STATEMENT OF KEVIN WELSH,
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FEDERAL AVIATION ADMINISTRATION,
BEFORE THE
UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
SUBCOMMITTEE ON AVIATION
AVIATION NOISE: MEASURING PROGRESS IN ADDRESSING COMMUNITY CONCERNS
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Chair Larsen, Ranking Member Graves, and Members of the Subcommittee: Thank you for inviting me to speak with you today about the Federal Aviation Administration's role in reducing the impact of aircraft noise exposure. My name is Kevin Welsh and I am the Executive Director of the FAA's Office of Environment and Energy. My office conducts research, develops policy, and collaborates with other FAA offices and the aviation community to address aircraft noise. Accompanying me today are my colleagues in this effort: Michael Hines, Manager of the Planning and Environmental Division in the Office of Airports; and Beth White, Senior Strategist for Community and Industry Engagement.

The FAA's core mission is to provide the safest and most efficient aerospace system in the world. This mission also includes addressing the environmental impacts of aviation, such as climate change, local air quality, and noise. Congress first gave the FAA the responsibility to regulate and address aircraft noise in 1968. In the decades since, the FAA has established a strong track-record of addressing the impacts of aircraft noise on communities by reducing noise from airplanes and engines through technology development and standard-setting, adopting Federal guidelines for compatible land use, providing Federal financial assistance for noise mitigation measures, working with airport sponsors and stakeholders to develop noise abatement procedures, and communicating with stakeholders. Today, I would like to provide you with a summary of what we've done to achieve a substantial reduction in exposure to aircraft noise

since that initial congressional mandate and outline our recent actions and plans to continue to address aviation noise and reduce exposure where possible.

Successfully addressing aviation noise requires collaboration, cooperation, and coordination across aviation stakeholders, including the FAA, air carriers, airports, aircraft manufacturers, local land use planning authorities, communities, and elected officials. Decisions about flight times, number of operations, and aircraft types are in the scope of private industry. Land use planning near airports, including the proximity of residential development, schools, and other noise-sensitive uses, is addressed at the state and local level. In short, the FAA has an important role in taking action to address aircraft noise, but we cannot do it alone.

Progress Over Time

During the last 50 years, we have seen a dramatic reduction in noise exposure despite a nearly five-fold increase in the number of passengers transported in the U.S. aviation system. Since the mid-1970s, the number of people living in areas exposed to significant levels of aircraft noise[1] in the United States has declined from roughly 7 million to about 440,000 in 2019. At the same time, the number of passengers has increased from approximately 200 million in 1975 to approximately 935 million in 2019. We are not, however, asserting that aircraft noise exposure is no longer a concern. Instead, exposure to aircraft noise has changed over time and making further reductions in noise has become more challenging. The FAA is not standing by, but instead we have increased efforts to understand and address aircraft noise reflecting today's environment.

[1] Under longstanding FAA policy, the threshold of significant aircraft noise exposure in residential areas is a Day-Night Average Sound Level of 65 decibels (dB). See the "Aviation Noise Abatement Policy," issued by the Secretary of Transportation and the FAA Administrator in 1976. This document is available on the FAA website at https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/.

Today's civilian aircraft are quieter than at any time in the history of jet-powered flight, but there are many more operations. The noise produced by one Boeing 707-200 flight, a typical airplane in the 1970s, is equivalent in noise to 30 Boeing 737-800 flights that are typical today.[2] While communities no longer experience very loud single flights, like the airplanes of the 1970s, they do experience more frequent operations of much quieter airplanes. This change in noise exposure has changed the way in which communities are impacted by noise. Despite this, the FAA has increased efforts to understand and address aircraft noise reflecting today's environment.

Continued Efforts to Reduce Aircraft Noise

The FAA, aircraft manufacturers, and airlines continue to work toward further reducing aircraft noise at the source through efforts like the Continuous Lower Energy, Emissions, and Noise (CLEEN) Program, which began in 2010. The FAA's CLEEN program provides funding to develop and accelerate the introduction of technologies that will reduce noise, emissions, and fuel burn. The technologies demonstrated during the first phase of CLEEN are estimated to result in a decrease in the land area exposed to noise by 14%. In 2021, the FAA initiated the third phase of CLEEN with over $100 million in funding and including a target for community noise exposure.

In addition to research and development, the FAA plays a leadership role in the development of international standards for noise certification at the International Civil Aviation Organization, including the establishment of the currently applicable Stage 5 noise requirements that were agreed in 2013, and a recent decision to evaluate the possibility of a more stringent noise standard.

[2] Based on an average of approach and takeoff certificated noise levels as defined in 14 CFR part 36.

Land Use Planning and Airport Noise Compatibility

Another factor in the reduction of aircraft noise exposure has been cooperative efforts by airports, airlines and other aircraft operators, State and local governments, and communities to reduce the number of people living in areas near airports exposed to significant levels of aircraft noise or provide other means of mitigation. Under the FAA's Airport Noise Compatibility Planning Program[3], airports may choose to consider measures to reduce existing noncompatible land uses, prevent new noncompatible land uses, and provide mitigation in areas exposed to significant levels of aircraft noise. Since 1983, the FAA has provided over $10 billion to more than 250 airports to use this program to implement changes in support of local land use planning and zoning, sound insulation, acquisition of homes and other noise-sensitive property, aircraft noise abatement routes and procedures, and other measures. The FAA issues grants to airport operators and local governments to fund noise mitigation projects under the program, including to sound-insulate homes, schools, and other noise-sensitive facilities. The FAA encourages participation by providing financial and technical assistance to airports to develop noise exposure maps and noise compatibility programs and to implement eligible noise-related mitigation measures, depending upon the availability of funding.

Airspace Modernization

In 2012, Congress directed the FAA to accelerate Next Generation air traffic technologies.[4] The introduction of satellite-enabled Performance Based Navigation (PBN) procedures and more precise flight paths has improved the safety and efficiency of the national airspace system. It has also provided noise benefits by reducing the geographical area that flight

[3] This process is outlined under 49 U.S.C. 47501 et seq., as implemented by 14 CFR part 150.
[4] See section 213 of PL 112-95: https://www.congress.gov/112/plaws/publ95/PLAW-112publ95.pdf.

paths cover, resulting in a reduction in the overall number of people exposed to aircraft noise. At the same time, however, the implementation of PBN, combined with a growth in air traffic, has increased the concentration and number of flights over certain communities. These changes, both air traffic procedures and air traffic growth, have resulted in new and increased concerns about aircraft noise, particularly by communities that are experiencing an increased number of flights, even if the overall noise levels have decreased. As a result, the FAA has significantly enhanced its focus on addressing noise concerns and working with communities, airports, and other key stakeholders.

Community Engagement

Since the initial years of PBN implementation, we have greatly expanded community outreach beyond the process requirements of the National Environmental Policy Act of 1969 to include broad and ongoing communications with airports, elected officials, and community leadership through *ad hoc* committees, task forces, and airport and community sponsored roundtables. Some of the most productive community groups are typically made up of representatives from multiple communities around an airport, who are or may be affected by aircraft operations, and may include the airline industry and other stakeholders who may serve in an advisory capacity. The FAA is fully committed to meaningful engagement and open dialogue with those affected by airspace changes and we routinely engage the public to understand specific challenges and concerns.

The FAA's community engagement framework is based on nine regional teams, each staffed by a regional administrator, a service center, and other FAA officials who work with community engagement officers to determine how to best engage with communities.[5] Our

[5] https://www.faa.gov/air_traffic/community_engagement/.

approach to community engagement is guided by time and experience proven practices and techniques described in detail in our Community Involvement Manual and our Community Involvement PBN Desk Guide. The FAA is constantly participating in community engagement activities and initiatives across the nation.

Improved Systems

In addition to extensive outreach, we are constantly striving to provide communities with new tools that will help them access noise information resources. As part of our Noise Complaint Initiative, we have taken several meaningful actions to provide greater transparency regarding aviation noise complaints and inquiries submitted by the public. Through this initiative, the FAA seeks ways to address the underlying issues raised by the public, proactively educate, inform, and engage in aircraft noise issues, and partner with airports to gather their complaint data and better understand nationwide concerns. As part of this initiative, members of the public can, for example, access our web-based noise resources to learn more about aviation noise, access information on FAA noise research and noise programs, as well as understand how to make a noise complaint.[6] The FAA has also designed a noise portal that accepts detailed complaint information and allows users to file noise complaints directly with the FAA.[7] For quick answers to frequently asked questions related to FAA's metroplex program, flight path information, regional administrators, and community engagement in general, users can also access our "chatbot". The chatbot is an artificial intelligence powered chat function that enables users easy access to the vast information on the FAA website.

[6] https://www.faa.gov/noise/inquiries/.
[7] https://noise.faa.gov/noise/pages/noise.html.

Noise Research and Policy

A key component of the FAA's noise research program is to better understand the effects of aircraft noise on individuals and communities through research into annoyance, health and human impacts (e.g., sleep, cardiovascular), speech interference, and children's learning. We also conduct noise modeling and develop noise metrics and environmental data visualization tools to help FAA and the aviation community estimate and share environmental impacts of aviation in a way that is accessible and understandable to the general public. These activities, including the research and development of tools and models, are critical to addressing aircraft noise, refining our approaches, and periodically updating policy.

As part of these efforts, we recently published the results of a nationwide survey regarding annoyance related to aircraft noise—the Neighborhood Environmental Survey.[8] This was a multi-year research effort and is one of many current FAA research efforts to update the scientific evidence of the relationship between aircraft noise exposure and its effects on communities around airports. The survey results were released along with an overview of FAA's broader noise research program in a January 2021 Federal Register Notice.[9] The notice requested public comment on the scope and direction of FAA's noise research program, and we received over 4,000 comments which are being reviewed to help inform the agency's noise research priorities and noise policy review planning efforts.

In late 2021, the FAA initiated a review of our noise policy as part of our ongoing commitment to address aircraft noise. This effort will build on our work to advance the scientific understanding of noise impacts as well as the development of analytical tools and

[8] https://www.faa.gov/regulations_policies/policy_guidance/noise/survey/.
[9] 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.

technologies. Our review will be evidence-based, thorough, and collaborative. It will consider new evidence from the agency's noise research program, including from the Neighborhood Environmental Survey, and the distribution of environmental risks, tradeoffs, or externalities across communities. We expect to review the continued use of the Day-Night Average Sound Level (DNL) as the FAA's primary noise metric for assessing cumulative aircraft noise exposure, as well as whether DNL 65dBA should remain the definition of the limit for residential land use compatibility and the significant noise exposure threshold. We also expect to explore whether, and under what circumstances, supplemental or alternative noise metrics are appropriate to inform research and policy considerations. The review process will identify and assess other policy options not noted here, consider feedback on the notice, and, if appropriate, recommend policy updates. We also anticipate that our noise policy review will include stakeholder outreach as we consider any recommended policy changes.

Conclusion

The FAA is fully committed to a long-term effort to minimize the effects of aviation noise as part of the FAA's mission. To be successful, we will continue to work closely with all stakeholders and elected officials. Thank you for the opportunity to be here today.