



Airport Noise Management Benchmarking Study September 2018

The Metropolitan Airports Commission (MAC), which operates Minneapolis-St. Paul International Airport (MSP), intends to identify best practices in airport noise management in North America through a comprehensive benchmarking study of airport noise management practices. The benchmarking study included a survey of peer airports across North America. High-level results of the survey are summarized in this document through infographics.

The objectives of the study are to: (1) detail the constraints imposed on U.S. airport noise programs due to the highly-regulated environment in contrast with airports in other countries; (2) provide an independent and transparent review of the MAC Noise Program Office and related noise abatement activities as compared with peer airports in the U.S. and Canada; and (3) identify improvement opportunities for the MAC Noise Program Office and MSP Noise Oversight Committee (NOC).

The motivation for this study stems from the need, identified by the NOC, for an independent and transparent review of airport noise programs in order to identify best practices in the industry. In response to increasing community concern about airport noise in many communities across the U.S., results of the study provide valuable data for airports to identify opportunities, assess progress, and address challenges related to airport noise.

The full report provides an overview of the airport noise regulatory environment in the U.S. and key international noise management programs. It provides an overview of each of the five categories of noise management that were assessed through the benchmarking study, including:

- ◆ Program Management and Innovative Use of Technology;
- ◆ Stakeholder Engagement;
- ◆ Operational Measures;
- ◆ Mitigation and Land Use Measures, and;
- ◆ Research and Policy Measures.



The methodology for the benchmarking study included identification of twenty-eight relevant noise management measures across the five categories, the creation of an online survey to collect data on the implementation of the identified measures, and analysis of airport responses.

The survey was sent to 72 airports in both the U.S. and Canada, with 54 airports responding, resulting in a response rate of seventy-five percent. Although a majority of respondents were U.S. airports, 6 were Canadian airports. Of the 48 U.S. airport respondents, approximately forty-eight percent are large hub, twenty-nine percent medium hub, eight percent small hub, thirteen percent non-hub, and two percent other.

The benchmarking survey results show that MSP performs well amongst airport respondents for many of the 28 measures, across each category of noise management:

- ◆ In the area of Program Management and Innovative Use of Technology, MSP has one of the largest noise offices in North America. MSP also has the most permanently installed noise monitors (39) of all surveyed airports. MSP's Noise and Operations Monitoring System (MACNOMS) is accessible to the public, including a public portal that allows users to customize reports for a wide range of analyses, and to report complaints. MSP might consider allowing noise complaints from non-residential addresses.
- ◆ In the area of Stakeholder Engagement, survey results show that MSP has one of the most comprehensive programs; including the NOC, quarterly Listening Sessions, an airport noise website, newsletter, and video series. MSP might consider livestreaming NOC meetings as an opportunity to provide greater access for stakeholders who cannot attend in person. Regarding pilots and users, MSP has an extensive pilot education program and noise abatement sensitivity training. Although this is not organized as a formal Fly Quiet Program, MSP does track compliance.
- ◆ In the area of Operational Measures, MSP has

a number of measures that have been developed to address noise from aircraft operations, including a preferential runway use program and 11 Noise Abatement Procedures (NAPs). MSP has both suggested and required NAPs, and is among forty-seven percent of responding airports that track compliance with NAPs. MSP is among the more than two thirds of airports that report collaborating with FAA and other stakeholders to consider airspace design for noise abatement purposes. These include flight tracks to avoid noise-sensitive areas and Performance Based Navigation (PBN).

- ◆ In the area of Mitigation and Land Use Measures, MSP is the only airport among all respondents to report providing sound insulation to DNL 60, and reported the highest program cost at approximately \$483M. MSP is among the one third of respondents that reported having a land/property acquisition program or residential relocation program; twenty-eight percent of respondents have disposed of previously acquired noise land, including MSP. Eighty-nine percent of respondents, including MSP, reported partnering with local jurisdictions concerning noise mitigation and land use control, using a wide range of measures.
- ◆ In the area of Policy and Research Measures, MSP is among the seventy-two percent of respondents that report having an FAA-accepted Noise Exposure Map and FAA-approved Noise Compatibility Program under FAR Part 150 or similar federally-approved program. More than three quarters of respondents, including MSP, indicate that they participate in at least one local or national airport noise research group or national aviation trade association.

Detailed information about this study is available in the full report.

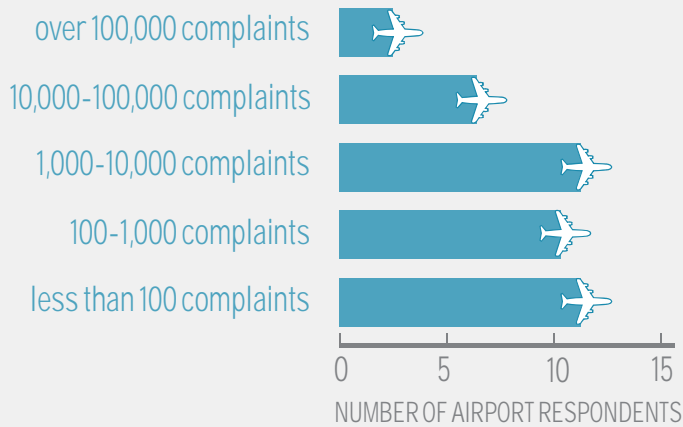
Metropolitan Airports Commission
Noise Program Office
6040 28th Avenue South
Minneapolis, MN 55450
www.macnoise.com



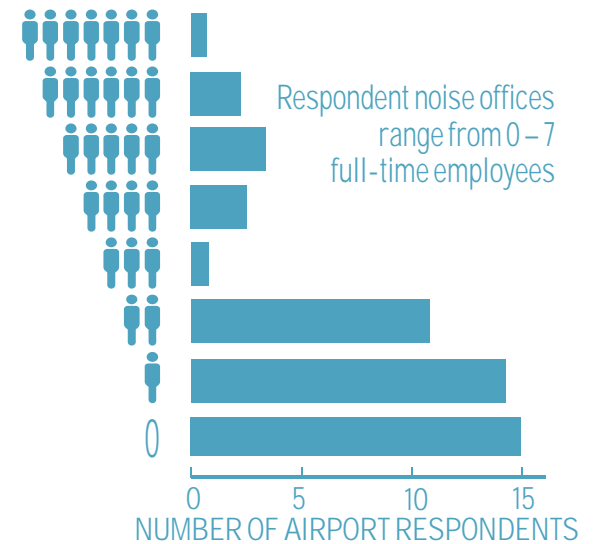
Airport Noise Benchmarking Study Results by the Numbers

Program Management and Innovative Use of Technology Measures

Total noise complaints reported

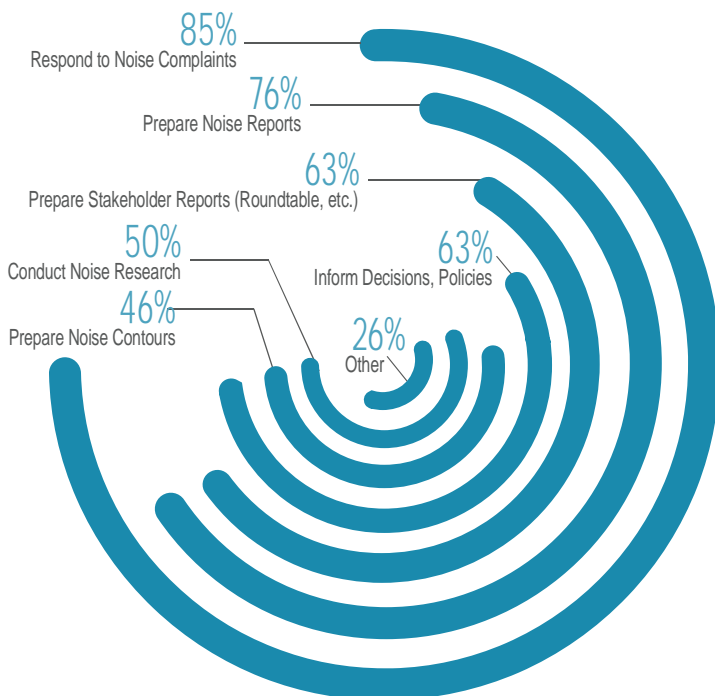


FULL TIME EMPLOYEES



74% of airport respondents have a noise office, including MSP

Uses of monitoring system data by airport respondents



MSP has the most noise monitoring towers (39) of all respondents

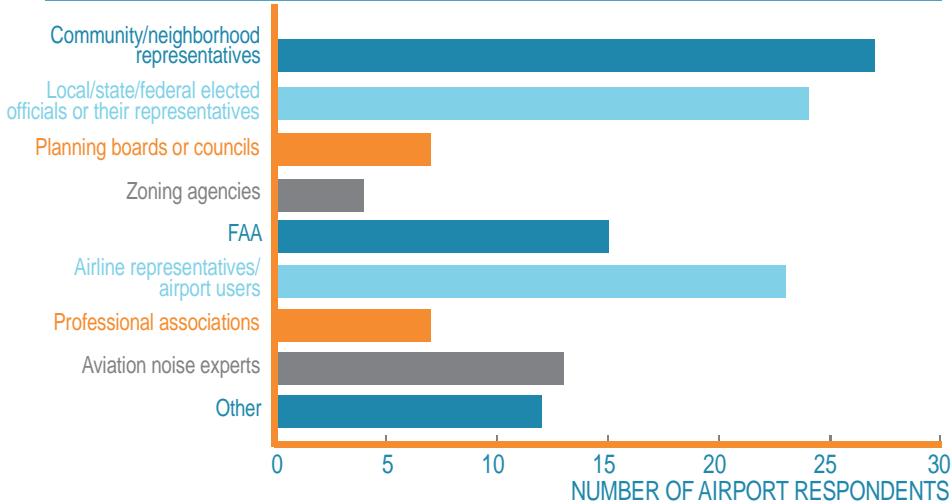
- 36-40 monitors
- 31-35 monitors
- 26-30 monitors
- 21-25 monitors
- 16-20 monitors
- 11-15 monitors
- 6-10 monitors
- 0-5 monitors



Airport Noise Benchmarking Study Results by the Numbers

Stakeholder Engagement Measures

Stakeholder groups represented on advisory committees or roundtables

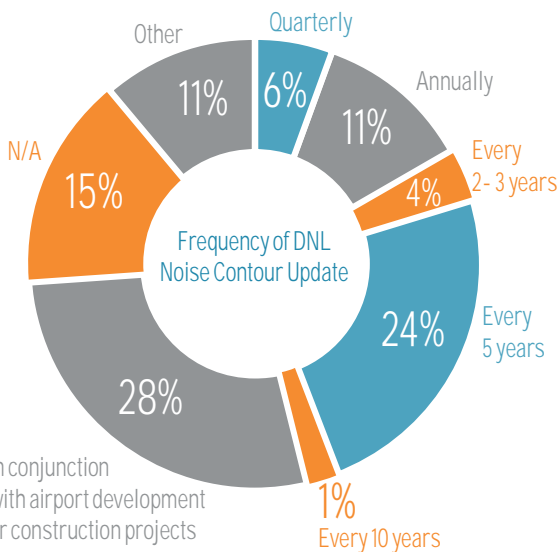


54% of respondents have a standing noise advisory committee/roundtable



80% reported that their standing noise committee does not have established/stated goals*

*Reported noise committee goals were described as committee charters, mission statements, and annual work plans.



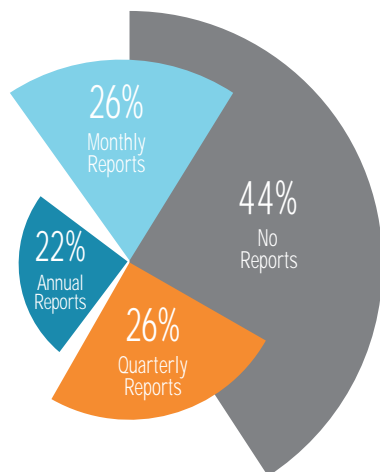
Public meetings beyond formal committee/roundtable

Regular meetings with external groups



NUMBER OF AIRPORT RESPONDENTS

Frequency of Noise Reporting >



Frequency of meetings

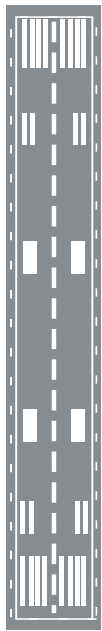


NUMBER OF AIRPORT RESPONDENTS

Airport Noise Benchmarking Study Results by the Numbers

Operational Measures

74%



YES

Respondents with preferential
runway use programs

26%

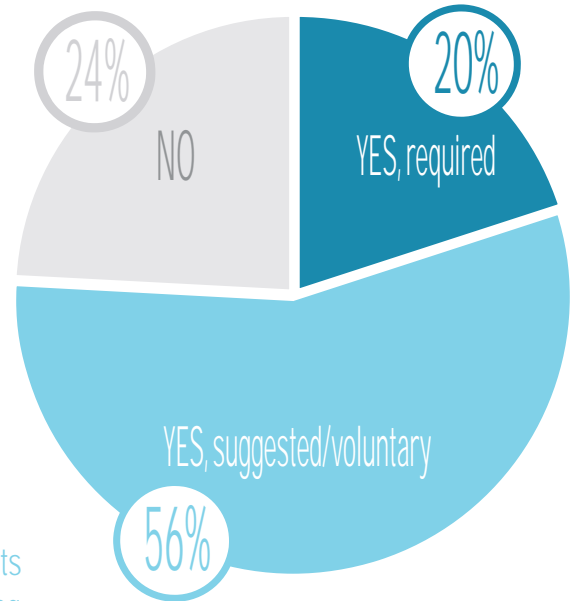


NO

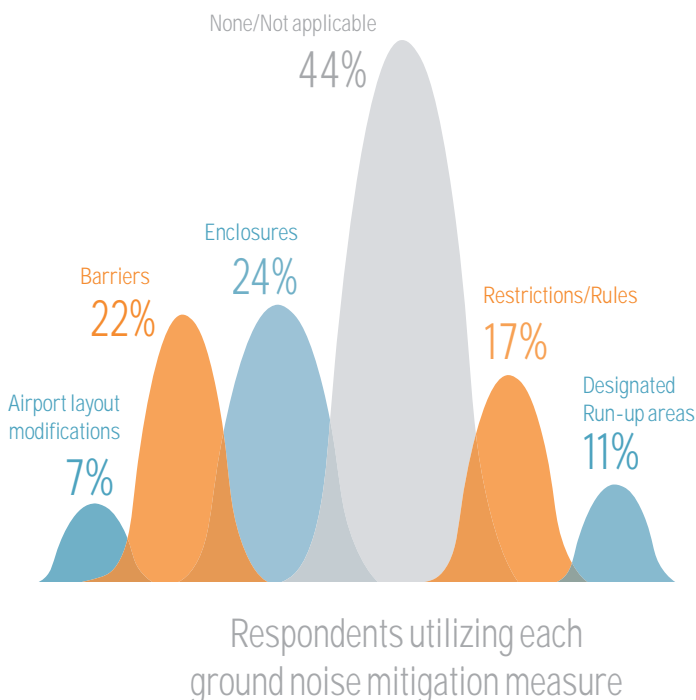


47% of respondents
report tracking and reporting
compliance with NAPs, including MSP

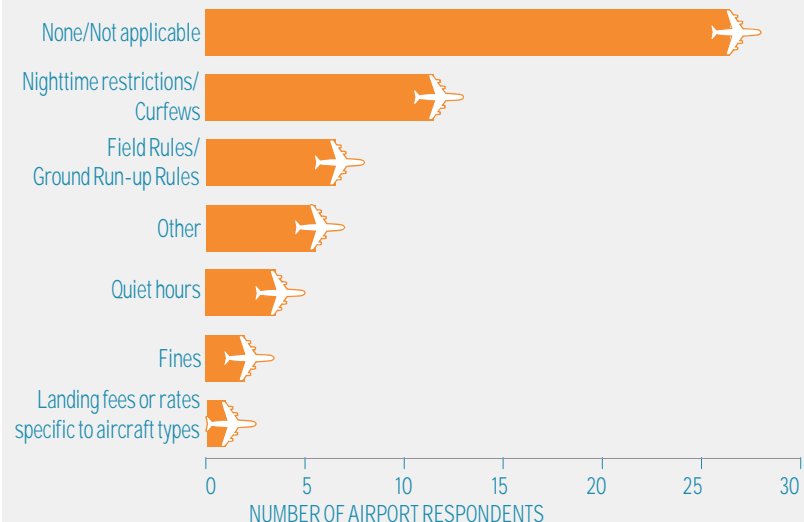
Noise Abatement Procedures (NAPs)



Only 2 out of 47
airport respondents report having instituted
greater than 3° glide slopes
purely for noise reduction purposes



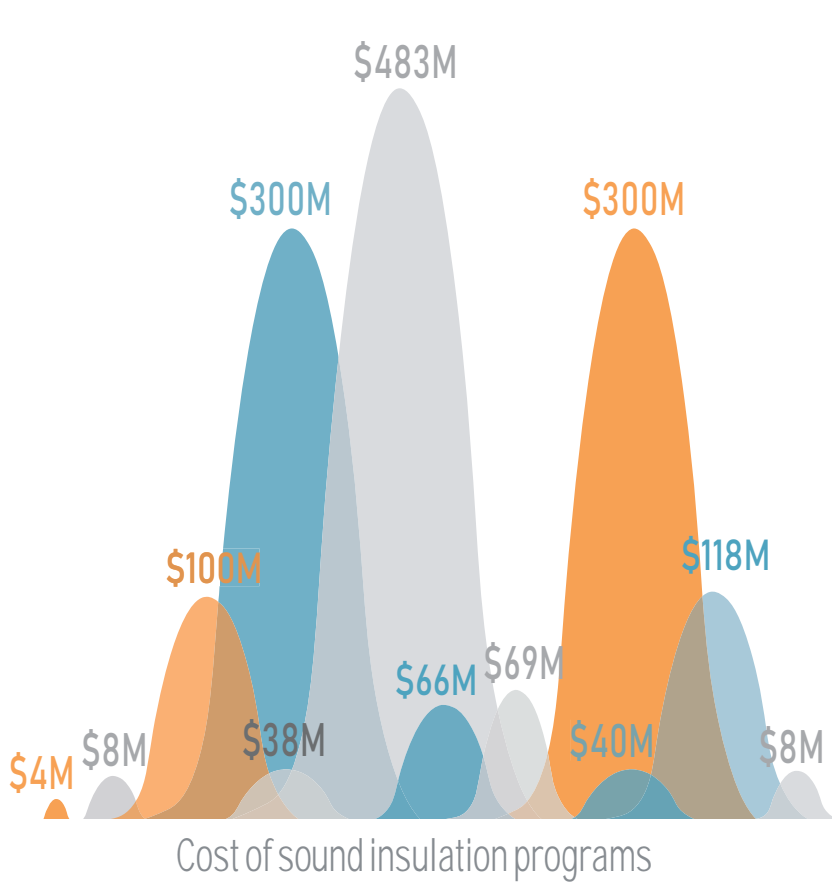
Respondents reporting each operational use restriction*




* All enforceable restrictions, such as curfews, differential landing fees for aircraft types, and/or noise fines were in place prior to the 1990 Airport Noise and Capacity Act.


Airport Noise Benchmarking Study Results by the Numbers

Mitigation and Land Use Measures



 56% reported a current or previously completed sound insulation or residential noise mitigation program

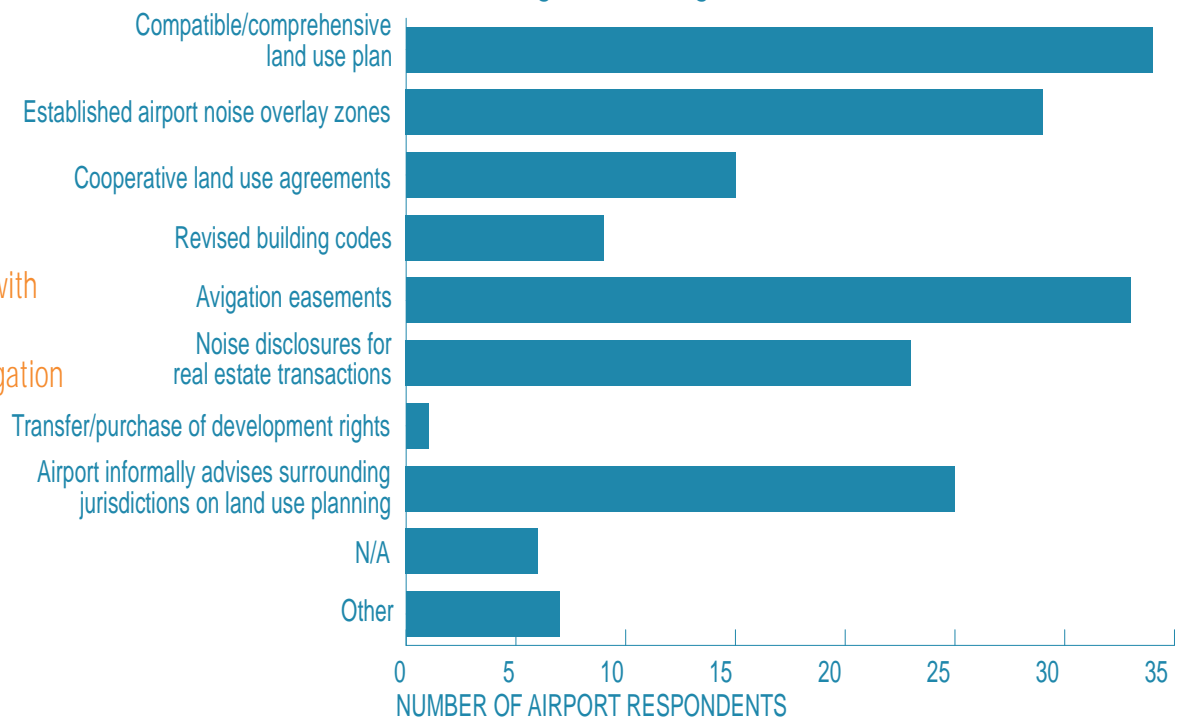
 MSP reported the highest cost of sound insulation at \$482.9M

 MSP was the only airport respondent to report providing sound insulation to residential homes outside the 65 DNL contour

How respondents partner with local jurisdictions concerning noise mitigation and land use

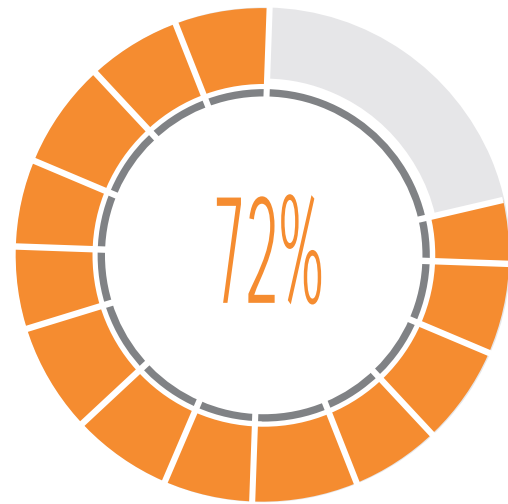
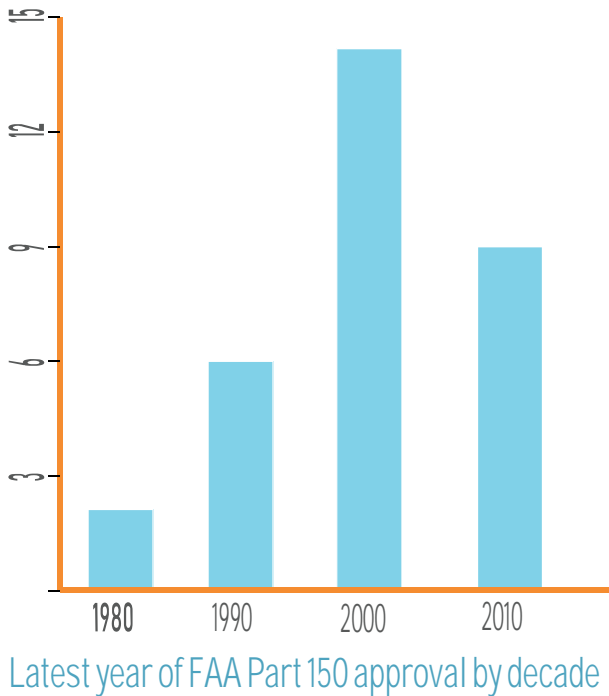


89% reported partnering with local jurisdictions concerning noise mitigation and land use



Airport Noise Benchmarking Study Results by the Numbers

Policy and Research Measures



^ Airport respondents that report having an FAA-accepted Noise Exposure Map (NEM) and FAA-approved Noise Compatibility Program (NCP), including MSP

