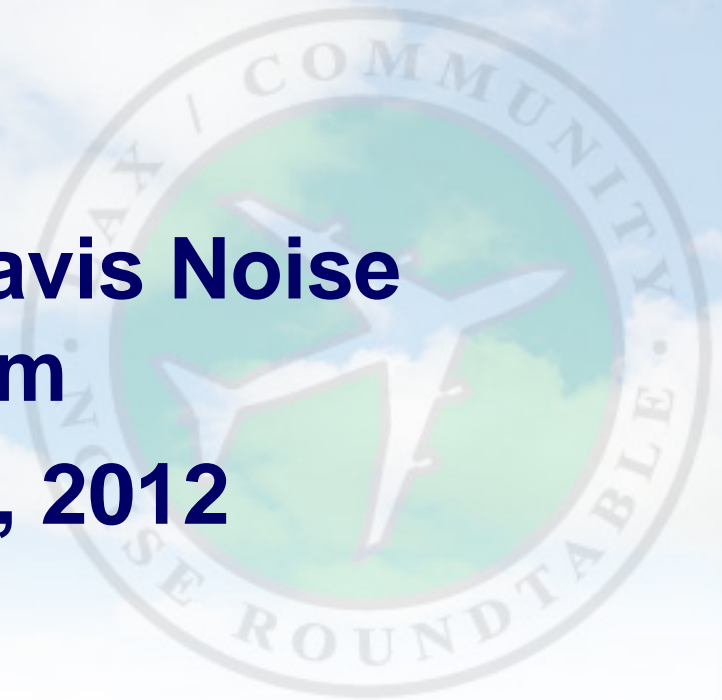


# **Briefing on U.C. Davis Noise Symposium**

**March 4<sup>th</sup> – 7<sup>th</sup>, 2012**

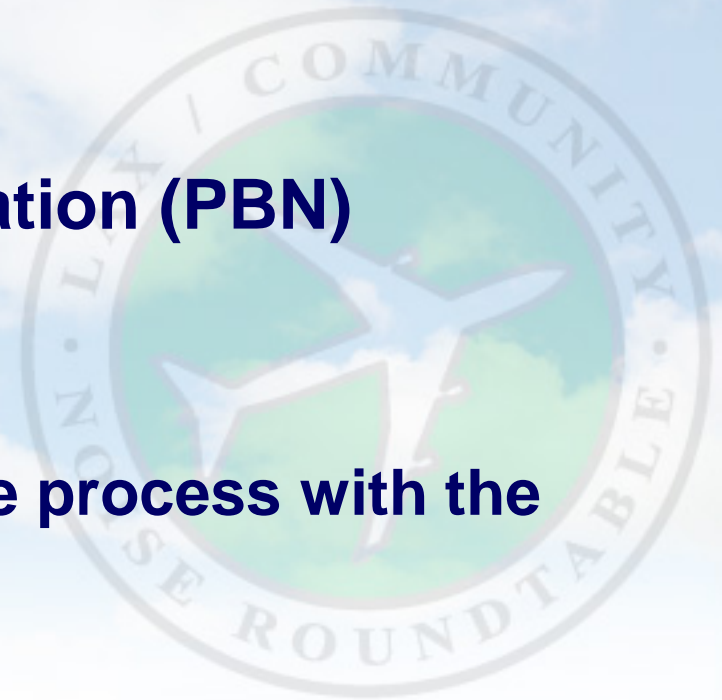
**Presentation to LAX/Community Noise Roundtable**

**March 14, 2012**



# Overview

- **Navigating NextGen**
  - **Performance Based Navigation (PBN)**
    - **Pros & Cons**
  - **RNAV has arrived**
    - **More procedures are in the process with the FAA**
- **NextGen Perspectives**
- **Land Use compatibility issues**



# Definitions

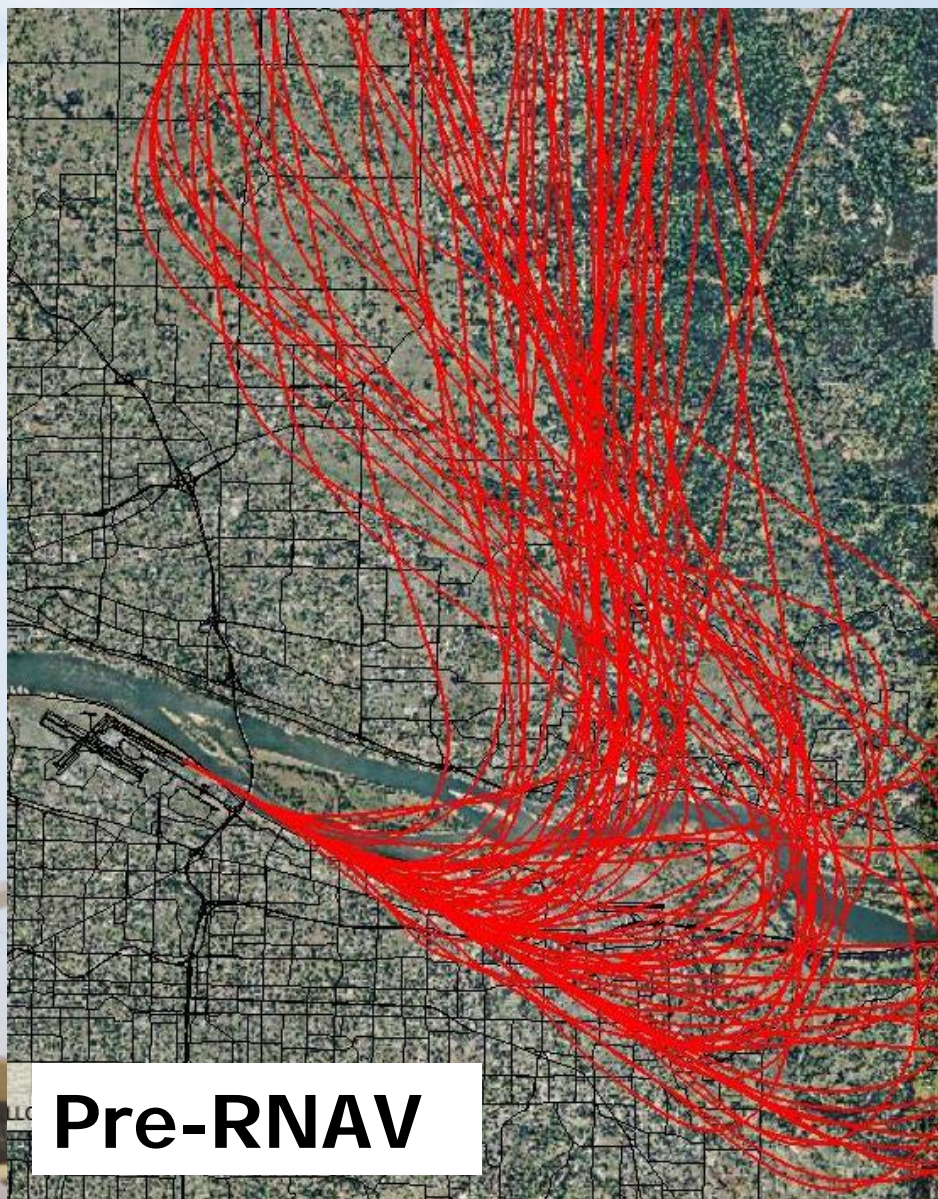
- **PBN (Performance Based Navigation):**
  - A framework for defining performance requirements in “navigation specifications”.
  - Includes RNAV and RNP.
  - Uses least amount of energy by aircraft to get from point A to B.
- **RNAV (Area Navigation):**
  - enables aircraft to fly on any desired flight path within the coverage of ground-or spaced-based navigation aids, i.e., ‘point-to-point’.
- **RNP (Required Navigation Performance):**
  - RNAV with the addition of an onboard performance monitoring and alerting capability; this enhances the pilot’s situation awareness and can enable reduced obstacle clearance or closer route spacing without intervention by air traffic control.

# PBN Pros and Cons

- **Pros**
  - **Condenses flight tracks, less dispersion**
  - **Saves fuel**
  - **Reduces Emissions**
  - **Enhances Safety**
  - **Reduces Noise for Some**
- **Cons**
  - **Condenses flight tracks, less dispersion**
  - **Changes flight path**
  - **Increases noise for some**
  - **Increases overflights for some**



# RNAV at Portland International Airport



# Community Perspective

- **Mixed reviews**
  - **Residents on the periphery of air routes generally like it**
    - **No longer have dispersed flights tracks over their home**
  - **Residents under air route dislike it**
    - **Have all the burden**



# Airport Perspective

- **Airports have mixed reviews about RNAV/PBN**
  - Could cause more problems than solutions
  - Need a transparent process
- **John Wayne Airport**
  - Residents requested RNAV; FAA implemented RNAV; now residents want dispersed tracks again
- **Phoenix Sky Harbor Airport**
  - Residents like it; condenses flight tracks to keep aircraft away from residential communities

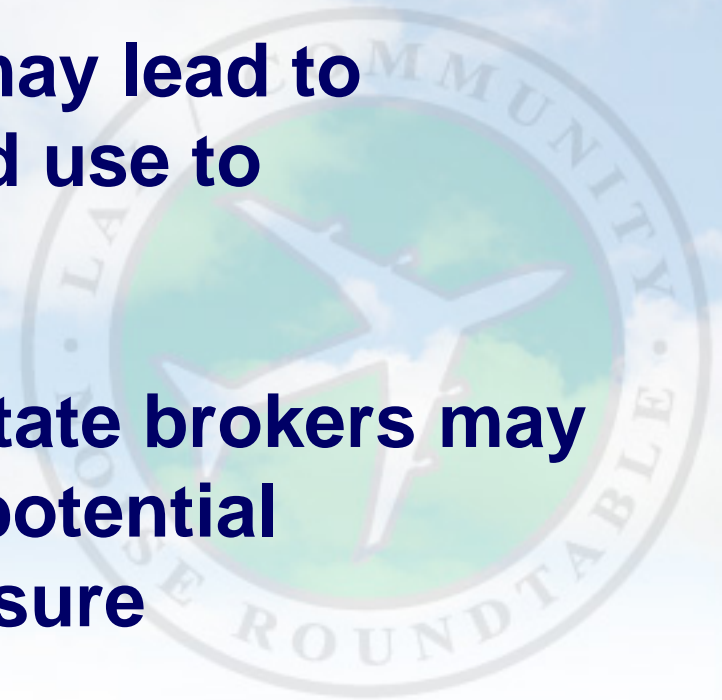
# Air Carrier Perspective

- **Air Carriers love RNAV**
  - **Saves time: most direct route possible**
  - **Saves fuel = reduces emissions = less noise**
    - **Delta Airlines saved \$25 million dollars annually**
  - **40% to 50% less communication between pilots and FAA Air Traffic Control**



# Land Use Compatibility Issues

- **Shrinking noise contours may lead to opening up compatible land use to residential development**
- **As contours shrink, real estate brokers may no longer need to provide potential homeowner aviation disclosure**
- **Give realistic expectations to community**



# Additional Information

- **UC Davis Aviation Noise & Emissions Symposium website:**
  - <http://airquality.ucdavis.edu/pages/events/index.html>
    - **Navigating NextGen Now**
- **Questions???**

