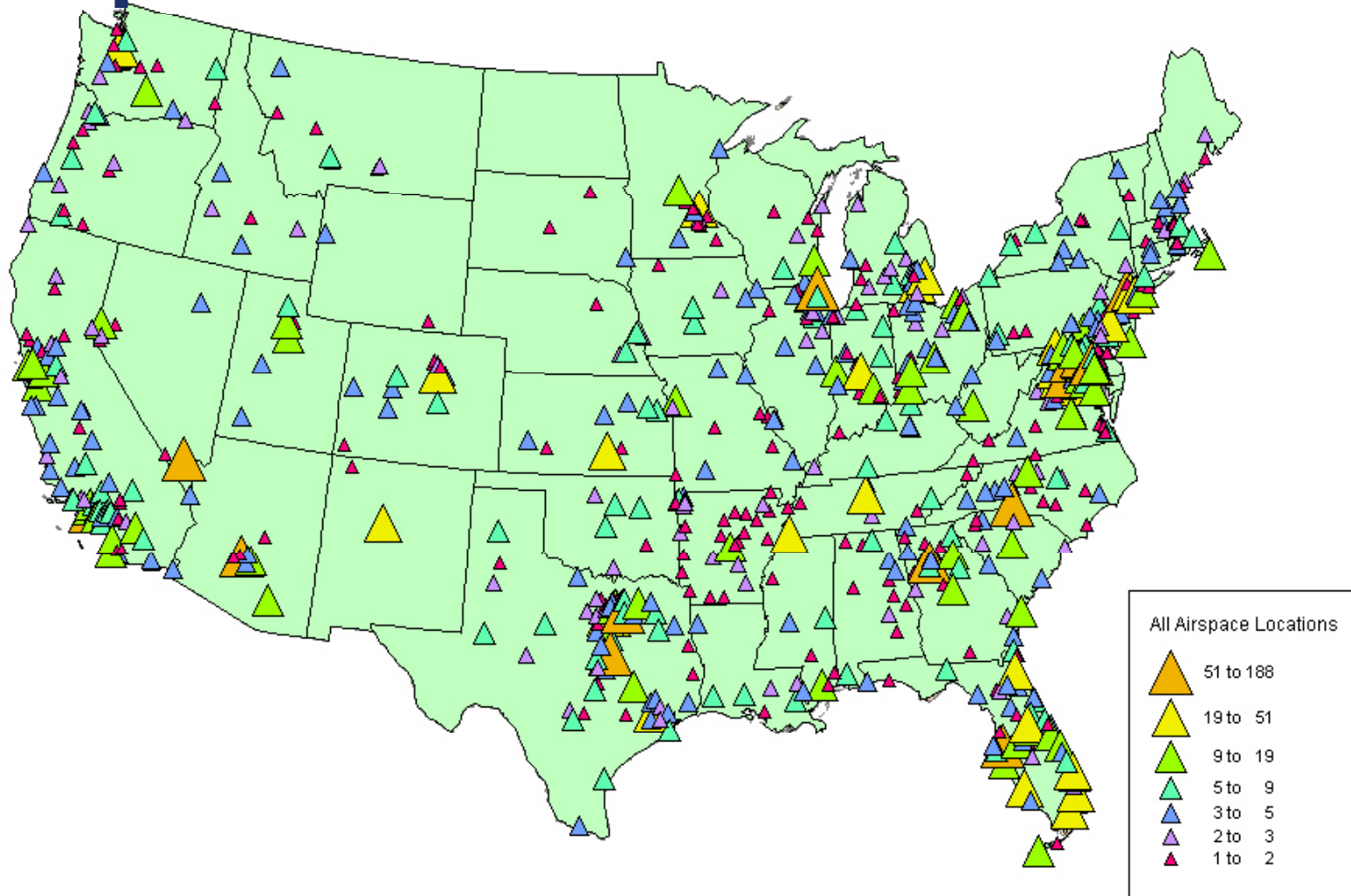
Pilot Deviations Phase of Flight



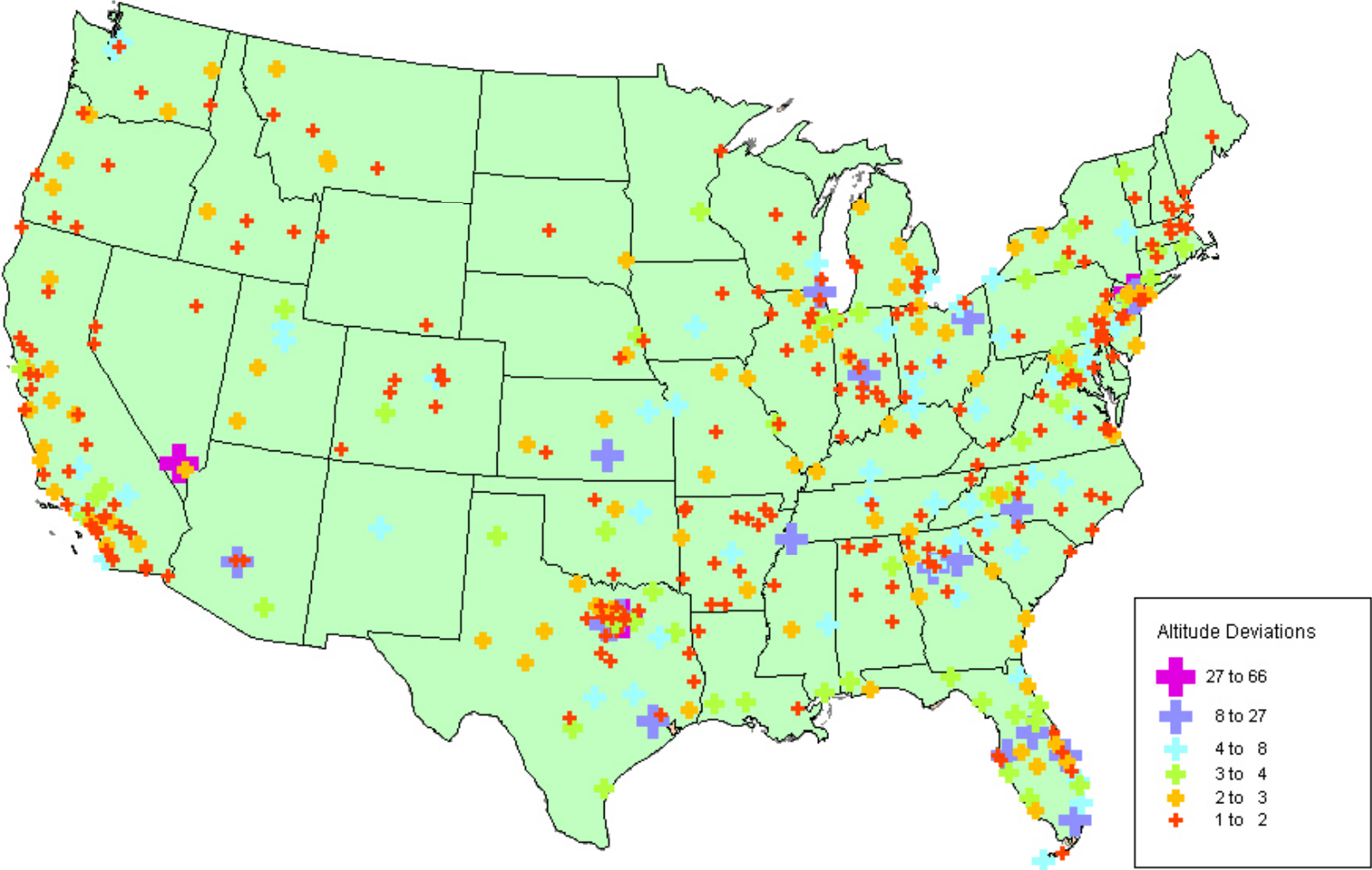
Special Use Airspace



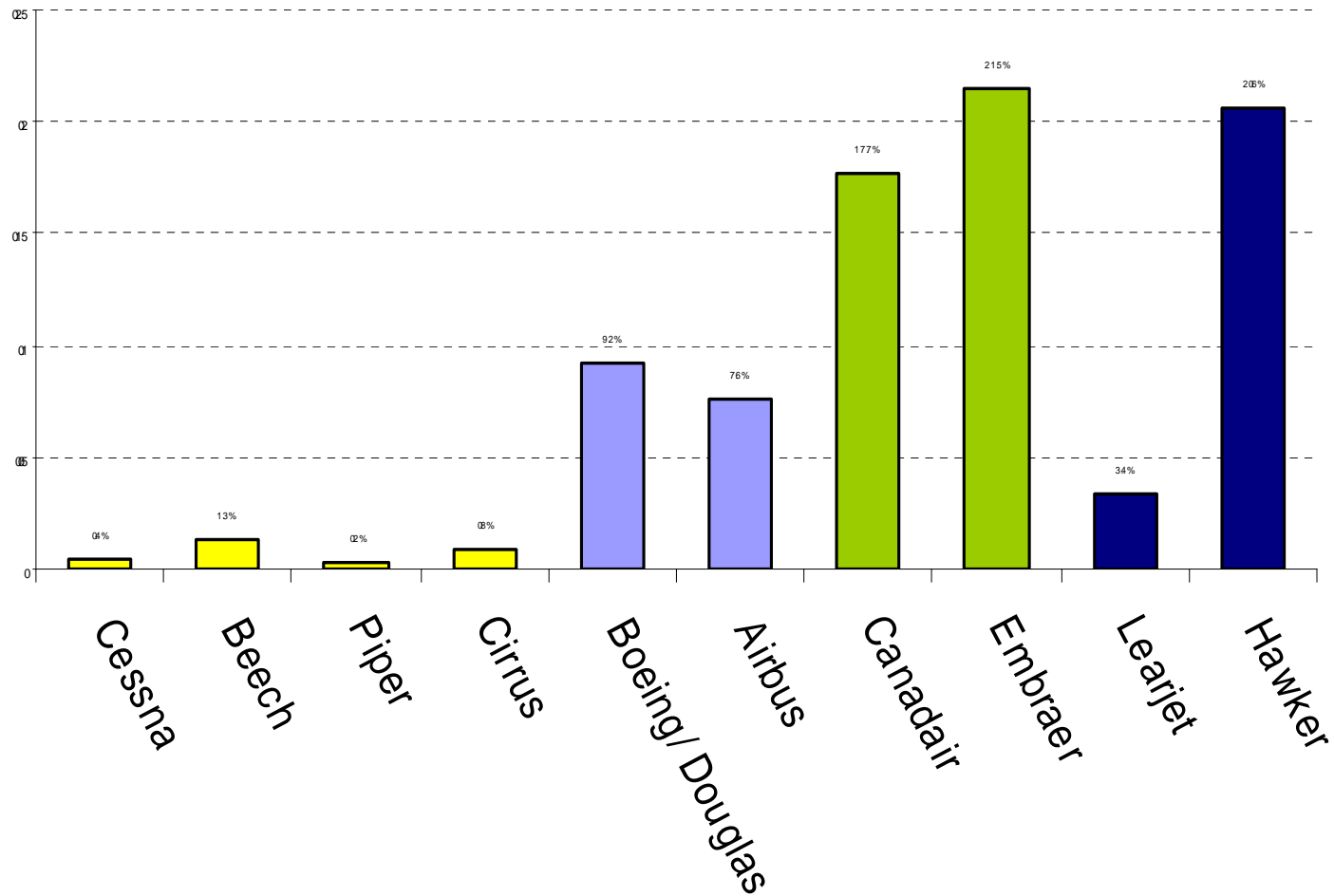
Airspace Deviations



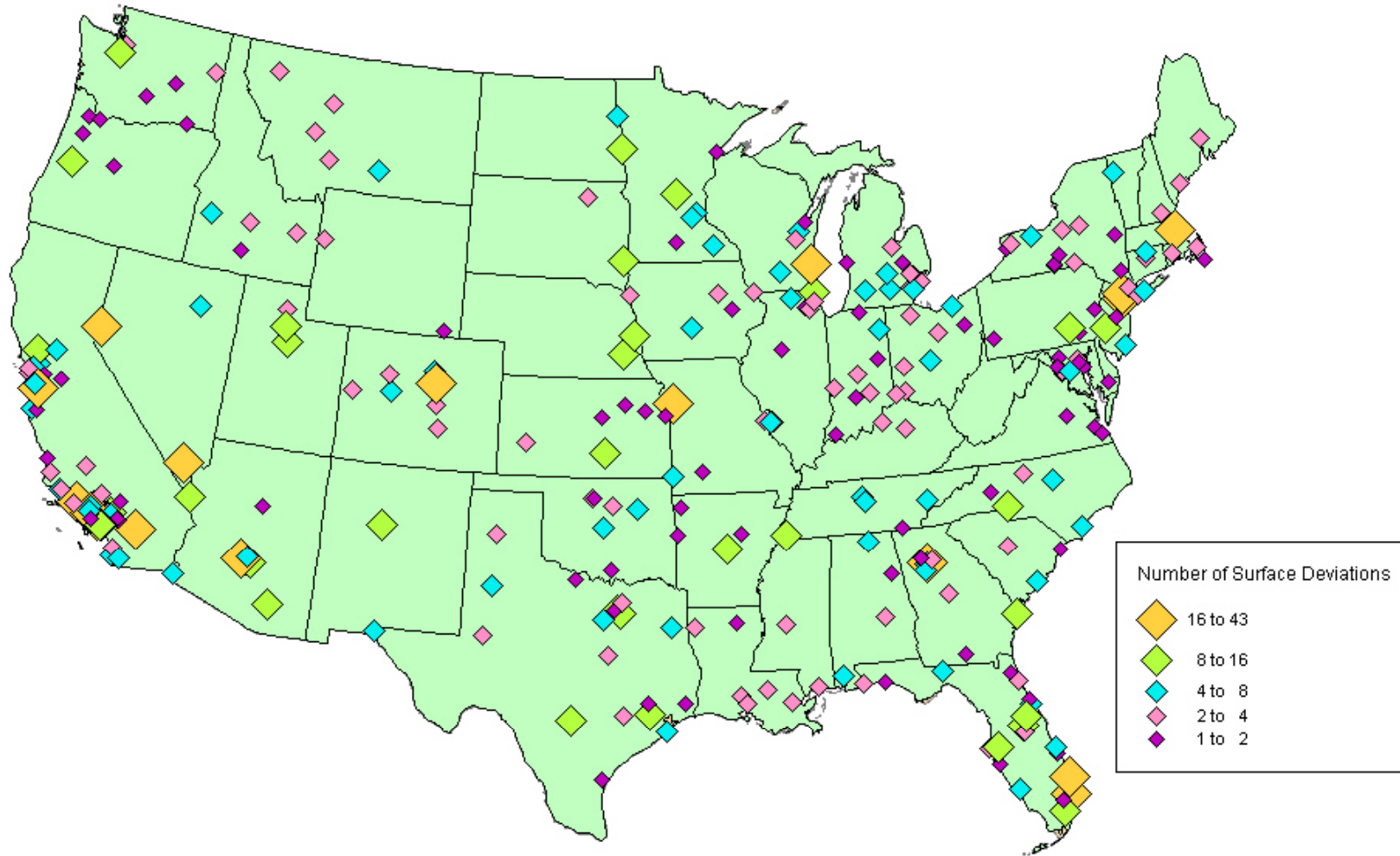
Altitude Deviations



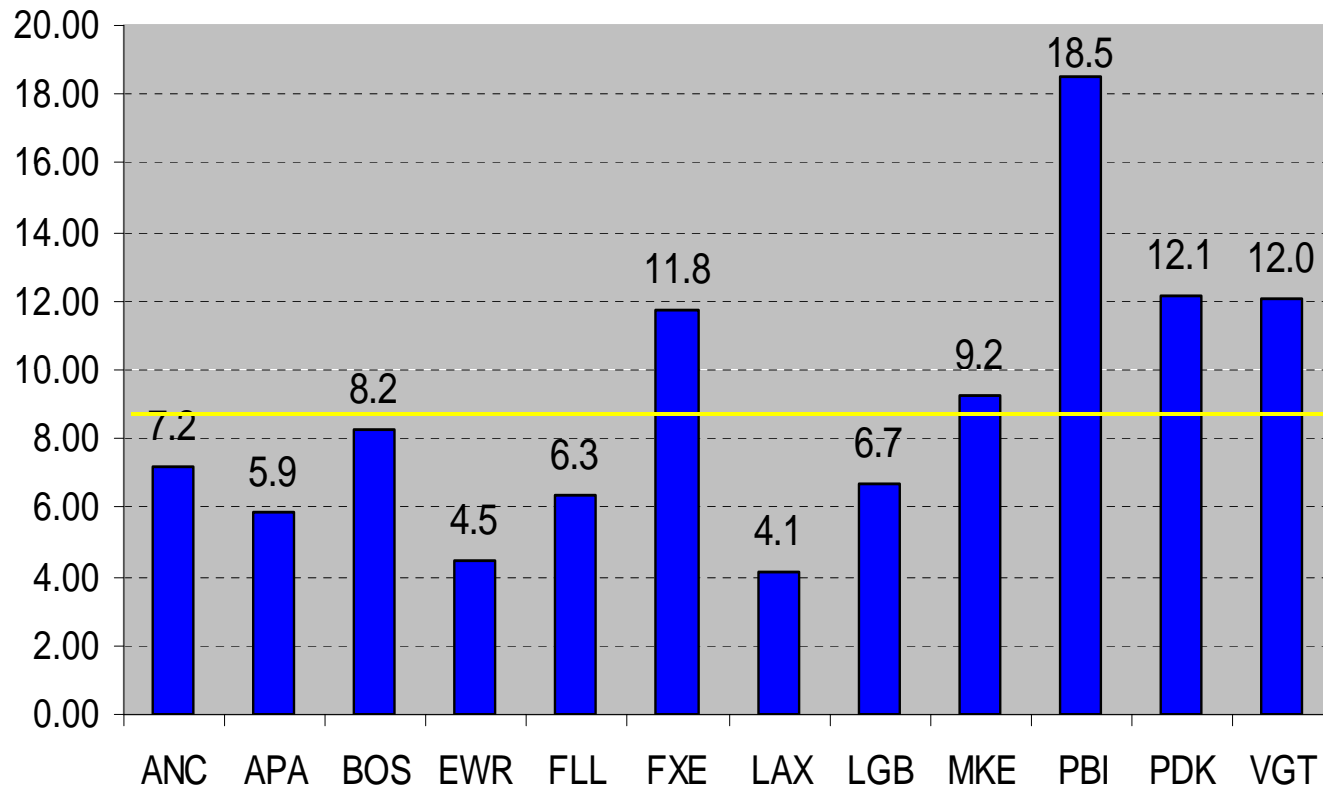
Altitude Deviation per Fleet Size



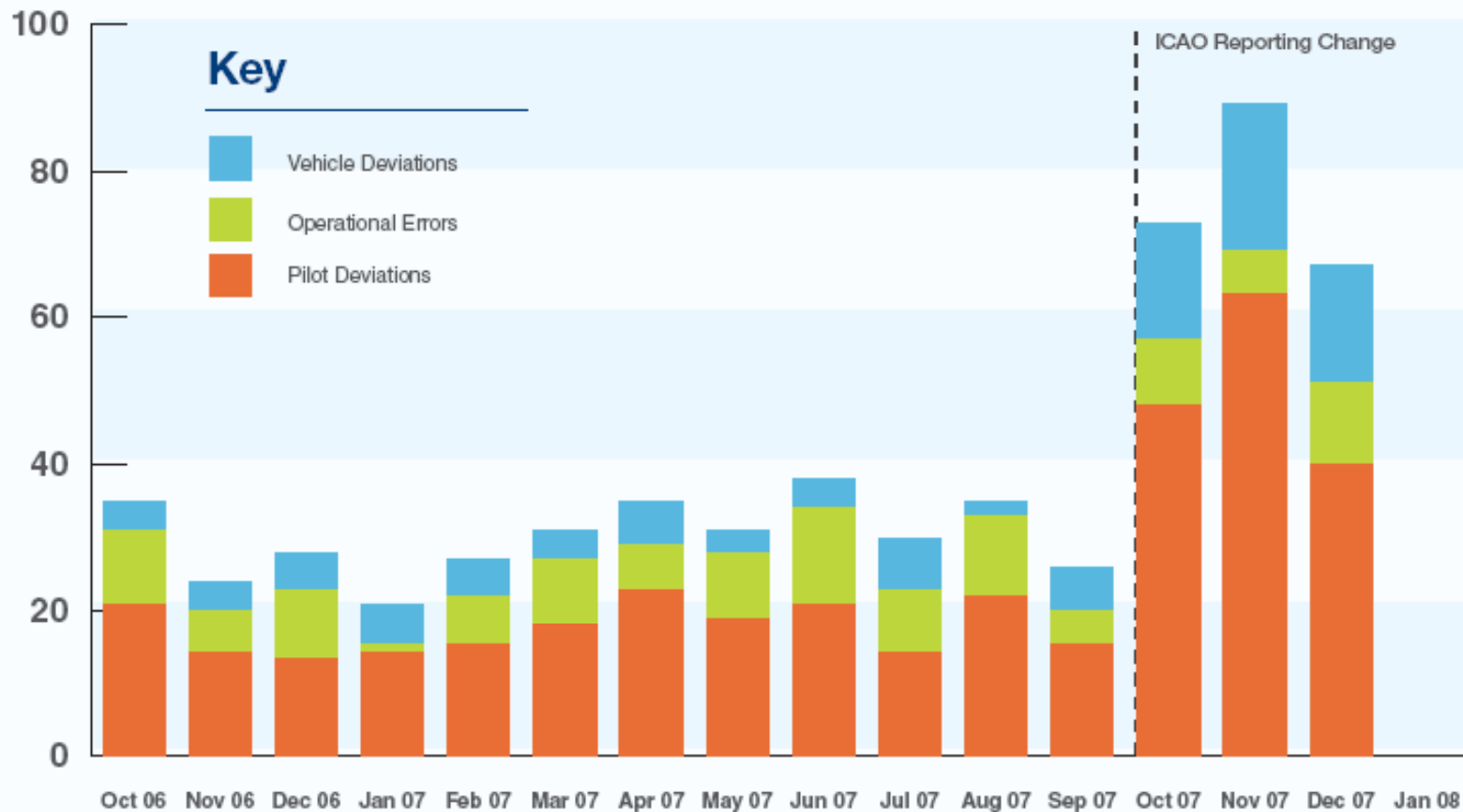
Surface Deviations



Surface Deviation per 100,000 Operations



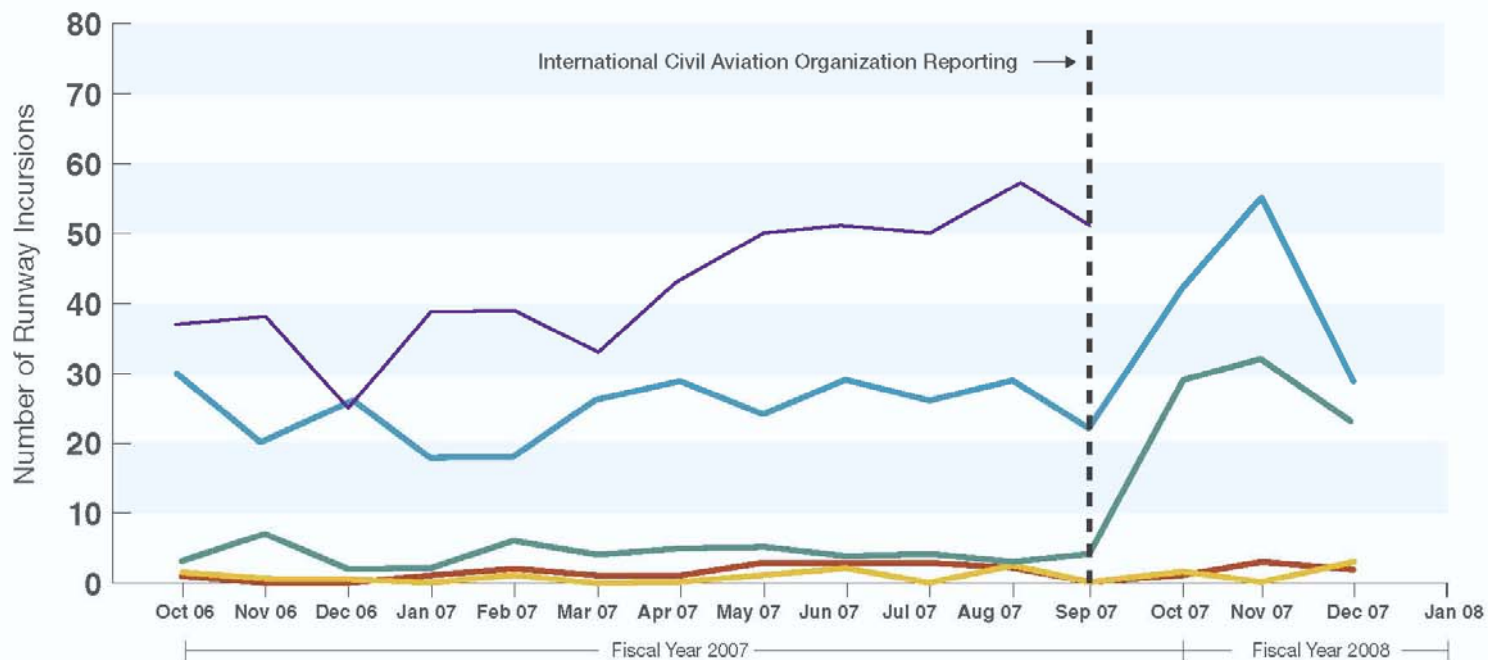
What's Driving Runway Incursions?



Runway Incursions



FAA
Air Traffic Organization



Key

- Surface Incidents - No Conflict
- Category D - Very Minor
- Category C - Minor
- Category B - Serious
- Category A - Very Serious

Key

Effective 1 October

- Category D - No Conflict
- Category C - Very Minor/ Minor
- Category B - Serious
- Category A - Very Serious



Safety Recommendations

- Altitude “Point Out” for Regionals
- Expand Training Outreach
- Repeat Offenders
 - Further Study
 - SID/ STARS
 - ARTCC Boundaries
 - Surface Deviations (i.e. PBI)



Runway Incursion Challenge

- **62 million landings and takeoffs last year ***
- **1,800 runway crossings per day!**
- **Human error is a certainty**
- **Technology has limitations**
- **Causes – Consequences are global in nature**



Source: * FAA Runway Safety Fact Sheet

Call to Action on Runway Safety

Background Information

On August 15, 2007 the Administrator issued a “call to action” to the industry to re-energize and re-focus on the issue of runway safety.

- **Participants included all sectors of the aviation industry:**
 - Airframe and Avionics Manufacturers,
 - Operators,
 - Airports,
 - Labor and FAA's air traffic and aviation safety personnel.

The group *committed to a list of five short-term actions* that could be accomplished within the next 60 days to help improve runway safety.

Air Carrier short-term actions

- **Improve pilot training by including particular focus on airport surface operations. Within 60 days each airline was to begin to provide simulator or other pilot training to incorporate realistic scenarios from pushback through taxi phases of flight.**



Air Carrier short-term actions

- **Review cockpit procedures to identify elements that may contribute to pilot distraction during taxi and develop a plan to eliminate those elements.**
- **Enhance training for non-pilot employees who move aircraft at airports.**



Review of Action Items

- **Has everyone developed the scenario based training? If so, how many crew members have received it? What steps can be taken to “speed-up” the implementation – or to reach crews immediately who won’t be back for refresher training for a while?**

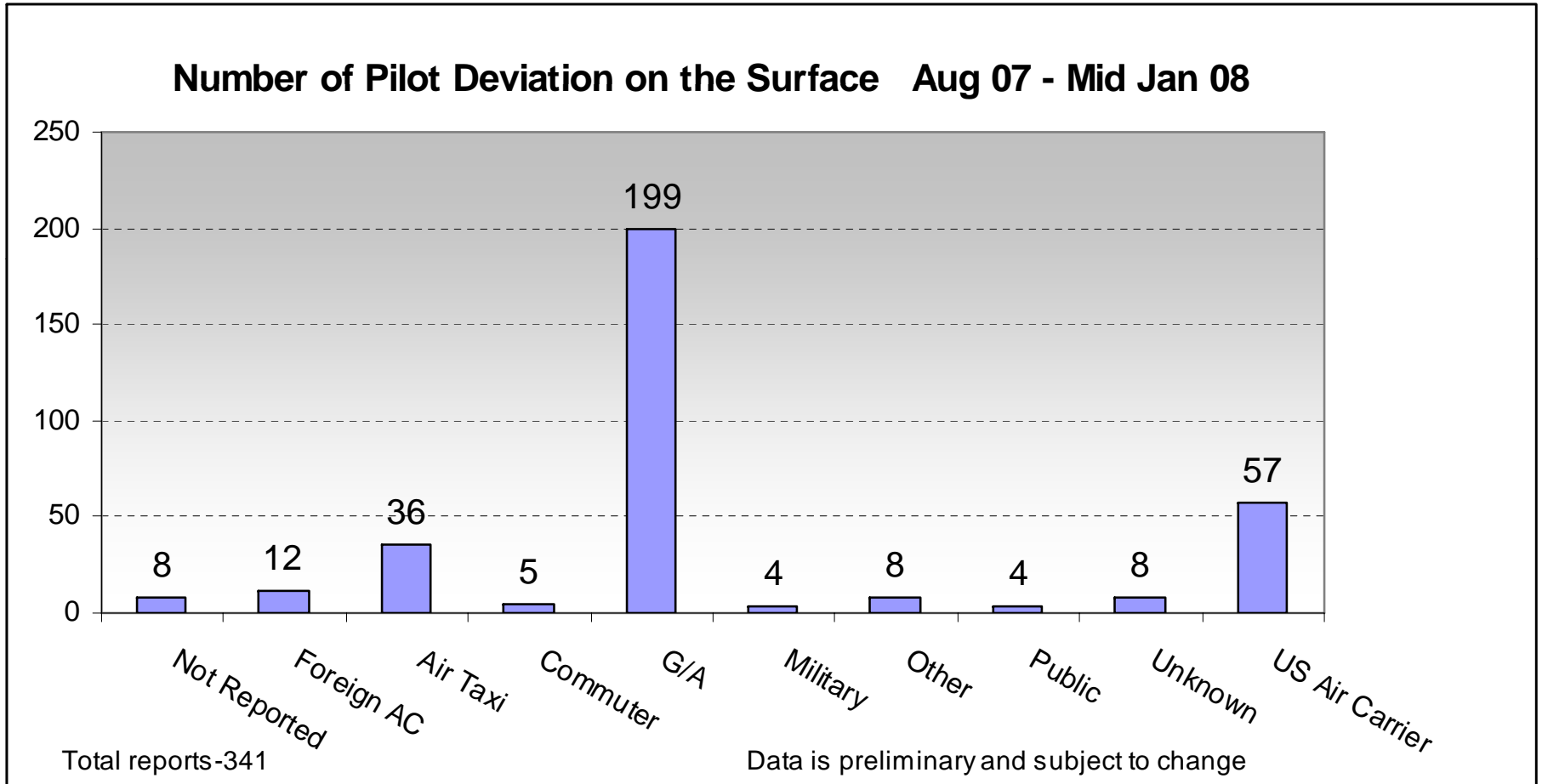


Review of Action Items

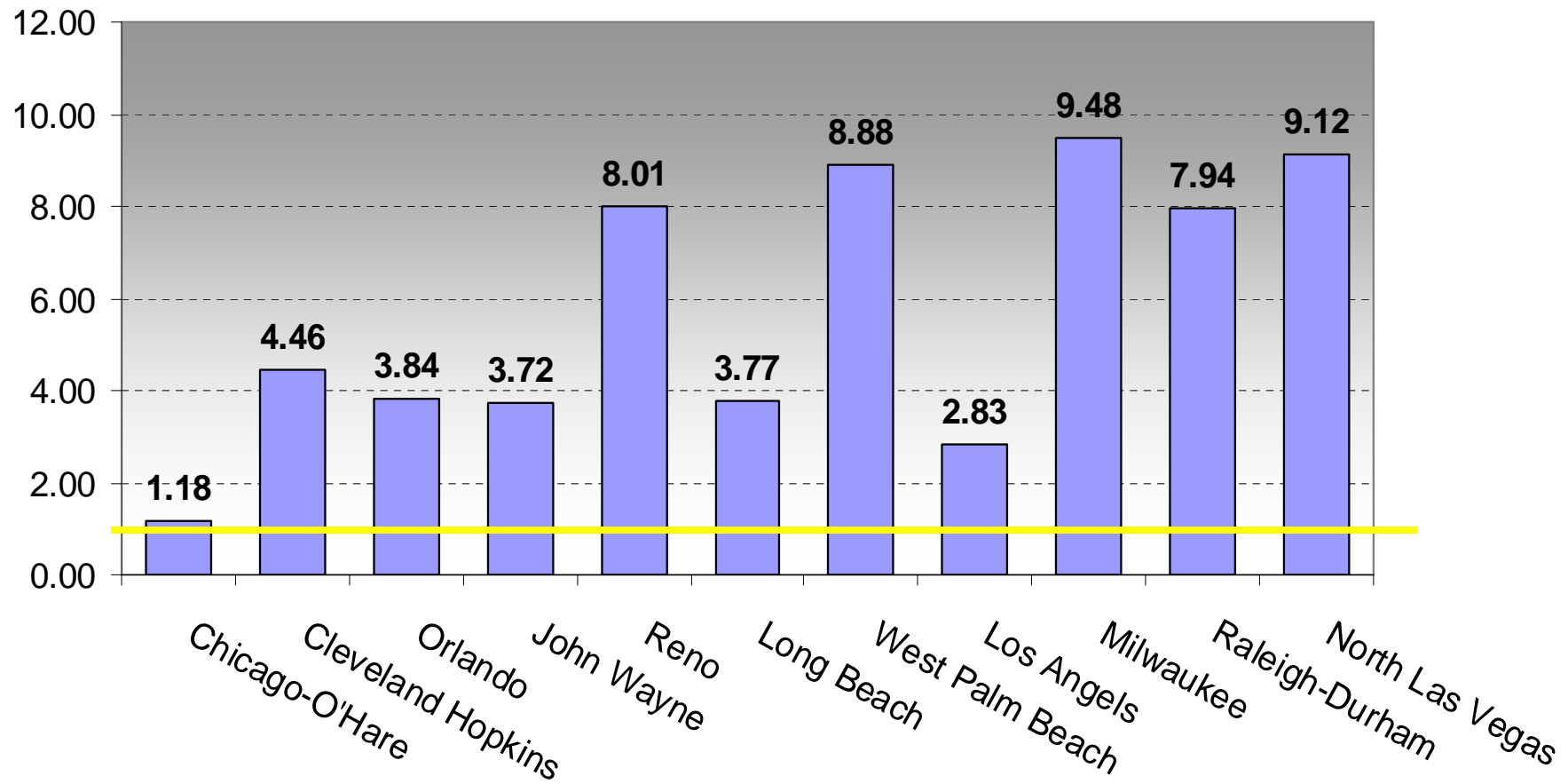
- **We committed to review cockpit procedures to eliminate distraction. Has everyone completed the review of their procedures? Have distractions been identified? Is there a plan for eliminating these distractions? Is the plan being executed? Can we speed up this effort?**



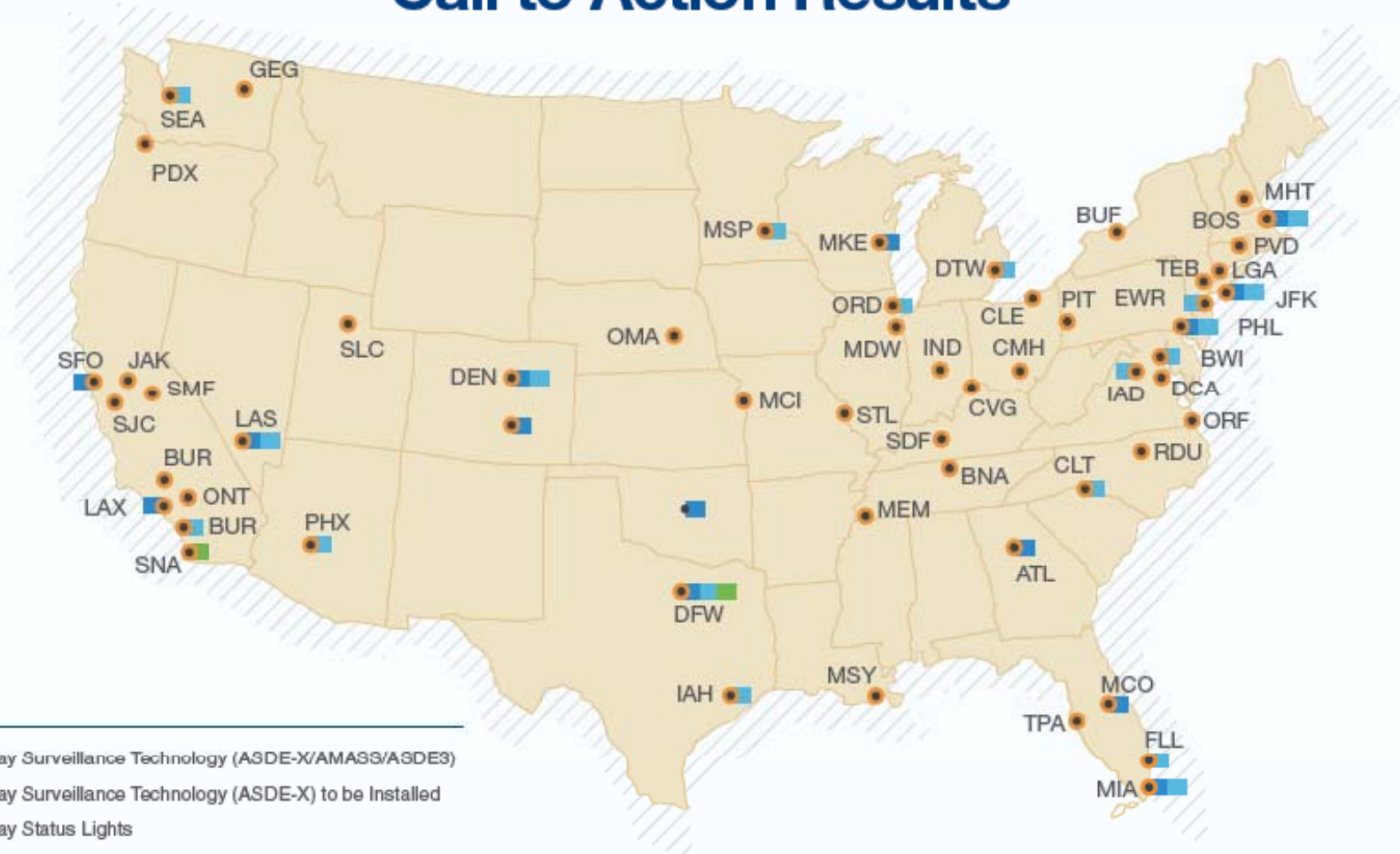
SINCE THE CALL TO ACTION



Surface PDs Per 100,000 Operations



Call to Action Results



Key


- Runway Surveillance Technology (ASDE-X/AMASS/ASDE3)
- Runway Surveillance Technology (ASDE-X) to be Installed
- Runway Status Lights
- Runway Status Lights to be Installed
- Improved Runway Markings
- Airport



FAA
Air Traffic Organization



Runway Safety Improvements at O'Hare



New Tower
Under Construction

New Runway
Under Construction

New ASDE-X
Completed 1 year ahead of schedule

22L-4R **D**

Improved Signs
Completed

Improved Centerline Runway Markings
Completed



Common Air Traffic Control Errors resulting in an Operation Error

- **Forget (about a closed runway, a clearance that they issued, an aircraft waiting for take off or cleared to land)**
 - “*Prospective memory*” – Remembering to do something later is the weakest function of human memory
 - Distractions, interruptions – Number one enemy of memory

Common Pilot Errors resulting in a Pilot Deviation

- **Read back the air traffic instruction (for example, to “hold short”) correctly and then do something else**
 - Most common reason for the error is that pilots lose track of where they are (misidentifying their location)
 - Most common factor cited for losing track of location is that one pilot is “heads down” programming FMC or conducting checklists

Safety Culture

A Safety Culture includes:

- Personal dedication and accountability
 - Individual attitudes and behaviors
- Shared vision with structures to attain it
 - Organizational processes, methods and metrics
- Commitment to improve (resist complacency)
 - Beyond simple adherence to procedures
 - Learning and continuous improvement
- Pervasive safety thinking
 - Commitment to excellence
 - Integration of safety into all activities
- Climate in which news is quickly and easily communicated
- Committed to investing the time and resources to address risk



Outreach to Pilots

- The FAA released a new booklet titled- [Runway Safety: A Pilot's Guide to Safe Surface Operations Booklet](#)
- In collaboration with the industry, the FAA created two [online courses](#) that educate pilots on runway safety. One is tailored for commercial aviation, the other for general aviation.
- Every year, the FAA conducts hundreds of safety seminars across the country to encourage safe practices on the airfield.



Outreach to Pilots

- A Safety Alert for Operators (SAFO) is an information tool that alerts, educates, and makes recommendations to the aviation community.
- An Information for Operators (InFO) message contains valuable information for operators that should help them meet administrative requirements or certain regulatory requirements with relatively low urgency or impact on safety.



Outreach to Pilots

- **FAA Aviation Safety Inspectors now verify that pilots have current surface movement charts (airport diagrams) available and that they are in use.**
- **[FAA Runway Safety Information for Pilots](#)**



Runway Incursion Information Evaluation Program (RIIEP)

- What is RIIEP?
- Who can participate?
- Benefits
- Process
- ASAP



What's Next

- **Enhanced Pilot Deviation Work Group**



Questions?

