

# Airport Planning and Environmental Highlights

## AGIS; SMS Airport Planning Environmental

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Federal Aviation  
Administration





# Objectives

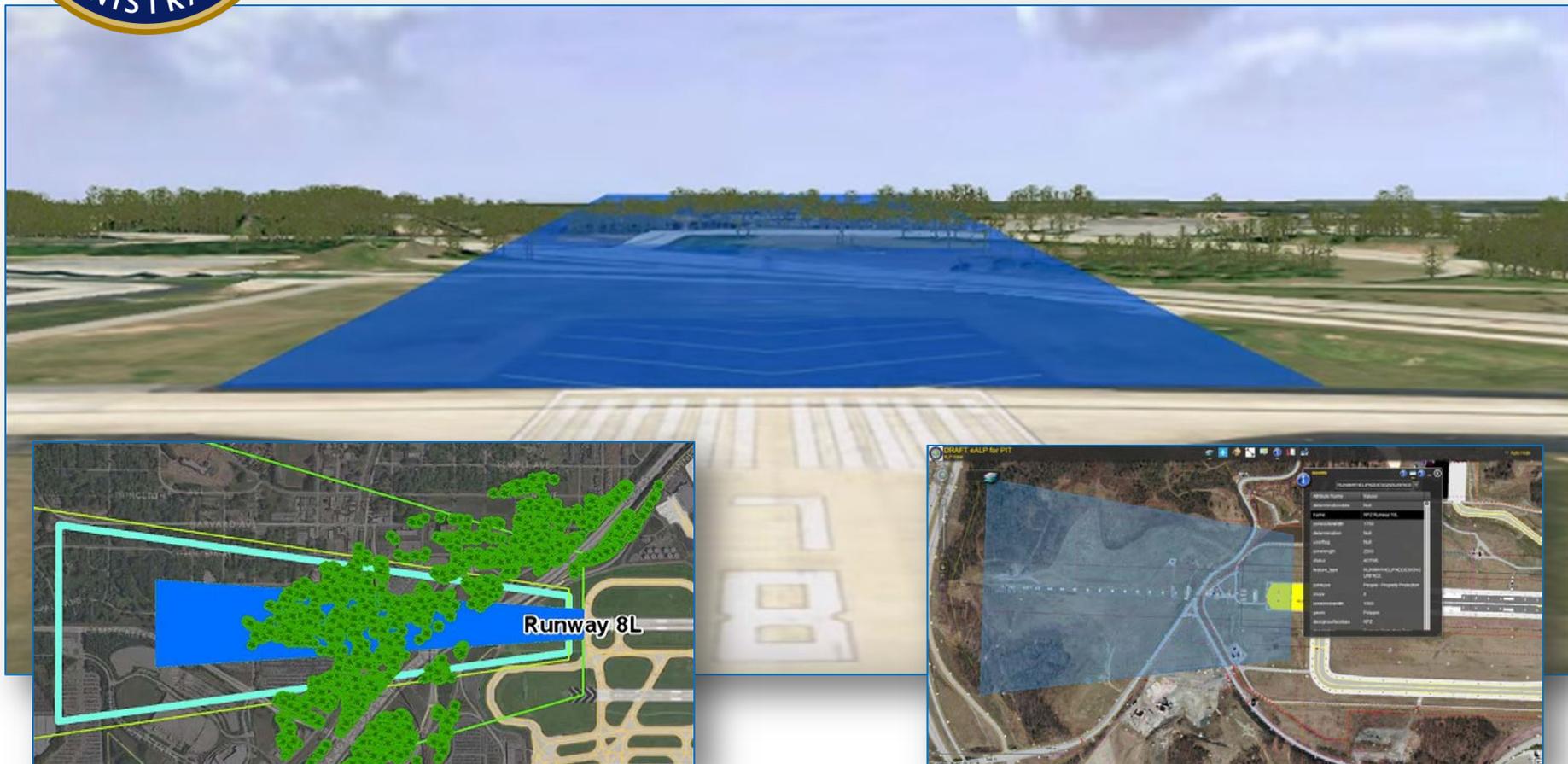
- **Examine the Airports GIS (AGIS) and Safety Management Systems (SMS) Programs as they relate to Airport Planning**
- **Capital Planning Refresher**
- **Present the different environmental actions the FAA supports through AIP**



*Advancing the safest, most efficient airport system in the world!*



# AGIS Vision: Accurate Data, Better Decisions





# AGIS: Inevitable Transition

Old Methods

New Technology



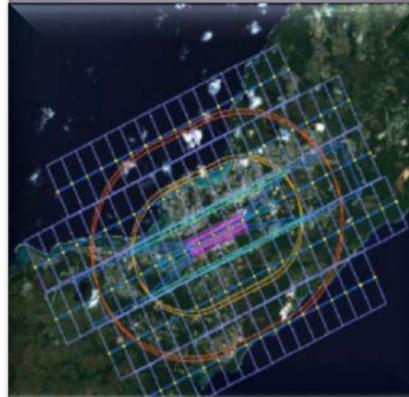


# AGIS: Aeronautical Survey Data Collection Reqs

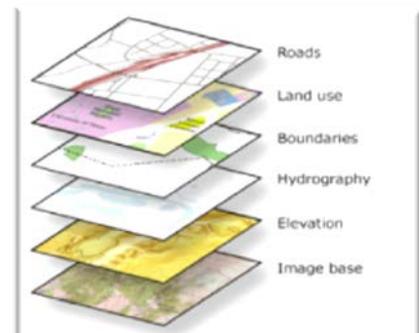
## AC 150/5300-16



## AC 150/5300-17

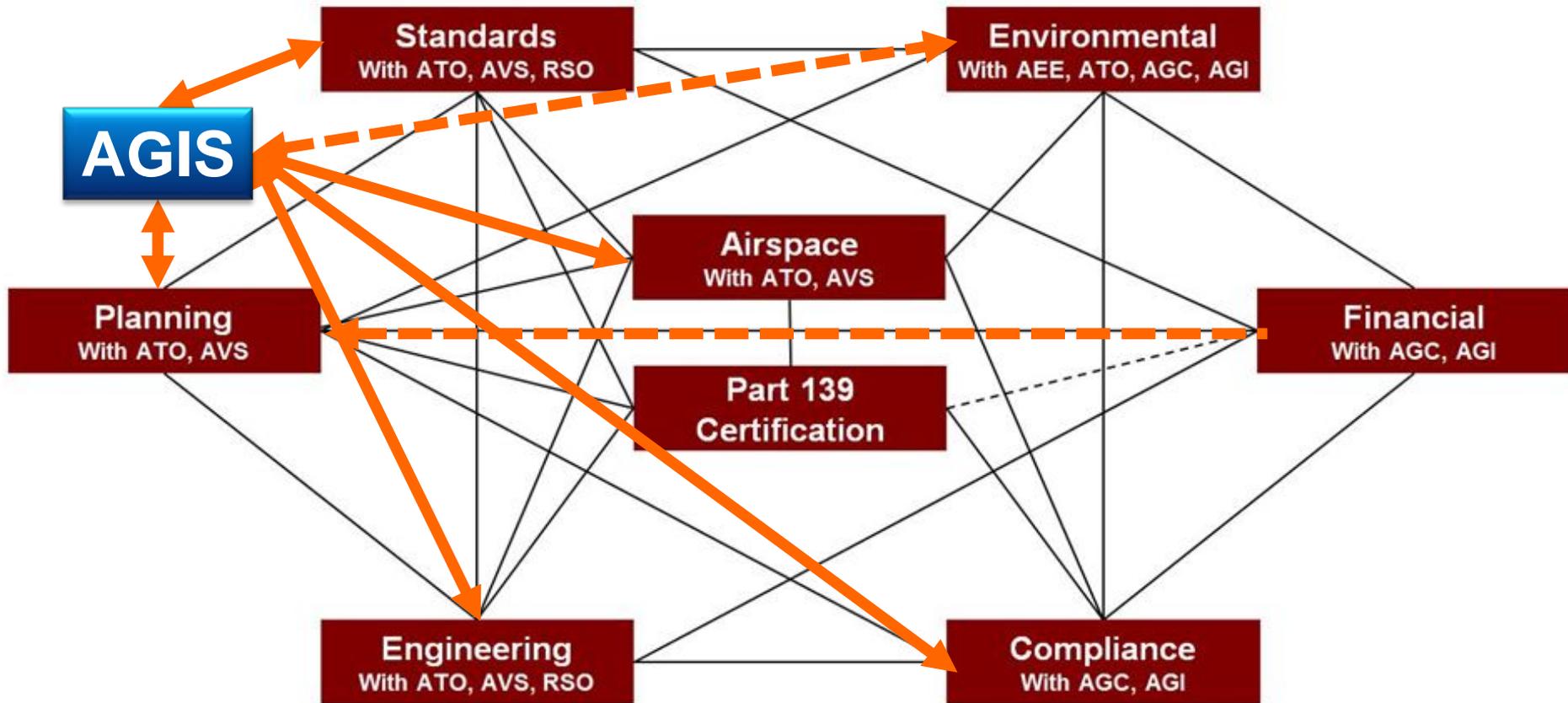


## AC 150/5300-18





# AGIS touch-points within the FAA construct





## Obligation for Survey Data

- **AGIS Data Standards (AC 150/5300-16,-17,-18)**
- **AGIS Transition Policy (August 2012)**
- **All projects at Part 139 and “Towered” airports must collect, submit, and manage data per FAA AGIS requirements**
- **At other airports, all projects involving safety-critical data must meet AGIS requirements**
  - ❖ Other projects should be discussed
  - ❖ If these airports desire to enter full AGIS compliance, FAA will consider helping, pending the ADOs AIP decisions



# Obligation for Survey Data

## ➤ AC 150/5300-18, Section 4.1.3

### Safety-Critical Projects

- All NAVAIDs
- All Obstacles
- All Runway Ends
- All Touchdown Lift Off areas
- All Airport Control Points
- Most Runway projects
- Most Stopway projects
- Most Taxiway projects
- Visual Aids
- Airport Airspace Analysis

*Master Plan Updates are considered on a case-by-case basis. ALP updates require up-to-date obstacle data for the airspace and inner airspace. Thus, most MPUs are considered safety-critical projects. Baseline data is easier to update in the future.*

### Non-Safety Critical Projects

- Most aprons projects
- Land acquisition, avigation, easements
- AIP-funded environmental features
- Noise contour mapping
- Most lighting projects
- Most construction of buildings (that do not penetrate airspace surfaces)
- Installation of fencing
- Installation of jetbridges





# Obligation for Survey Data

- **Understand the benefits for your airport**
  - ❖ Long-term cost efficiencies (BCA ratio); limit redundancy
  - ❖ Cost effectiveness by utilizing better data for decision-making
  - ❖ Improved communication with all FAA LOBs (especially ATO)
  - ❖ Capability of better instrument flight procedures (IFPs)
  - ❖ Appreciate “you get what you pay for”
  - ❖ Knowing where everything resides geospatially
- **Manage aeronautical data sets for future use**
  - ❖ Updates to data set, not the legacy ALP in AutoCAD
  - ❖ Engineering Brief 91 - Managing vegetation in AGIS to protect airspace surfaces
- **Be proactive: don't wait to be told to implement**
- **Provide useful feedback to the ADO**





# What does AGIS mean for me (airport sponsor)?

**An opportunity for:**

- **Defensible planning**
- **Return-on-investment (ROI)**
- **View and/or use your data**
- **Faster FAA coordination**
- **AIP reimbursement; Project Formulation**





# AGIS and Airport Planning: Scoping

- **AGIS data collection should inform the chapters within a Master Plan**
- **ALP drawing set should be derived from AGIS, not recreated from scratch in CADD**
- **Scoping may take a few iterations**
- **Expect to narrow down to a feature class level**
  - ❖ e.g., feature class, source, accuracy level
- **Like any other project work task, expect to detail your approach, level of effort, tasks, and deliverables**





# How can FAA help with AGIS?

- **Scoping – start early and invite feedback**
- **Clarify requirements; discuss and define airport “must haves” and “wants”**
- **Delineate AIP eligibility**
- **Coordination with internal FAA LOBs**
- **ADO, Regional, HQ resources at your service!**
- **Education: On-line Certification; FAQs; AGIS Help Desk**





# What is SMS?

“An SMS is as a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies, and procedures.” – *ICAO SMM Doc9859, 2009*

“A dynamic risk management system based on quality management system principles in a structure scaled appropriately to the operational risk, applied in a safety culture environment.” – *Stolzer, Halford, & Goglia, 2008*

“...an integrated collection of processes and procedures that ensures a formalized and proactive approach to system safety through risk management.” – *Notice of Proposed Rulemaking, Safety Management System for Certificated Airports, 2010*





# External and Internal SMS

## ➤ Part 139 SMS: “External” SMS

- ❖ Status of SNPRM
- ❖ Keri Lyons: 202-267-8972 / [keri.lyons@faa.gov](mailto:keri.lyons@faa.gov)

## ➤ ARP SMS: “Internal” SMS

- ❖ Schedule: 6/11 Large; 6/15 Medium; 6/16 Small (typically FY prior to construction)
- ❖ Components: Policy; Assurance; Promotion; SRM
- ❖ Triggering Actions: New/Rev ALPs; CSPPs; MOS
- ❖ SA Process: all triggering events require SAS; most SAS do not result in the need for an SRM panel
- ❖ Funding: SA costs eligible projects are reimbursable; Project Formulation





# How can FAA help with SMS?

- **Scoping – start early and invite feedback**
- **Refine SAS during CSPP development to ascertain the need for an SRM panel**
- **Delineate AIP eligibility**
- **SRM panel: coordination with internal FAA LOBs, SMEs**
- **ADO, Regional, HQ resources at your service!**
- **Education: SMS Desk Reference; SMS SOP 4.0**





# Objectives

- Examine the Airports GIS (AGIS) and Safety Management Systems (SMS) Programs as they relate to Airport Planning
- Capital Planning Refresher
- Present the different environmental actions the FAA supports through AIP





# Airports Capital Improvement Plan

- **The FAA Airports Capital Improvement Plan (ACIP) is our primary planning tool for prioritizing funds for airport development and planning needs.**





# Capital Improvement Planning

- **Master Plans/ALPs**
- **Capital Improvement Plans**
- **AIP Funding**





# Master Plans / Airport Layout Plans

## ➤ Master Plans

### ❖ Provides

- Realistic schedule for proposed development.
- Graphic representation of existing and future airport features, development and land use.
- Framework for continuous planning process.





# Master Plans / Airport Layout Plans

## ➤ Airport Layout Plans

### ❖ Requirements

- Sponsor must maintain a current ALP.
- Sponsor must not make any alteration to airport unless ADO has determined it will not affect the safety utility and efficiency of the airport.
- Proposed project must be on current ALP (exception, rehabilitation and equipment acquisition).





# Capital Improvement Plans

## ➤ Capital Projects

### ❖ Provides

- Sponsor's 5-year capital needs (6-10,11-20)
- Displays eligible, justified and feasible projects.
- Emphasis on important airside projects.
- Funding needs per respective project.





# Capital Improvement Plans

## ➤ Capital Projects

### ❖ Requirements

- Should be accurate reflection of airport needs.
- Funding associated with project.
- Safety and airside needs prior to revenue generating.





# AIP Funding

## ➤ **Planning for Discretionary Funding**

### ❖ **General Guidance**

- Project planning needs to be accurate min. 3 years out (5 years is recommended)
- Type of project competing for D funding (apron vs runway)
- Use of entitlements as part of funding plan
- Project ready to bid





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# Environmental Set-Aside

## ➤ Noise

- ❖ 14 CFR Part 150 Studies
  - Noise Exposure Maps
  - Noise Compatibility Plans
  - Updates
- ❖ NEPA Noise Mitigation





# Environmental Set-Aside

## ➤ Air

- ❖ Voluntary Airport Low Emissions (VALE) Program
  - Commercial Service Airports
  - Located in a Maintenance or Non-Attainment Area
  - Infrastructure
  - Vehicles



# Environmental Set-Aside

## ➤ **Water**

- ❖ Construction of Deicing Containment Facilities
- ❖ Purchase of Glycol Recovery Truck as Environmental Mitigation



# Entitlements or Discretionary

- **Conduct Environmental Study for AIP Project**
- **Conduct Environmental Study for Flight Procedures Approved in a Part 150 Study**
- **Conduct Drainage Study**
- **Environmental Mitigation Associated with an AIP Project**



# Entitlements or Discretionary

- **Environmental Management System (EMS)**
  - ❖ Medium or Large Hub
  - ❖ Initial Development of the EMS
  - ❖ Must be certified compliant with AC 150/5050-8, *Environmental Management Systems for Airport Sponsors*
  - ❖ Can be done every 5 years





# Entitlements or Discretionary

- **Conduct Airport Energy Efficiency Assessment**
  - ❖ Funding Source is Off the Top Discretionary
  - ❖ Assesses Airport's Energy Requirements
  - ❖ Can be done every 5 years
- **Implement Airport Energy Efficiency Project**
  - ❖ Funding Source is Off the Top Discretionary
  - ❖ Project increases energy efficiency of airport power sources – Solar/Geothermal





# Entitlements or Discretionary

- **Sustainability Master Plan**
  - ❖ Stand-Alone Plan
  - ❖ Chapter of Master Plan
- **Recycling and Minimizing Airport Solid Waste**
  - ❖ Required in all Master Plans and Updates since FY '13
  - ❖ Cost of waste audit is allowable



# Entitlements or Discretionary

- **Zero Emission Program**
  - ❖ Not limited to Non-attainment and Maintenance Areas (but they are priority)
  - ❖ 50% Funding
- **Zero Emission Infrastructure**
  - ❖ Refueling and Recharging Stations



# Entitlements or Discretionary

## ➤ Zero Emission Vehicles

- ❖ On-road vehicles only
- ❖ Airport Dedicated
- ❖ Buy American is an Issue





# Questions?

- **If there is time, we can answer a few questions now**
- **If we run out of time, please do not hesitate to find us later today or in future meetings**

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