Geospatial Data Collection for the FAA
Airports GIS Program
A Change in Direction

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What is the FAA Airports GIS Program

- About 544 airports have commercial service in US
- About 3,330 receive federal funding and are included in the National Plan of Integrated Airport System (NPIAS)
- There are about 13,188 Airports and 5,581 Heliports
- Of those about 8,310 Airports and 5,513 Heliports are private use landing facilities.
- About 19,440 landing facilities in the FAA database including seaplane bases, gliderports, balloonports and ultralight Flightparks

Full Feature Geospatial Data Collection

Limited geospatial features and attributes 2014/2015
Airports GIS

**INPUT**
- Survey Data Collection
- Geodetic Control
- Photography Control
- Data Standards
  - Collection
  - Input
- Aerial Photos
- Airport Planning

**OUTPUT**
- Aeronautical Charting data
- Instrument Procedures data
- Obstruction data
- electronic ALP Tool
- Modification of Standards Tool
- Cloud Server of Aerial Photography
- Airspace Evaluation Tool
- Part 139 Inspections Tool

**Airports GIS**
- Planning Application
- Engineering Applications
New Implementation

- **eALP Module implemented. (Waiting Security Signoff)**
- **Modification of Standards Implemented**
  - Start testing with ASW and ASO regions
- **Cloud server FAA Implementation**
  - Aerial Photography
  - NASR Subset Data
  - Google Earth Airport View
  - Airport Data Upload
    - ALP, RSA, Signage and Marking Plans, SHP files
- **Airport 20:1 Penetrations Visualization Tool**
Data Collection Requirements

- **AC 150/5300-16 Geodetic Control**
  - National Geodetic Survey (NGS) reviews

- **AC 150/5300-17C Imagery Requirements**
  - Submit Plan in Advance, equipment, ground control
  - Imagery Reviewed and checked for accuracy
  - Imagery used for feature extraction

- **AC 150/5300-18B Feature and schema standards**
  - Change 1 to 18B sitting in Legal office before Publication
  - About 34 safety critical features –
    - Runways, taxiways and safety features - Reviewed
  - About 135 features with attributes
    - 1 foot elevation contours, buildings, proposed features
    - Electronic Airport Layout Plan (eALP)
Draw and Measure tool in eALP
### Immediate Steps

**Safety Critical Data:** if a survey is required for a project involving safety-critical data submit into Airports GIS

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<th>NUMBER OF AIRPORTS</th>
<th>FY10</th>
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<th>FY12</th>
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<th>FY15</th>
<th>FY16</th>
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Most requested data – 1 foot elevation contours for planning and preliminary design
AC 150/5300-17C, Standards for Using Remote Sensing Technologies in Airport Surveys

• Mandatory for all Federally Funded Airports
• Survey required for Safety Critical Projects
  – Master Plans, Airport Layout Plan updates
  – Instrument Procedures Updates
  – Major Construction Projects
  – Maybe required for off airport FAA installed Navaids
• Aerial Photography Required
• LIDAR permitted but must be cost effective
Data Required

• 3,330 NPIAS Airports
• Major airports require updates 3-5 years
• 2000 projects per year (60%-70% require survey)
  – Peak Data collection time
• Data migration from NASR
Aeronautical Data Management (ADM)

• Aeronautical Data Management (ADM)
  – NavLean initiative under ATO
  – Airports and Surveys Requirements Documents, Software Design Documents
  – Schedule April 2013 to Sept 2015
    • Includes changing 5010 data to Airports GIS Web Interface
    • Includes change of Airport Data 5010.4 Order and AC 5300-19

• AIM Agreement to Cooperate with ARP
  – Airports GIS is Authoritative Source
  – All Surveys enter into Airports GIS
  – AIM will use Airports GIS for
    • Airport Diagrams, Digital NOTAMs, LVO/SMGCS Charting
Thank You: Questions Welcome!