
NOISE POLICY REVIEW
Virtual Webinar
Federal Aviation Administration
FEDERAL AVIATION ADMINISTRATION

# COMMENTS AND QUESTIONS

- Throughout this presentation and in the Q&A session following this presentation, you may submit questions by clicking the Q&A icon at the bottom of the Zoom window. There's no need to wait until the presentation ends.

- You may also submit questions to FAA's YouTube Channel.

- Please note: Questions and comments made during this webinar will not be recorded to the federal docket.

- To make an official comment, a link to the Federal Register notice is available at www.faa.gov/noisepolicyreview

# NOISE POLICY REVIEW

- 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 technologies.
- 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.
- Goals
  - Identify and implement well-reasoned, scientifically-grounded noise policy updates that incorporate FAA's updated understanding of aviation noise and human response and the development of analytical tools and technologies to better manage and reduce the environmental impacts of aviation
  - Conduct an inclusive, transparent, and participatory process that prioritizes input from substantially affected stakeholders, including local communities

# FEDERAL REGISTER NOTICE (FRN)

- Published on May 1, 2023
- 90-day comment period ends July 31, 2023
- Includes a background on FAA Noise Policy
- Request for comments includes 11 questions
- Links to a companion framing paper
- Submit comments to Docket FAA-2023-0855 at regulations.gov

# FRAMING PAPER

- Entitled "*The Foundational Elements of the Federal Aviation Administration Civil Aviation Noise Policy: The Noise Measurement System, its Component Noise Metrics, and Noise Thresholds*"
- Intended to be read in parallel with FRN.
- Provides additional context and discussion around the 11 questions included in the FRN.
- Aimed at providing context for the review and helping stakeholders better understand the questions included in the FRN.

# SCOPE OF NOISE POLICY REVIEW

- **Focus on foundational elements of FAA's noise policy, including:**
  - **Metrics**: hard look at DNL, consideration of other metrics (e.g., Number Above), and how they are calculated.
  - **Noise Thresholds**: Consider NES findings and other research, investigate lowering below DNL 65 dBA the definition of the level of significant noise exposure for actions subject to environmental review requirements and modifying the definitions of the levels of noise exposure that are deemed to be “normally compatible” with airport operations, as set forth in Table 1 of Appendix A to Part 150.
  - For new metrics, consider whether it is appropriate to establish a noise threshold and its potential value.

# PURPOSE OF THE FAA'S REQUEST FOR COMMENTS

- Provide meaningful, equitable, and transparent opportunities for early engagement and input into agency deliberations.

- Help the FAA define the public policy problem noise metrics describe.

- Opportunity for asynchronous brainstorming to:
  - Consider relevant facts;
  - Seriously reflect on the opposing interests, concerns, and needs FAA must address;
  - Give reasons for preferences, and explain why these preferences make sense within FAA's mission, authority, and mode of operation.

# WHY PROVIDE INPUT NOW

- Influence outcome of noise policy review;
- Provide meaningful and early input to agency decisionmakers;
- Help FAA understand how it can improve community understanding of and expectations regarding future noise exposure; and
- Questions are designed to solicit public input that will supplement and augment the FAA's technical expertise and consideration of aviation noise issues.

# WHAT KIND OF INPUT TO PROVIDE

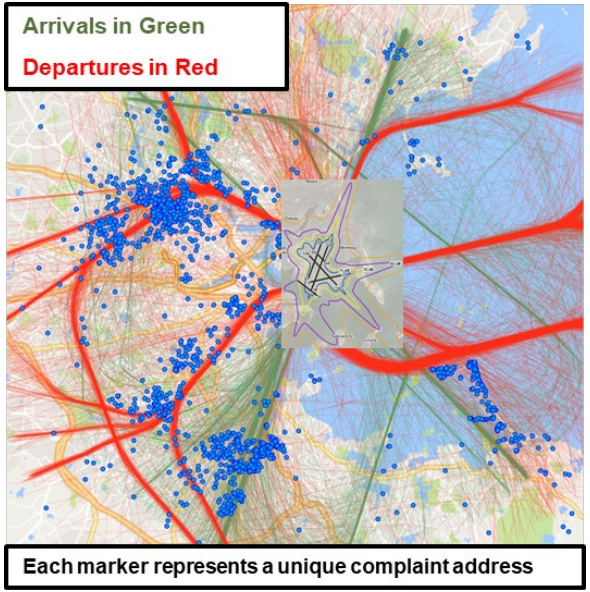
- The FAA welcomes any comments and is particularly interested in the public's responses to questions and issues identified in the Notice;
- Specific recommendations, explanations for any recommended change(s), and supporting information;
- Comments addressing potential improvements in how, where, and with whom the FAA communicates regarding changes in aircraft noise exposure will be particularly helpful; and
- NOTE: Comments noting concerns regarding the level of aviation noise at specific locations should be made on the FAA Noise Portal at: https://noise.faa.gov/noise/pages/noise.html

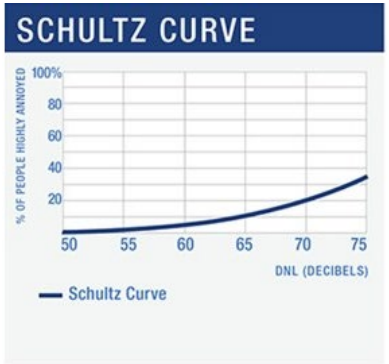
# EFFECTIVE COMMENTS LEAD TO CHANGE

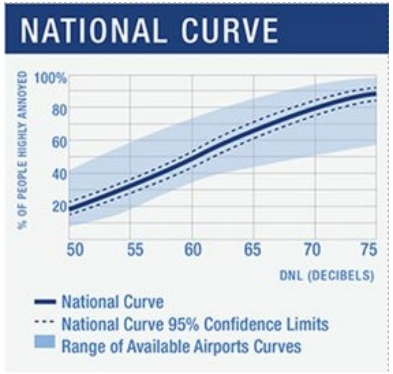
- FAA seeks substantive input on nationally applicable policy

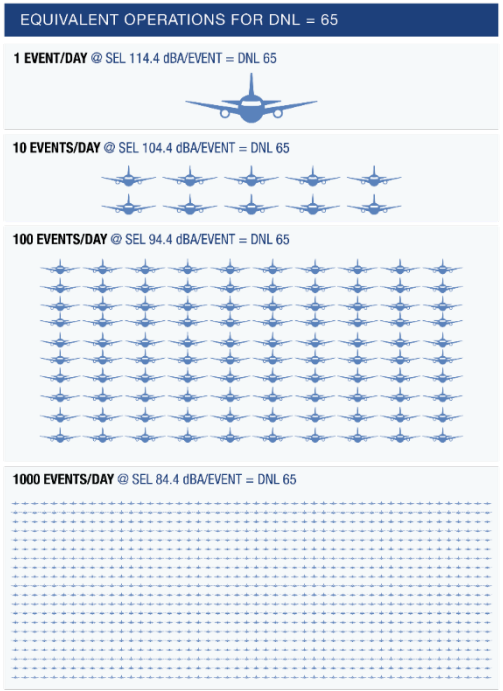
| Types of comments that may lead to a policy change | | |
|---|---|---|
| Submit science, evidence, & expert knowledge | Point out factual or legal errors, gaps, or unintended consequences | Propose and explain alternative solution or enhancement |

# THE NOISE PROBLEM: THEN AND NOW



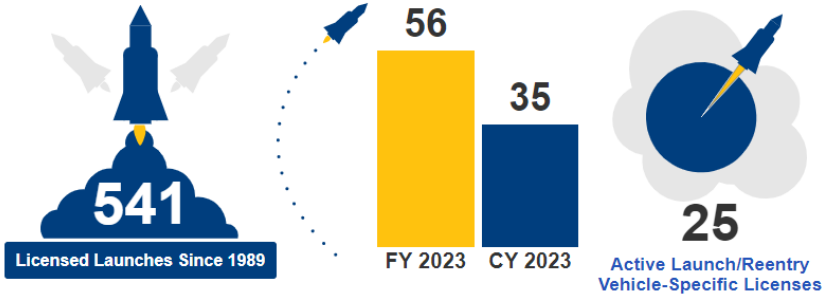
# DEFINING THE MODERN NOISE PROBLEM

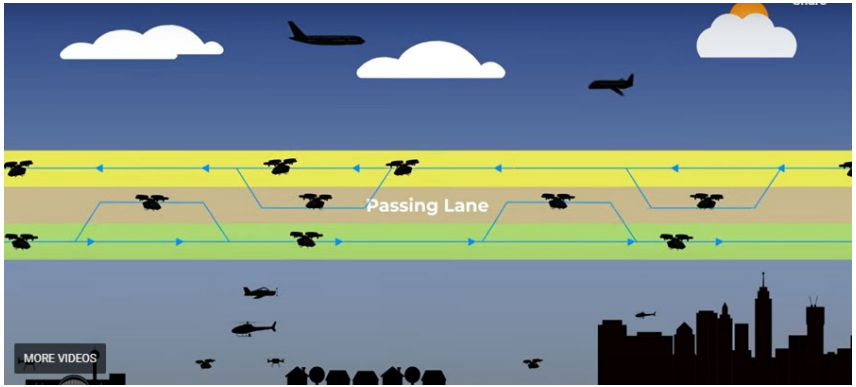
## Questions 1 and 2a

- Requests **information about:**
- **The aircraft and vehicle types and operations that the policy should address;**
  - Fixed wing aircraft, helicopters, rockets, future supersonic aircraft, or new entrant technologies like UAS (drones) or advanced air mobility (air taxis)
- **How and what elements of the operations should be described using noise metrics;**
- **How information should be used by the FAA to communicate with the public regarding changes in noise exposure and to make decisions**

# DEFINING THE MODERN NOISE PROBLEM

- **Questions 2.b - e**
  - Who is and will be affected by aviation noise?
    - Vicinity of airports vs. overflight communities
    - Vicinity of commercial space launch or reentry operations
    - Vicinity of UAS or other newly emerging technology operations
  - How has your experience of noise changed over time?
  - How do your interests and concerns differ from others based on your location and experience of aviation operations?
  - How would different noise metrics address these concerns?



# FAA'S NOISE METRIC SYSTEM AND DNL

**Congress directed the FAA to establish a single system of measuring noise in the Aviation Safety and Noise Abatement Act of 1979 (ASNA)**

- **The system must –**

  (A) have a highly reliable relationship between projected noise exposure and surveyed reactions of individuals to noise; and

  (B) be applied uniformly in measuring noise at airports and the surrounding area;

- **The single system must account for:**
  - Noise intensity;
  - Duration;
  - Frequency, and
  - Time of occurrence.

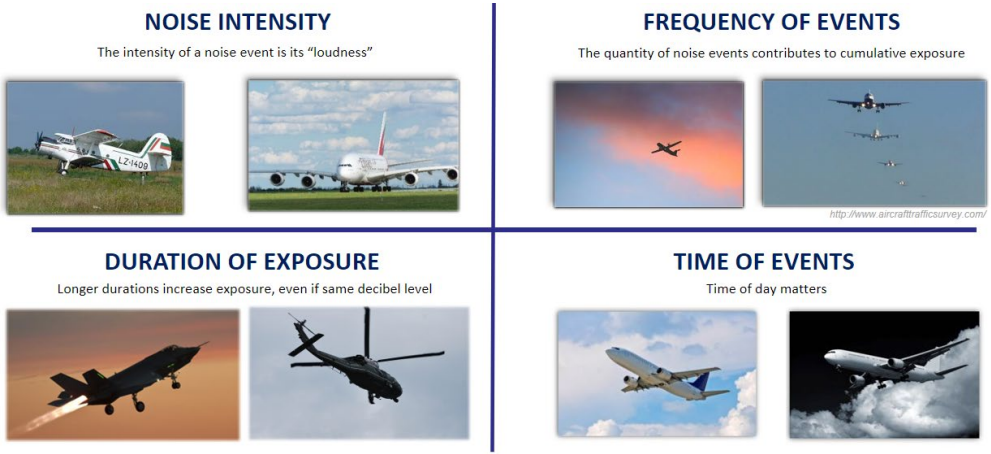
# FAA'S NOISE METRIC SYSTEM AND DNL

## Day-Night Average Sound Level (DNL)

Single-number metric to quantify cumulative aircraft noise exposure over a 24-hour period accounting for:

- ✓ Noise intensity / magnitude
- ✓ Duration of exposure
- ✓ Frequency or number of events
- ✓ Time period in which events occur (day or night)

Primary decisionmaking metric for actions subject to NEPA and airport noise compatibility planning studies prepared pursuant to 14 CFR part 150.



# DOES THE DNL NOISE METRIC RESPOND TO THE MODERN NOISE PROBLEM?

- **Question 3 asks about the DNL metric as a whole**
  - What views or comments do you have regarding DNL? About its benefits or shortcomings?
  - Would these views change if another metric was used as a companion, supplement, or alternative to DNL?
    - Companion Metric - A noise metric that is used in conjunction with another noise metric, such as DNL, for decisionmaking
    - Supplemental Metric - A noise metric used to improve the public's understanding of the expected change in aviation noise that is not used for decisionmaking
    - Alternative Metric - A noise metric that is used in lieu of another metric, such as DNL, for decisionmaking
  - Would these views change if the FAA changed how DNL is calculated?

# WOULD CHANGING AVERAGING OF DNL RESPOND TO THE MODERN NOISE PROBLEM?

- **Question 4 asks about the calculation of DNL and averaging**
  - DNL is calculated using the concept of an Average Annual Day (AAD), which averages annual aircraft operations into a single, representative day
  - Do you believe AAD appropriately describes noise impacts?
  - What other averaging schemes should be considered and what do they capture that AAD does not?

# WOULD OTHER DECISIONMAKING METRIC(S) RESPOND TO THE MODERN NOISE PROBLEM?

- **Question 5 asks about possible decisionmaking metrics and how they can interact**
  - What noise metrics should be used for decisionmaking for actions subject to NEPA and airport noise compatibility planning studies prepared pursuant to 14 CFR part 150?
  - Should different metrics be used in different circumstances? How?
  - Should FAA continue to use DNL for decisionmaking?
  - How can metrics be used to support better agency decisionmaking?

# OTHER POTENTIAL METRICS

- The FAA is considering the ways it analyzes and describes aircraft noise so that the public more easily understands changes in exposure
- Different metric classes offer different types of information:
  - Cumulative
  - Operational or Single Event
  - Impulsive or Low-Frequency

# COMMUNICATING CHANGES IN NOISE EXPOSURE

- **Question 6 asks about communicating changes in noise exposure**
- **FAA's current supplemental noise metric policy**
  - Contained in FAA's NEPA policies and procedures (FAA Order 1050.1F)
  - The FAA uses the policy to engage with the public to better explain changes in noise exposure
  - Not used for decisionmaking
- **If the FAA were to change this policy should FAA consider:**
  - What information FAA communicates regarding changes in noise exposure?
  - Where and with whom FAA communicates?
  - What information methods FAA uses to communicate?
  - What venues FAA uses to share information regarding changes in noise exposure?

# FAA NOISE THRESHOLDS

- **Refers to two different levels:**
  - FAA's significant noise impact threshold for actions being reviewed under the National Environmental Policy Act (NEPA); and
  - the land use compatibility guidelines established in 14 CFR part 150, Appendix A
- **Informed by a historic dose-response curve (Schultz Curve), which provided a useful method for representing the community response to aircraft noise.**
- **Set at DNL 65 dB**

# FAA NOISE THRESHOLDS

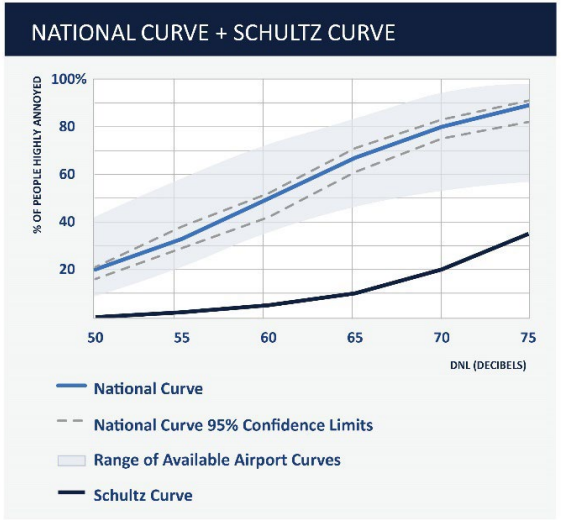
- **Question 7 asks:**
  - How should historic and Neighborhood Environmental Survey findings be considered in establishing a noise thresholds for actions subject to NEPA and Land Use Noise Thresholds in 14 CFR part 150 (airport compatibility planning)?
  - Should FAA consider other information regarding noise impacts in establishing noise metrics?
  - Should the noise thresholds be established using DNL or another cumulative noise metric?
- **Question 8 asks:**
  - Should FAA establish noise thresholds using single event or operational metrics for certain types of actions subject to FAA approval or control?
  - When should FAA use these metrics?
  - What should be the level of noise exposure that defines the limits of significant noise exposure in NEPA analyses and for actions subject to 14 CFR part 150?

# FAA NOISE THRESHOLDS

- **Question 9 asks about low frequency and impulsive noise events**
  - Should the FAA establish noise thresholds for certain types of actions subject to FAA approval or control, such as when the FAA Office of Commercial Space Transportation authorizes launch and reentry of commercial space transportation vehicles?
  - What should be the level of noise exposure that defines the limits of significant noise exposure in NEPA analyses and for actions subject to 14 CFR part 150?

# METRICS COULD DESCRIBE DIFFERENT NOISE IMPACTS

- **Question 11 asks you to identify any other research studies that FAA should consider and how that research could inform the FAA's use of metrics and thresholds**
- **CURRENT POLICY:**
  - Annoyance Dose-Response Curve
- **FUTURE NOISE POLICY:**
  - Annoyance;
  - Health Impacts;
  - Economic Impacts;
  - Other?




*Percentage of US population who self-identify as "highly annoyed" due to aviation noise exposure*

# WHAT ELSE SHOULD THE FAA CONSIDER?

- **Question 10 –**
  What other issues or topics should the FAA consider in this review regarding noise metrics, the method of calculating them, the establishment of noise thresholds, or FAA's method of communicating the change in noise exposure? Please explain your response.

# KEY TAKEAWAYS REGARDING FAA POLICYMAKING

## Potential Outcomes of Policy Changes

- Possible updates to regulations, orders, guidance, etc.
- Change level of review needed for a given action
- Improve FAA's communication about noise impacts to public

## Policy Changes Will Not Affect . . .

- Current/existing aviation noise exposure
- Where/when aircraft currently fly
- Completed or ongoing environmental reviews

# FURTHER INFORMATION

Webpage: www.faa.gov/noisepolicyreview

Email: NoisePolicyReview@faa.gov

Phone: 202-269-6999

# Q & A SESSION

# COMMENTS AND QUESTIONS

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# TODAY'S PANELISTS

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# LIST OF ACRONYMS

- AAD - Average Annual Day
- CNEL – Community Noise Equivalent Level
- dB – Decibel
- dBA – A-weighted decibel
- DNL – Day-Night Average Sound Level
- FRN – Federal Register Notice
- GA – General Aviation
- $L_{eq}$ – Equivalent Sound Level
- $L_{max}$ – Maximum Sound Level
- NA – Number Above
- NAS – National Airspace System
- NEPA – National Environmental Policy Act
- NES – Neighborhood Environmental Survey
- NPR – Noise Policy Review
- SAF – Sustainable Aviation Fuels
- SEL – Sound Exposure Level
- TA – Time Above