Panel Discussion
Collaborating to Prepare our Aviation System for 2035
2006  FAA partnered with NCTCOG to perform a multi-year study of general aviation and heliport assets in North Central Texas

Goal  Update older system plans (horizon year 2010)
Many thanks to staff and our consultant team.

- North Central Texas Council of Governments
- Clough Harbour & Associates
- R.A. Wiedemann & Associates, Inc.
- gcr
- PAVLIK AND ASSOCIATES
Objectives of System Planning

**Long-Range and High-Level Planning Exercise**

- Inventory System
- Forecast Demand
- Assess constraints
- Recommend Strategies
- Evaluate vertical flight
- Provide input (FAA and TxDOT)

*Spinks and Alliance Airports – Results of the 1984 Aviation System Plan*
Aviation System Planning Levels

Federal

State

Regional

Local/Airfield
Why System Planning is Important to Our Region
Mike Nicely

Federal Aviation Administration (FAA)
Why update the System Plan?

- Answer Specific Question – Is the existing General Aviation airport system capable of accommodating future needs of the Metroplex.
Why update the System Plan?

- Continue the aviation planning work of those who have gone before us
  - The excellent airport/aviation system in North Texas is no accident

- Planning must continue to maintain and enhance the system
  - Establish Framework for the Future

- Non-Traditional – Not a Plan on the Shelf
  - Continuously Monitor System Performance
Historic Perspective – A Look Back

North Central Texas Airports – 25 years ago

- **Air Carrier Airports**
  - DFW International Airport – opened in 1974
  - Dallas Love – commercial passenger service relocated (except SWA)

- **General Aviation Airports**
  - Existing and in-place for some time
    - Denton, Meacham, Redbird (Executive), Addison (private-public)
  - “Relatively new”
    - Arlington, Grand Prairie, Lancaster (private-public), Mesquite (private-public), McKinney, Midway
  - Non-existent
    - Alliance, Spinks
Historic Perspective – A Look Back

North Central Texas Socio-Economic Change 1985 to 2011 (16 county region)

- **Population**
  - 3,715,950 to 6,845,621
  - Increase of 3,129,671 over 25 years (125,000 people per year)
  - 84 percent increase

- **Employment**
  - 2,340,451 to 4,159,290
  - Increase of 1,818,739 over 25 years (73,000 jobs per year)
  - 78 percent increase
Through 1984

Population Growth
- Airports
- Primary Highway
- Counties
- Lakes

Year of Construction
Year Built
- Built through 1984
- 1985 - 1994
- 1995 - 2004
- 2005 - 2010
The Future – A Look Ahead

Planning Horizon for System Plan – 2035

- North Central Texas Growth Trends (16 county region)
  - Population Forecast - 2040
    - 6,845,621 to 10,330,130
    - Increase of 3,484,509 over 28 years (124,000 people per year)
    - 51% increase

  - Employment Forecast - 2040
    - 4,159,290 to 6,423,760
    - Increase of 2,264,470 over 28 years (81,000 jobs per year)
    - 54% increase

- Influence Future Aviation Demand (GA & Passenger Svc.)
  Planning For The Future Critical
Greg Miller

Texas Department of Transportation (TxDOT)
The main purpose of the airport system planning process is to determine the type, extent, location, timing and cost of the airport development need in a state or metropolitan area to establish a viable system of airports.”

“Block grant states act as FAA’s agent in AIP grant administration for their non-primary airports.”
Economic Impact of Aviation Activities in Texas

“Just Completed”

Combined Commercial & GA

Total Employment
771,355

Total Payroll
$23.2 billion

Economic Output
$59.5 billion

Prepared by:
Center for Economic Development and Research
University of North Texas
Department of Economics
www.unt.edu/cedr
Economic Impact of General Aviation Activities in Texas

- **2003**
  - Total Employment: 56,600
  - Total Payroll: $1.9 billion
  - Economic Output: $5.9 billion

- **2005**
  - Total Employment: 61,900
  - Total Payroll: $2.5 billion
  - Economic Output: $8.7 billion

- **2010**
  - Total Employment: 56,635
  - Total Payroll: $3.1 billion
  - Economic Output: $14.6 billion
## Economic Impact of General Aviation Activities
### NCTCOG 16 County Region

<table>
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<tr>
<th>City</th>
<th>Facility Name</th>
<th>Output</th>
<th>Labor Income</th>
<th>Jobs</th>
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<td><strong>TOTAL IMPACT</strong></td>
<td><strong>$3,000,718,569</strong></td>
<td><strong>$763,091,342</strong></td>
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Michael Morris, P.E.

North Central Texas Council of Governments (NCTCOG)
Metropolitan Planning Area Perspective

- 4th largest metropolitan area in the United States
- Ranked 2nd in population growth between 2000-2010 adding over 1.2 million persons
- Larger than 35 states in population
- Larger than 5 states in land area
- Represents over 34% of the state’s economy
- 6.5 million persons in year 2010
- Growing to 10 million persons by the year 2035
Regional Aviation Education Needs

Between 1997 and 2007

- Student and private pilots in the U.S. decreased by 6.2%
- Registered aircraft mechanics in the U.S. decreased by 10.1%

Regional workforce deficiencies

- Aircraft mechanics and service technicians (270 needed annually by 2016)
- Other deficient positions
  - Avionics technicians
  - Airline pilots, copilots
  - Flight engineers
  - Air traffic controllers
North Texas Airport System

- 2 Primary Commercial Facilities
- 11 Reliever Airports
- 56 General Aviation Facilities
- 1 Military Training Field
- 3 Public-Use Heliports
- Over 300 Private-Use Aviation Facilities

Major Regional Aviation Employers
Regional General Aviation and Heliport System Plan

PROCESS

STRATEGY

INNOVATION
NEW Planning Strategy

Innovative Processes

Modern Planning Tools

- Inventory
- Forecasts
- Sharing
- Tracking
- Monitoring
- Facility Value Metrics
Inventory Process

Need to reacquaint planners with system characteristics.

How has system infrastructure changed in 20 years?

New aircraft technologies?

What new influences on aviation demand?
Inventory Process

- Inconsistent airport data
- A separate Geospatial Analysis of hangar space for non-NPIAS
- Compare independent analyses to determine cause of disparity
  - Hangar Space
  - Population
  - Income

GIS Software Utilized
Innovative Forecast Modeling

Regression Model Considered Multiple Independent Variables

Differences from standard trend analysis:
• Variables easy to forecast and observe
• Variables tailored to forecast metric
• Combines variables to produce one trend line
Innovative Forecast Modeling

Demographic Driven

Population + Income + Employment
Total Regional Based Aircraft

Approx. 7,500
60% Growth
Total Regional Operations

Approx. 2.3 Million
40% Growth
Industry Focused Products

Scope items for changing industry challenges

• General Aviation misconceptions and negative perceptions

• Encroachment concerns with growing population and development

• Evolving technologies and impacts

• Airport wildlife concerns and assessment efforts being adopted by FAA
General Aviation Video Series

Designed to educate public about benefits of General Aviation

Showcases:
- diversity
- economic impact
- quality of life enhancements
Preserving GA Airports

**Encroachment Concerns:**

- Since 1981, airport closures average 262/year (nationwide)
- Rapid development around metroplex
- Land use planning key to sustainability
Unmanned Aircraft Report

**Advantages of UAS**

- Lower overall costs
- Less noise vs. manned aircraft
- Fewer emissions vs. manned aircraft

**FAA Modernization and Reform Act of 2012**

Details requirements for full integration of UAS by end of September 2015.
Airports & Wildlife

Aviation Wildlife Concerns:
- Economic loss average $123 million/year
- Texas 2\textsuperscript{nd} in wildlife strikes 1990 - 2010

- Wing 31%
- Fuselage 4%
- Engine 44%
- Windshield 13%
- Nose 8%
System Plan Recommendations

Integrated Planning

System Performance Monitoring

Collaborative Policy Discussions
Major Outcome #1

Airside system capacity will be sufficient in 2035 however:

a. Capacity improvements planned at airports assumed to take place

b. Localized congestion will exist, assuming some loss of private airport capacity

c. Geographic coverage in the Western part of the region, suggesting need for additional public-use aviation infrastructure
Question #1

From a planning perspective, what can be done regionally to ensure capacity goals are achieved to accommodate demand in 2035?
Major Outcome #2

Nearly 70% of the anticipated aviation system costs (approximately $211 million) are landside development and primarily for aircraft storage.

Historically, federal Airport Improvement Program (AIP) grants and state funding do not cover the needs of revenue generating projects.
70% of costs include improvements that may need financial accommodations outside traditional grant funding.

Public Airport System Costs

Costs by Subregion (in millions)

- **Central**: $161
- **North**: $81.3
- **South**: $14.4
- **East**: $9.2
- **West**: $8

**Total Public System**: $274,811,402
Question #2

If no federal funding is available, what can be done to accommodate this need?

Are there any alternate funding sources or innovative partnerships?
Major Outcome #3

Continuous planning and regional performance measure tracking will be essential.

Implementation of planned improvements and monitoring of regional aviation growth to 2035 is critical.
Question #3

How does the MPO anticipate implementing and evaluating the aviation system plan results?
Continuous System Planning Efforts

- Monitor capital improvement and other performance measures
- Coordinate adequate regional planning
- Form partnerships with communities and airport stakeholders
- Initiate policy discussions as necessary
- Work closely with TxDOT and FAA on strategic investment
By utilizing System Plan Tools...

Online Data Management System
Discussion and Questions

Please join us for refreshments in the Grand Ballroom Foyer