Agenda

- Introduction
- Part 150 Study Process
- Part 150 Study Timeline
- Part 150 Study Overview
- Essential Elements of a Part 150 Study
- Public Involvement
- Basics of Aircraft Noise Modeling
- 1997 Existing Condition Noise Exposure Map
- 1997 Noise Compatibility Study
- Short-Term Noise Monitoring Program
- Next Steps
Part 150 Study Process

We are Here

Study Initiation

Data Collection
- Forecast Validation
- Radar Data Analysis

- Existing Noise Exposure Map
- Initial Future Noise Exposure Map

- Noise Abatement Alternatives
- Land Use Management Alternatives

- Noise Abatement Plan
- Implementation Plan
- Land Use Management Plan

Draft Noise Compatibility Program & NEMs
Draft Documents and Public Hearings
Recommended Noise Compatibility Program & Final NEMs
Review and Approval
Part 150 Study Timeline

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<td>Project Kick-off/Data Collection</td>
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Part 150 Study Overview

- Part 150 Studies are Planning Studies
  - Identify noise and land use impacts that exist today and in the future
  - Work to develop solutions within the FAA’s framework

- Part 150 Studies can open funding sources
  - Following FAR Part 150 guidelines makes airport eligible for grants for implementing recommendations of the study
  - Funding is not guaranteed

- Part 150 Studies do not:
  - Recommend closing an airport or implementing mandatory restrictions on aircraft
  - Give environmental approval for implementing noise abatement or land use programs
Essential Elements of a Part 150 Study

– Noise Exposure Maps
  – Description of the noise levels for existing and future conditions
    – Future condition should take into account any changes (physical or operational) that may have an effect on the noise levels around the airport

– Noise Compatibility Program
  – Recommendations for reducing, minimizing, and/or mitigating aircraft noise and land use conflicts
    – Noise Abatement
    – Land Use Mitigation
    – Implementation Measures

– Public Involvement
  – Public information meetings/workshops
  – Public hearings
  – Planning advisory committee
Public Involvement

– Special Presentations / Focus Group Meetings
  – To public bodies or focus groups affected by, or having oversight responsibilities for, matters covered by the Part 150 Study Update

– Public Information Meetings
  – Open house, informational meetings to discuss and analyze potential aviation noise, land use, and other mitigation measures

– Public Hearings
  – Public hearings to receive comments (either oral or written) from the public on the Part 150 Study Update document

– Project Website / Social Media
  – Project website and social media will be updated with study information, including images and documents pertinent to the study
  – Posting of all meeting notices
  – Posting of study process and draft findings
Basics of Aircraft Noise Modeling

DNL is the Day - Night Average Sound Level

Single Event Noise Level
- Noise Level of each noise event (Takeoff or Landing)
- Apply Duration of Event
- SEL - Sound Exposure Levels

Cumulative 24-Hour Noise Level
- Total Daytime Events
- Total Nighttime Events
- Apply Night Penalty

Output
- Noise Contours
- Tabular Reports
- Grid Point Analysis

User Inputs
- Airport Information
- Aircraft Flight Tracks
- Aircraft Fleet
- Number of Operations
- Runway Utilization
- Time of Day
- Aircraft Climb Profiles
- Departure Trip Length
- Meteorological Data
- Topographic Data

Source
- Airport Layout Plan
- FAA Radar Data, Minnesota Air National Guard (MnANG)
- Traffic Flow Management System (TFMS), MnANG
- Tower, TFMS, Air Traffic Activity Data System (ATADS)
- Radar/Wind Data, Radar Data
- Radar Data, TFMS
- AEDT, Radar Data, MnANG
- TFMS
- Climatic Data, AEDT
- Airport Layout Plan, U.S. Geological Survey

Aviation Environmental Design Tool (AEDT)
- AEDT-Provided Information
  - Aircraft Noise Levels
  - Aircraft Performance Data
- Types of Aircraft Noise Considered within AEDT
  - Arrival
  - Departure
  - Flyover
  - Reverse Thrust (Braking)
  - Run-up Noise
1997 Noise Compatibility Study

- Recommended Noise Abatement Procedures
  - Noise Complaint documenting and responses
  - Contingency plan for rapid creation of Noise Abatement Committee
  - Agreement between ATC and MnANG amended to include overflights of Pike Lake

- Recommended Land Use Alternatives
  - Voluntary land acquisition/relocation program
  - Creation of multi-jurisdictional Airport Zoning Board
    - Develop airport noise overlay zone
Short-Term Noise Monitoring Program

– Purpose
  – To gather actual noise and operational data for validation of study inputs

– Potential Locations
  – Secure locations at residential neighborhoods, public facilities areas of community noise concerns
  – Areas to avoid include locations with other noise sources (e.g., near highways, construction sites etc.)
  – Feedback from residents and meeting attendees – Stop by the Noise Monitor Location display

– Timeframe
  – Will be conducted in the first two weeks of November
Next Steps

– Short-Term Noise Monitoring Program
  – Early November 2019
– Develop input and model Existing 2020 Noise Exposure Contours
– Develop input and model Future 2025 Noise Exposure Contours