



# DANE COUNTY REGIONAL AIRPORT NOISE COMPATIBILITY PLANNING STUDY

Summer 2022 Newsletter

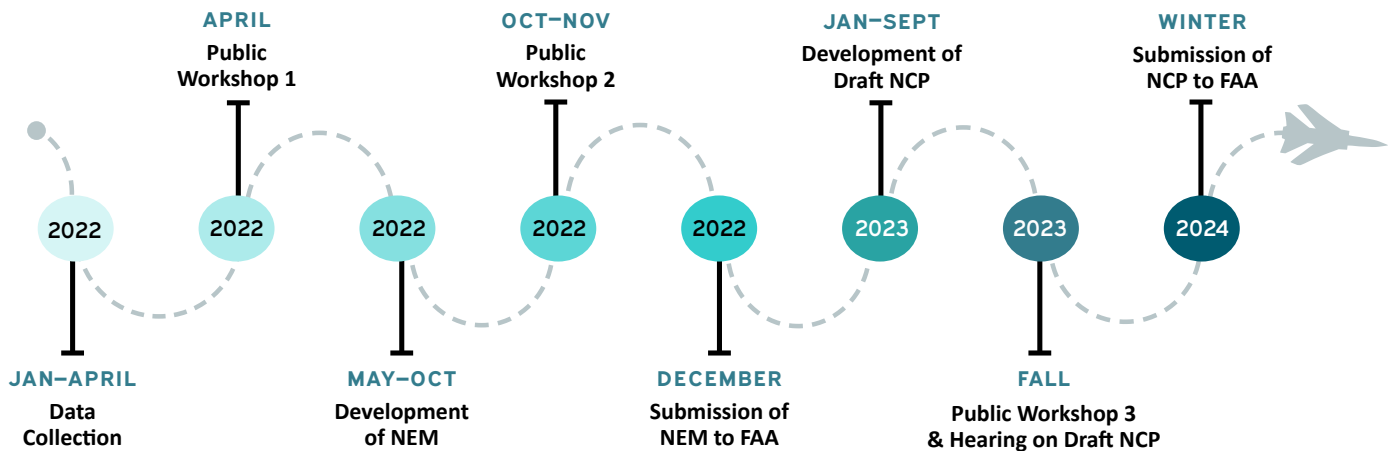
## Study Overview

Dane County Regional Airport (MSN) is undertaking a Noise Compatibility Planning Study in accordance with Title 14 of the Code of Federal Regulation Part 150 (14 CFR Part 150 or “Part 150”). The purpose of the Study is to develop an accurate Noise Exposure Map (NEM) that reflects current and future airport operations; communicate noise levels to the surrounding communities; and collaboratively develop noise abatement, mitigation, and management measures through a Noise Compatibility Program (NCP). The NEM and NCP prepared under this Study will be subject to

Federal Aviation Administration (FAA) acceptance and approval, respectively.

Part 150 describes a formal process for airport operators to address airport noise in terms of land use compatibility. The regulation establishes thresholds for aircraft noise exposure for specific land use categories. Part 150 studies are voluntary and allow airports to apply for federal funding for implementation of their noise program including FAA-approved measures recommended to reduce or eliminate incompatible land use. The study is expected to be completed in 2024.

## Study Phases Timeline



## Public Outreach and Stakeholder Engagement

Stakeholders and those interested in aircraft noise compatibility planning will be afforded an ongoing opportunity to learn about the Study and provide feedback. This will occur through various mechanisms, including a Technical Advisory Committee (TAC), a project website, project newsletters, public draft documents, public open houses, public comment periods, and a public hearing.

### First Open House Recap

Thank you to everyone who attended the first open house held on April 26, 2022! The presentation boards are available at this link: <https://www.msnairport.com/documents/pdf/MSN-20220426-Public-Mtg1-Boards-Final.pdf>.





# DANE COUNTY REGIONAL AIRPORT NOISE COMPATIBILITY PLANNING STUDY

## Frequently Asked Questions

### **Why is MSN undertaking a Part 150 Study?**

MSN strives to be a good neighbor to the communities surrounding the airport. MSN is undertaking this study to develop an accurate NEM that reflects current and future airport operations including the impending F-35 operations, to communicate noise levels to the surrounding communities, and collaboratively develop noise abatement, mitigation, and management measures through an NCP.

### **How is noise exposure quantified?**

The FAA requires the use of the noise metric Day-Night Average Sound Level (DNL) to quantify noise exposure. DNL uses an average number of operations over a 24-hour period based on one year of aircraft operations data. The sound levels are then averaged (with nighttime noise weighted with an additional 10 decibels [dB]). Nighttime operations are weighted to represent the greater sensitivity for most people by nighttime sounds.

### **How will the noise contours be developed for the Part 150 Study?**

The Noise Exposure Maps will be generated by a computer modeling program (Aviation Environmental Design Tool or "AEDT"), which is the modeling program prescribed by the FAA for noise studies. The input data for the AEDT includes a forecast of aircraft operations, on an annual average day, for each of the study years (broken down between day and night activity), runway utilization rates for aircraft types, flight track geometry for different aircraft types and other factors.

### **Why is DNL used to develop noise contours rather than the sound level I hear when planes are overhead?**

The FAA requires the Noise Exposure Map noise contours to be based on DNL, and for DNL to be used to assess land use compatibility. The advantage of DNL is that it reflects an annual average of 24-hour noise exposure and not just the noise level at a specific moment in time. The noise when aircraft are overhead is averaged with the times during the day when there is less or no aircraft noise, so the DNL level for a particular location is considerably lower than the highest decibel levels that might be heard at that location, or measured on a noise meter, during aircraft overflights.

### **Does DNL take into account the time of day when noise occurs?**

Yes. 10 decibels is added to the noise exposure from each nighttime flight (from 10 p.m. to 7 a.m.). This is mathematically equivalent to counting a single nighttime flight the same as 10 identical day-time flights.

### **Does DNL take into account weather and topography?**

Yes. As required by the FAA, a 30-year average weather history is used to develop the noise exposure contours. Topographic data is also used to accurately account for the distance from the aircraft (noise source) to the receiver on the ground using actual elevations around MSN airport.

### **Will noise monitors be used in developing the updated noise exposure maps for the airport?**

No. The FAA requires DNL contours to be developed through its computer modeling program rather than actual noise measurements. The input into the modeling program is far more comprehensive than could possibly be obtained from field measurements, and modeling is the only practical way of determining the noise that will be experienced at all of the geographic points that are represented in the noise contours. Noise modeling is also necessary to forecast the noise that is expected in the future, as required by Part 150. The FAA noise modeling program has been shown to accurately portray the results from measurements in the field.

### **Could the Part 150 Study determine that the F-35 aircraft is too loud to operate at MSN?**

No. 14 CFR Part 150 is focused on addressing the land use compatibility conditions around an airport based on existing and future operations. The MSN Part 150 Study will include the projected F-35 operations in the forecast NEM to assess land use compatibility as a result of the projected F-35 operations; and then determine NCP measures to address incompatible land uses for that future condition NEM.

### **How is the study funded?**

The FAA provided funding for the study from an Airport Improvement Program (AIP) grant. The AIP grants come from the Airport and Airway Trust Fund. The Trust

Fund was established by Congress in 1970 to provide a dedicated funding source for the U.S. aviation system, and it helps finance the FAA's investment in the nation's airports and airways. The Trust Fund receives funding from taxes on aviation fuel and on commercial airline tickets. The MSN Part 150 Study is not funded with local taxpayer dollars.

### **Does Part 150 consider health effects and impacts of noise on children's hearing?**

No. Part 150 does not consider health effects and impacts of noise on children's hearing. MSN is committed to conducting the Noise Compatibility Planning Study in accordance with Title 14 of the Code of Federal Regulation Part 150 (14 CFR Part 150), following FAA requirements and guidelines limited to land use compatibility around airports. FAA acknowledges that noise or unwanted sound is known to have several adverse effects on humans, such as communication interference, sleep disturbance, physiological responses, and annoyance. The FAA continues to research these topics to inform their aircraft noise policy. A Federal Register notice published in 2021 summarizes the latest research findings: <https://www.federalregister.gov/documents/2021/01/13/2021-00564/overview-of-faa-aircraft-noise-policy-and-research-efforts-request-for-input-on-research-activities>. Additional

information is available on the FAA website, [https://www.faa.gov/regulations\\_policies/policy\\_guidance/noise](https://www.faa.gov/regulations_policies/policy_guidance/noise).

### **How is MSN considering environmental justice in the Part 150 Study?**

14 CFR Part 150 does not specifically address environmental justice. As the "airport operator", MSN is responsible for preparing the NEM, recommending NCP measures, pursuing implementation of the adopted NCP measures and managing the consultant team. MSN may apply for grant funding for the implementation of FAA-approved Airport Improvement Program (AIP) eligible measures. A MSN-recommended and FAA-approved measure does not require the implementation of the measure, but merely demonstrates that the measure is in compliance with Part 150 and allows MSN to apply for federal Airport Improvement Program (AIP) grants for measures that are eligible. Additionally, if a measure requires subsequent FAA action, its implementation may require environmental study under the National Environmental Policy Act (NEPA). NEPA requires environmental justice to be analyzed as a resource category. Chapter 12.2 of the FAA 1050.1F Desk Reference (v2) discusses analysis of environmental justice for FAA actions subject to NEPA review: [https://www.faa.gov/sites/faa.gov/files/about/office\\_org/headquarters\\_offices/apl/12-socioecon-enviro.pdf](https://www.faa.gov/sites/faa.gov/files/about/office_org/headquarters_offices/apl/12-socioecon-enviro.pdf).



*Photos from the first open house held on April 26, 2022*