

Noise Compatibility Planning Study

Dane County Regional Airport

Public Open House



Part 150 Study Team

Dane County Regional Airport Team

- Wisconsin Department of Transportation
Bureau of Aeronautics
 - Matt Messina – Airport Development Engineer
- Airport (MSN)
 - Kim Jones – Airport Director
 - Michael Kirchner – Engineering Director
 - Lowell Wright – Airport Noise Abatement/ Environmental Officer

Project Team

- HMMH
 - Gene Reindel – Principal-in-Charge
 - Tim Middleton – Project Manager
 - Julia Nagy – Assistant Project Manager
- Mead & Hunt
 - Kate Andrus – Project Lead, Airport Planning and Forecasts
 - Ryan Hayes – Airport Planning and Forecasts
 - Chris Reis – Local Client Lead
- The Jones Payne Group
 - Diane Carter – Project Lead, Principal-in-Charge
 - Brianna Whiteman – Assistant Project Manager, QA/QC



Roles and Responsibilities

Part 150 Study

Airport

- Project sponsor
- Certification that documentation is true and accurate
- Recommend measures to address incompatible land use

Consultant Team

- Overall project management, documentation, and outreach
- Aircraft noise analysis and abatement planning
- Noise compatibility analysis and planning
- Aviation forecast and airfield analysis

FAA

- Certification that the documentation meets federal regulations and guidelines
- Approval of Airport-recommended measures

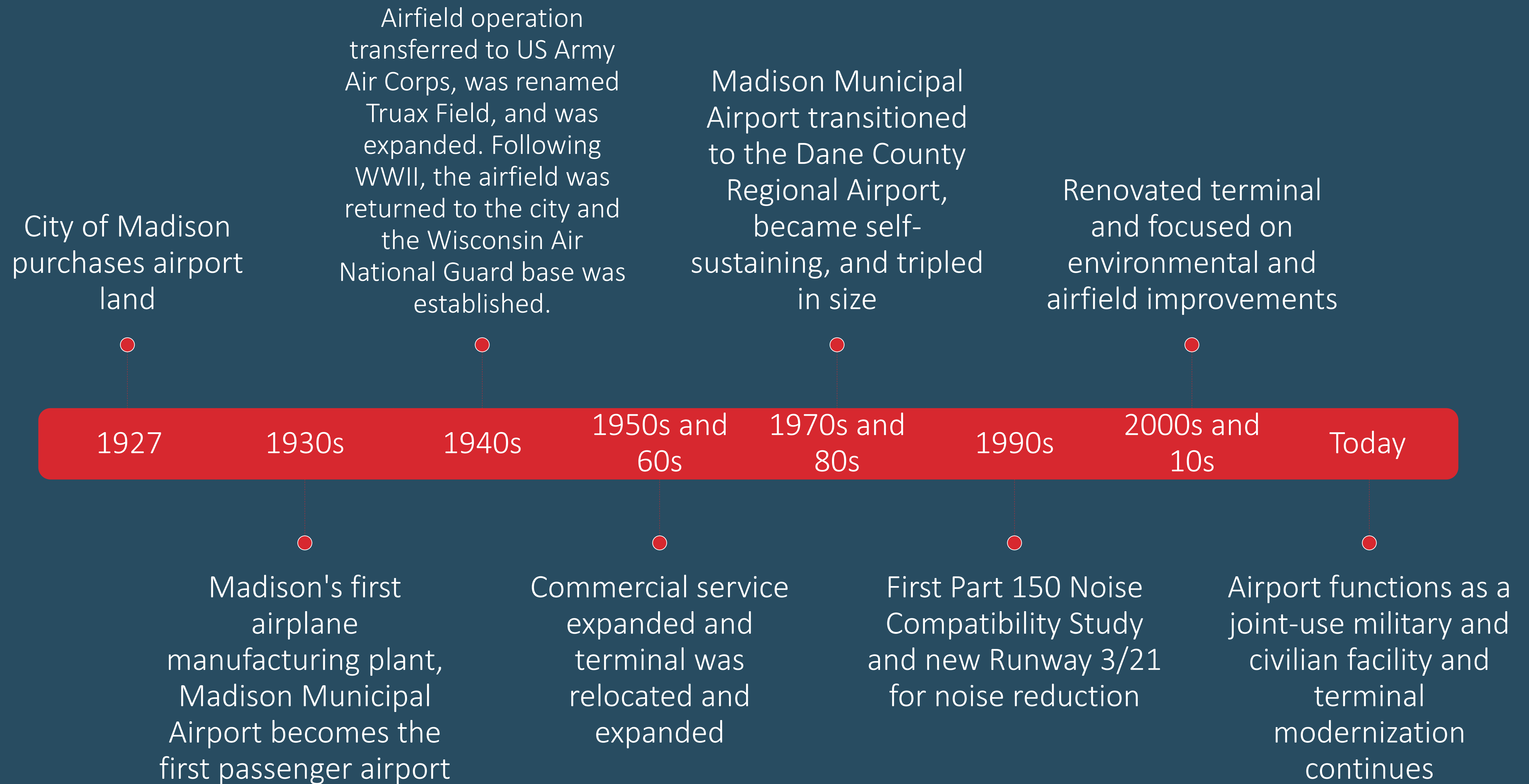
Technical Advisory Committee

- Review study inputs, assumptions, analyses, documentation, etc.
- Input, advice, and guidance related to NEM and NCP development

Public

- Provide input on study during comment period
- Review public draft documents

Airport History



Source: https://www.msairport.com/about/facilities_maps/history



Airport Facility Overview

MSN

- Covers 3,500 acres and serves over 2.2 million commercial passengers each year
- Fixed-Base Operator Wisconsin Aviation is located on the east side of the airport

115th Fighter Wing of the Wisconsin Air National Guard (ANG)

- Chosen to host the F-35A mission and receive a new fleet of F-35A Lightning II aircraft beginning in Spring of 2023

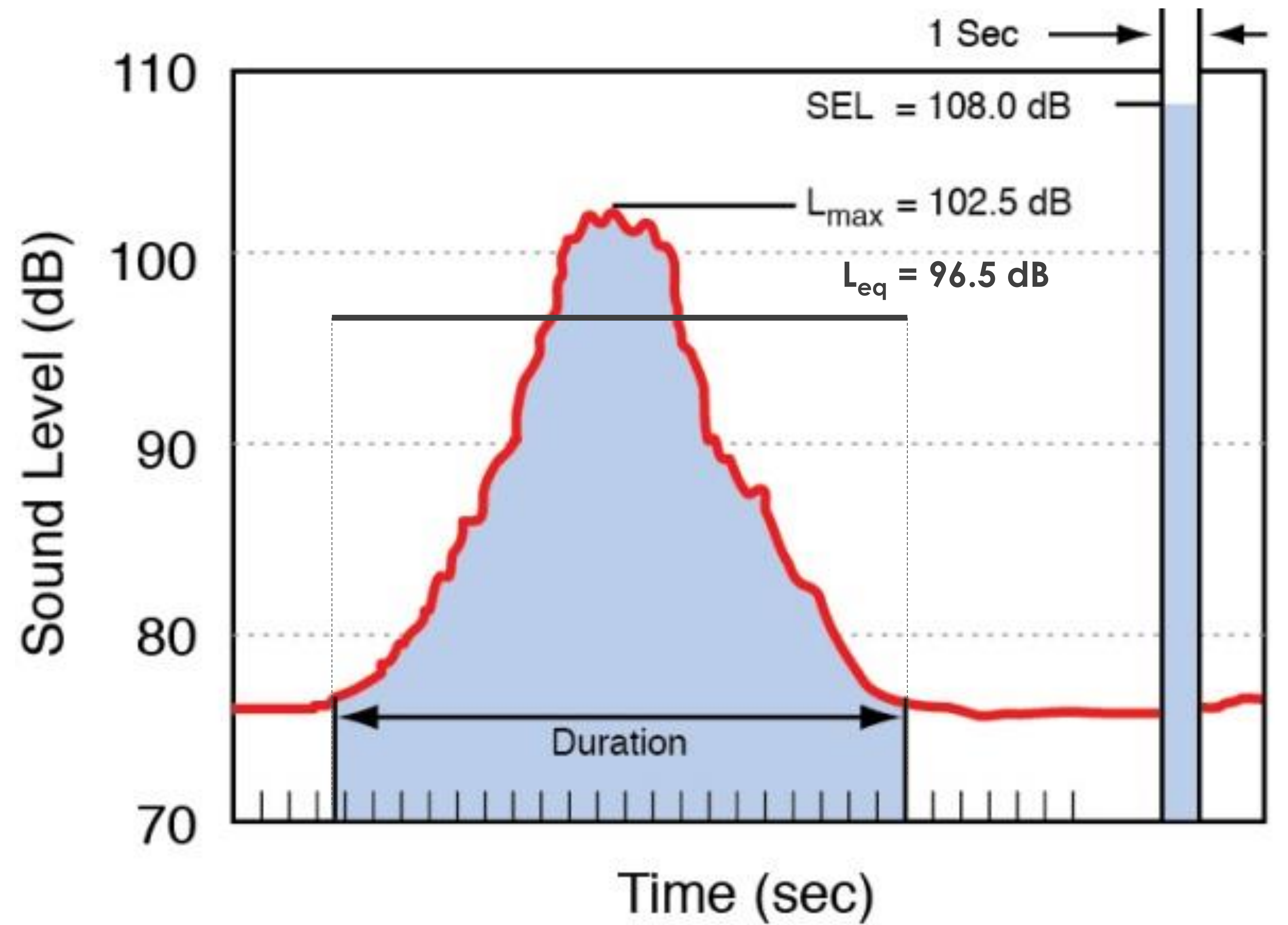
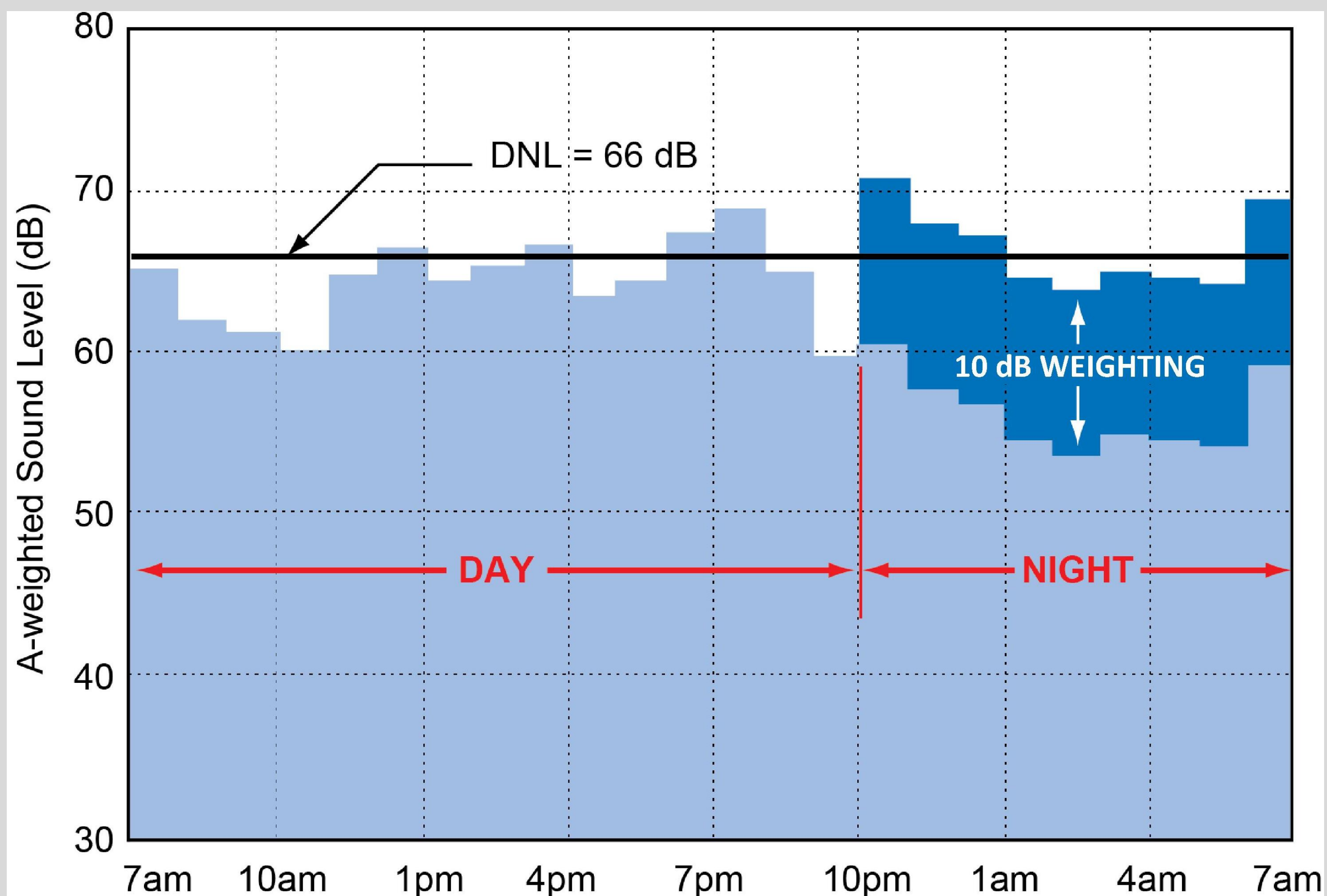
Wisconsin Army National Guard (ARNG) 64th Troop Command

- Operates UH-60 Black Hawk helicopters at Truax Field



Noise Terminology

- Maximum Noise Level (L_{max})
- Sound Exposure Level (SEL)
- Equivalent Sound Level (L_{eq})
- Day-Night Average Sound Level (DNL)



Noise Terminology

- The decibel is a complex logarithmic quantity based on sound pressure
- A-weighted decibels correlate well with how we hear
- Noise levels can be expressed many ways depending on their purpose, including but not limited to:
 - Instantaneous maximum noise levels (Lmax)
 - Single event dose (SEL)
 - Long-duration exposure (DNL)
- FAA requires use of DNL in a Part 150 study
- FAA Part 150 land use compatibility guidelines:
 - All land use is compatible with aircraft noise less than DNL 65 dB
 - Land use compatibility assessments use 5-dB contour bands
 - 65 to 70 dB
 - 70 to 75 dB
 - Greater than 75 dB

Part 150 Overview: Major Elements

- FAA created in response to Federal Aviation Safety and Noise Abatement Act of 1979 (ASNA)
- Codified under Title 14 of the Code of Federal Regulations Part 150
 - Formal *citation* is “14 CFR Part 150,” informal is “Part 150”
- Two primary elements
 - Noise Exposure Map (NEM)
 - Noise Compatibility Program (NCP)
 - Detailed FAA guidance available at www.faa.gov/airports/environmental/airport_noise/
- Consultation required with:
 - All local, state, and federal entities with control over land use within DNL 65+ dB
 - FAA regional officials, regular aeronautical users of the airport
 - All parties interested in review of and comment on the draft
- Opportunity must be offered for a final public hearing on the NCP
- MSN will exceed all consultation requirements
 - Improved stakeholder relations is typically one of the most valuable study results

Part 150 Overview: Study Process

Develop Study Protocol

- Finalize methodology
- Establish Technical Advisory Committee
- Develop project schedule and milestones

Verification

- Existing Noise Exposure Maps, planning, and environmental documents
- Noise complaint data
- GIS and land use data
- Flight track, operations, and noise data
- FAA activity forecasts

Develop NEMs

- Develop noise contours for existing and 5-year forecast conditions
- Review land use data & policies
- Noise evaluation for DNL 65-75 dB
- Identify incompatible land uses and review existing NCP
- Prepare maps in accordance with 14 CFR Part 150

Develop NCP

- Consider noise abatement strategies
- Consider land use strategies
- Consider programmatic strategies
- Update NCP in accordance with 14 CFR Part 150

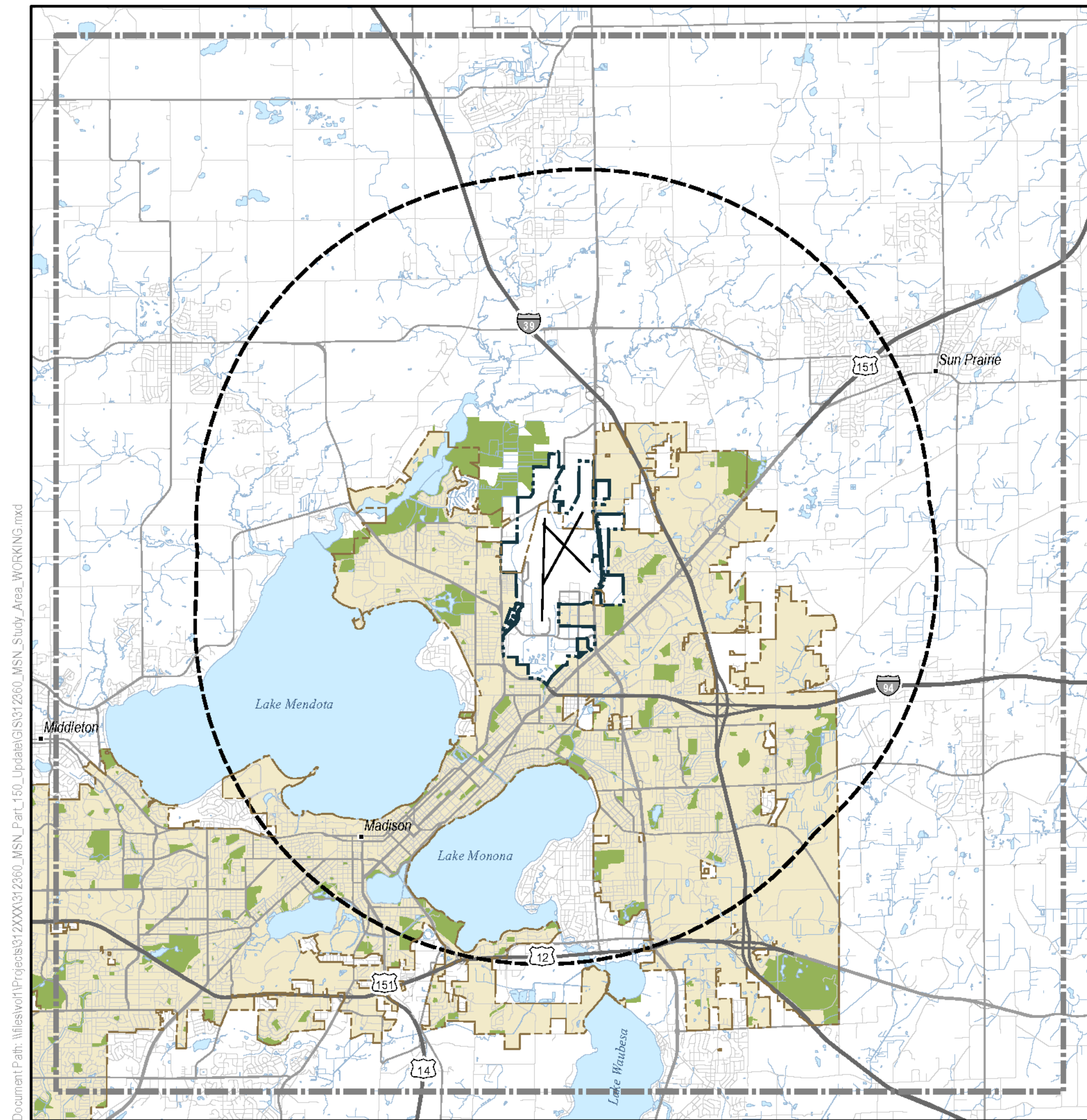
Stakeholder Engagement and Public Outreach

Technical Advisory Committee • Public Meetings/Hearings • Public Website Materials and Newsletters








Part 150 Overview: Noise Exposure Map

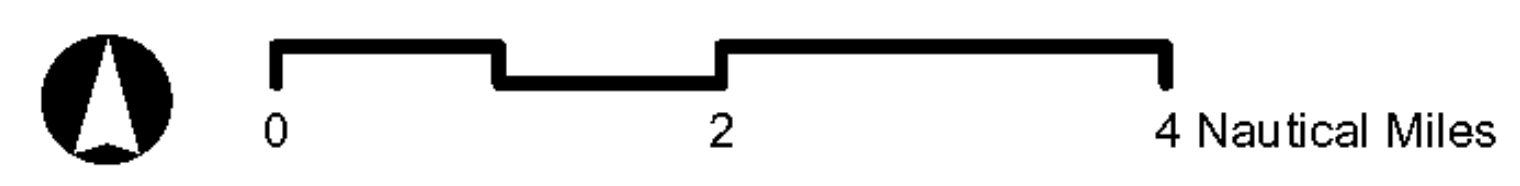
- FAA “accepts” NEM as compliant with Part 150 standards
- NEM must include detailed description of
 - Airport layout, aircraft operations, and other inputs to noise model
 - Aircraft noise exposure in terms of Day-Night Average Sound Level (DNL)
 - Land uses within DNL 65+ decibel (dB) contours
 - Noise / land use compatibility statistics within DNL 65+ dB contours
- NEM must address two calendar years
 - Year of submission (2022)
 - Forecast (at least five years from year of submission; 2027)
 - FAA reviews forecasts for consistency with Terminal Area Forecast (TAF)

Part 150 Overview: Draft Study Area



Document Path: \\files\vol1\Projects\312XXXX\312360_MSN_Part_150_Update\GIS\312360_MSN_Study_Area_WORKING.mxd

-  Airport Boundary
-  Study Area
-  FlightTrack Analysis Boundary
-  Major / Minor Roads
-  Lake / Pond
-  Recreation / Open Space
-  Madison City Limit



Dane County Regional Airport
Madison, Wisconsin

Figure:
Draft Study Area



Part 150 Overview: Noise Compatibility Program

- NCP must address three major categories of proposed actions
 1. Noise abatement measures
 2. Compatible land use measures
 3. Program management/administrative measures
- FAA *accepts* NCP as compliant with Part 150 standards
- FAA reviews and *approves* or *disapproves* proposals as compliant with Part 150 standards on a measure-by-measure basis

Proposed Schedule

Meeting / Activity	Anticipated Purpose	Anticipated Time Frame
Kick-Off Meeting with MSN and the Part 150 Team	Define organizational and procedural matters and public outreach, review and refine scope and schedule details.	January 20, 2022
1 st Public Open House	Introduction to Part 150, set expectations, discuss stakeholder roles, identify issues of concern	April 26, 2022
NEM Public Comment Period, 2 nd Public Open House	NEM thirty-day public comment period and second Public Open House	Sep-Oct 2022
MSN to Submit Final NEM to FAA	MSN submits final updated NEM to FAA for review and approval. Respond to FAA questions as needed.	December 2022
NCP Public Comment Period, 3 rd Public Open House and NCP Hearing	NCP thirty-day public comment period and third Public Open House and NCP Hearing.	4 th Quarter 2023
MSN to Submit Final NCP to FAA	MSN submits final updated NCP to FAA for review and approval. Respond to FAA questions as needed.	1 st Quarter 2024

Note: Schedule is subject to change



MSN Part 150 Study Website and Project Contacts

- Website:
<https://www.msnairport.com/about/ecomentality/Part-150-Study>
- Project email address:
part150study@msnairport.com
- Tim Middleton – HMMH Project Manager, Contact:
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- Michael Riechers – MSN Director of Marketing and Communications, Contact:
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