



# **NOISE POLICY REVIEW**

## **Current Status and Next Steps**

August 28, 2024

Presented to the  
START Committee

Ryan Weller – FAA AEE-400



# AGENDA



- **Noise Policy Review Overview**
- **Potential Noise Metrics**
- **Noise Policy Review Federal Register Notice and Engagement**
- **Status of Comment Review and Preliminary Comment Statistics**
- **Next Steps**



# NOISE POLICY REVIEW OVERVIEW



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# OVERVIEW OF 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



# SCOPE OF NOISE POLICY REVIEW



- **Focus on foundational elements of FAA's noise policy, including:**
  - **Metrics:** hard look at day-night average sound level (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 (significant noise exposure) for environmental review requirements - modifying the definitions of the levels of noise exposure that are deemed to be “normally compatible” (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 or not



# 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





# EXAMPLES OF POTENTIAL NOISE METRICS

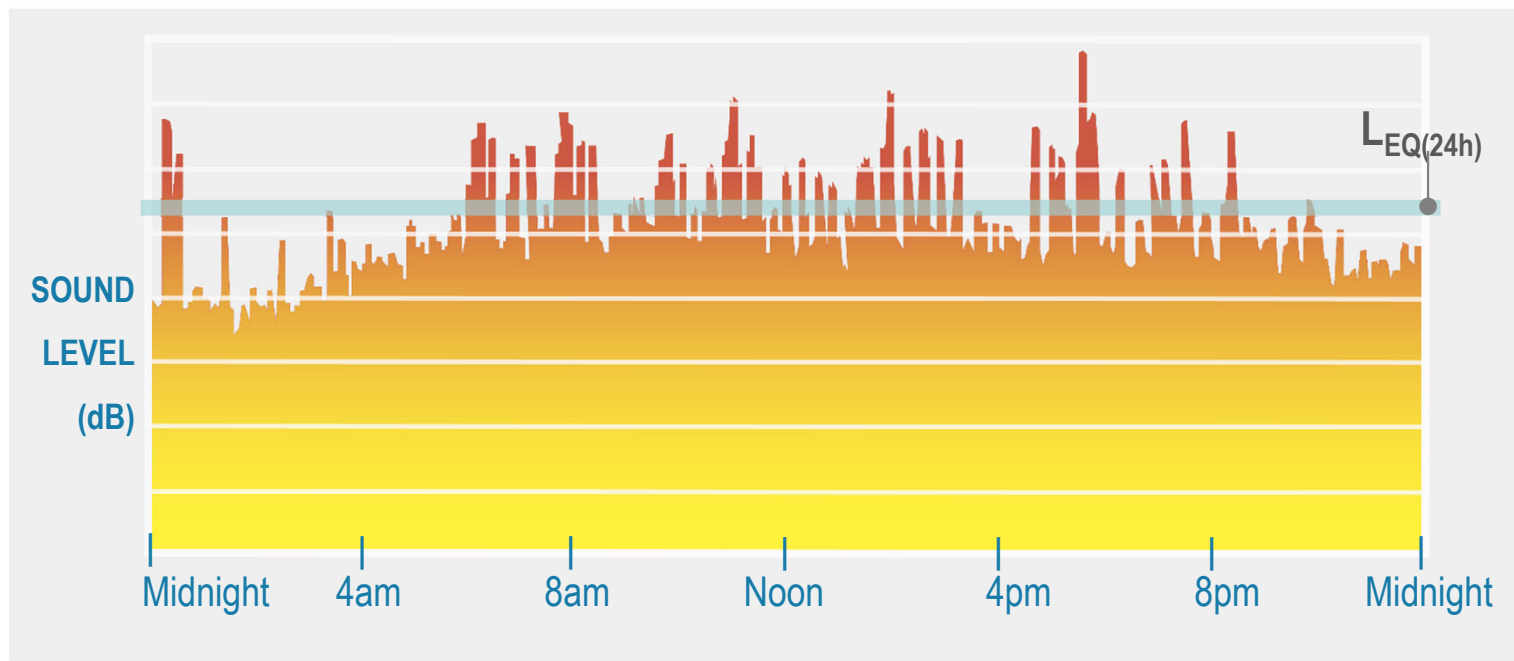


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# CUMULATIVE NOISE METRIC: EQUIVALENT SOUND LEVEL ( $L_{EQ}$ )



Average acoustic (sound) energy over a specific period to account for the cumulative effect of multiple noise events.

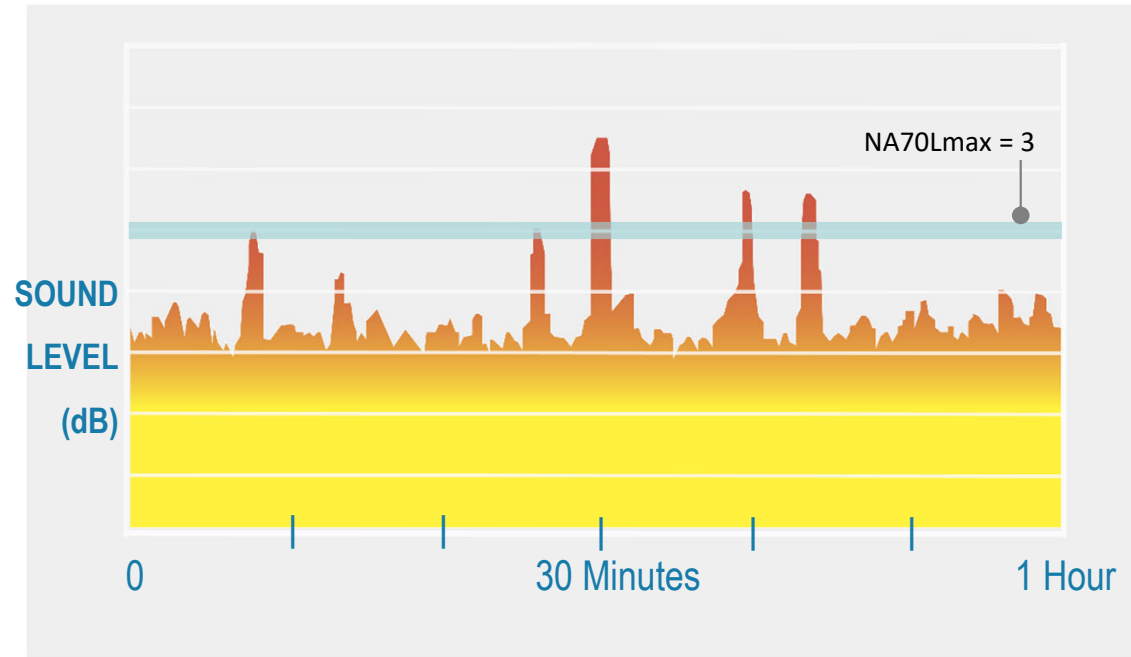




## NUMBER OF EVENTS ABOVE AN L<sub>MAX</sub>: NA



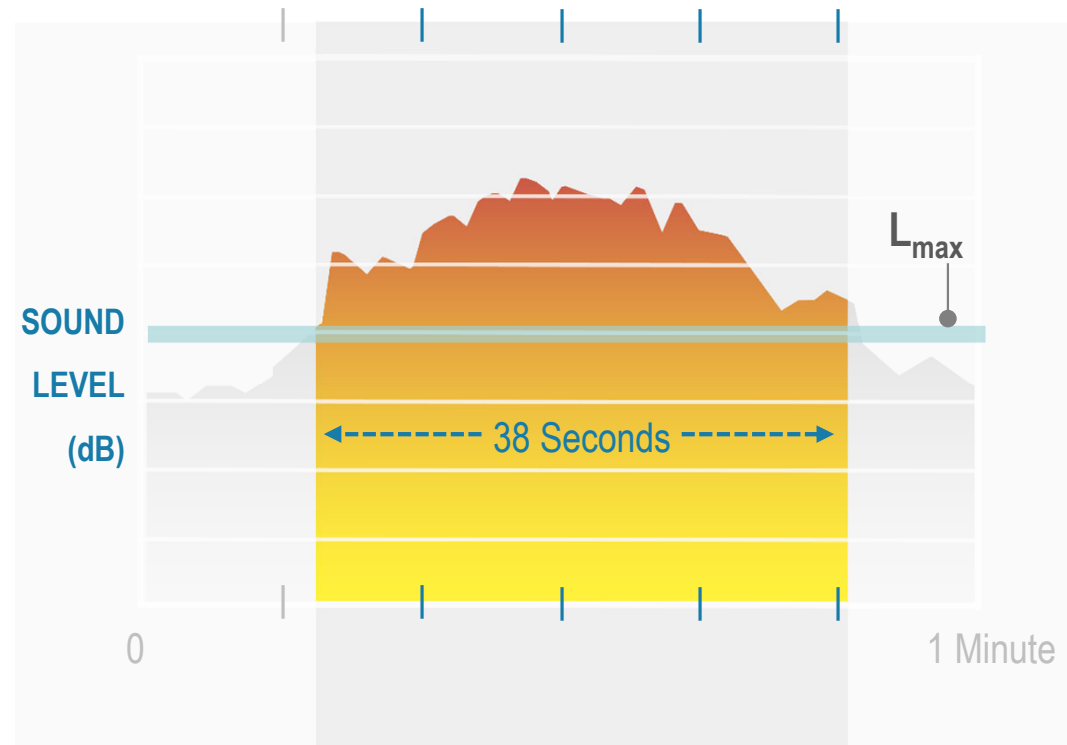
- The count of noise events at or exceeding a specified Maximum Sound Level (L<sub>max</sub>)



## TIME ABOVE AN $L_{MAX}$ : TA



- The amount of time noise events are at or above a specified Maximum Sound Level ( $L_{max}$ )



# **NOISE POLICY REVIEW FEDERAL REGISTER NOTICE AND ENGAGEMENT**



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# NOISE POLICY REVIEW FEDERAL REGISTER NOTICE



- **Published** on May 1, 2023, initially with a 90-day comment period ending July 31, 2023. Comment period was extended an additional 60 days and closed on September 29, 2023
  - Included a background on FAA Civil Aircraft Noise Policy, outlines next steps, and requested input on 11 questions
  - Comment period extended based on requests from the public, elected officials, and industry/trade groups
- Included link to a companion [framing paper](#), *“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 Federal Register Notice
  - Provides additional context and discussion around questions posed in the Federal Register Notice to help stakeholders better understand the questions and feedback sought



**FEDERAL REGISTER**  
The Daily Journal of the United States Government



Notice

## Request for Comments on the Federal Aviation Administration's Review of the Civil Aviation Noise Policy, Notice of Public Meeting

A Notice by the Federal Aviation Administration on 05/01/2023

PUBLISHED DOCUMENT		DOCUMENT DETAILS	
      	<b>AGENCY:</b> Federal Aviation Administration (FAA), DOT.	<b>Printed version:</b> PDF	
	<b>ACTION:</b> Notice of public meeting; Request for comments.	<b>Publication Date:</b> 05/01/2023	
	<b>SUMMARY:</b> The FAA invites public comments from interested individuals, entities, and other parties to review four key considerations of its civil aviation noise policy, in the context of noise metrics and noise thresholds. The civil aviation noise policy sets forth how the FAA analyzes, explains, and publicly presents changes in noise exposure from aviation activity: recreational and commercial fixed wing airplanes, helicopters, commercial space transportation vehicles, unmanned aircraft systems, as well as emerging technology vehicles (newer types of vehicles that will operate in U.S. airspace). The FAA will consider how changes to the civil aviation noise policy may better inform agency decisionmaking, the types of impacts it considers in making decisions (e.g., community annoyance, certain types of adverse health impacts highly correlated with aviation noise exposure), and potential improvements to how the FAA analyzes, explains, and presents changes in exposure to civil aviation noise.	<b>Agencies:</b> Department of Transportation Federal Aviation Administration	
		<b>Dates:</b> Comments: Send comments on or before July 31, 2023.	<b>Comments Close:</b> 07/31/2023
			<b>Document Type:</b> Notice
		<b>Document Citation:</b> 88 FR 25541	
		<b>Page:</b> 25541-25547 (7 pages)	
		<b>Agency/Docket Number:</b> Docket No.: FAA-2023-0855	
		<b>Document Number:</b> 2023-09113	



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# FEDERAL REGISTER NOTICE ENGAGEMENT



- Conducted four national webinars on Federal Register Notice in May 2023 in addition to providing briefings throughout the summer and fall of 2023 to multiple community organizations, trade groups, and airport operators as requested
- Created educational videos regarding background on aviation noise, the FAA's current noise policy, the Federal Register Notice, and providing meaningful stakeholder feedback to FAA
- Translated materials into Spanish and Chinese
- Created [Noise Policy Review landing page](#) which contains educational materials and videos, webinar recordings, and updates on policy review process

The screenshot displays the FAA's Noise Policy Review page. At the top, the FAA logo and navigation links (About, Jobs, News, Search) are visible. The page title is "Noise Policy Review". A prominent blue box contains the text: "Read the [Noise Policy Review Federal Register Notice](#)." Below this, a paragraph states: "The comment period for the Noise Policy Review Federal Register Notice was open from May 1, 2023, until September 29, 2023, and is now closed. Over 4,800 comments were received on the notice, and the FAA has begun the process of reviewing comments. As the FAA completes review of received comments, updates on timelines and next steps for the Noise Policy Review will be posted to this webpage as they become available." A link to "Review the [Foundational Elements](#) of the FAA Civil Aircraft Noise Policy." is provided. Further down, a paragraph explains: "The FAA is reviewing our noise policy as part of our ongoing commitment to address aircraft [noise](#). This effort builds on [our work](#) to advance the scientific understanding of noise impacts as well as the development of analytical tools and technologies." Another paragraph states: "The Noise Policy Review is evidence-based, thorough, and collaborative. We are considering findings from ongoing [noise research](#), including the [Neighborhood Environmental Survey](#) which provided an updated [dose-response curve](#), and other research related to health impacts, speech interference, [sleep disturbance](#), and economic impacts. We are examining the distribution of environmental risks, tradeoffs, and resulting impacts across communities." A section titled "As part of the review, we are:" lists three bullet points: "Looking at our current use of [DNL or Day-Night Average Sound Level](#) as the primary noise metric for assessing cumulative aircraft noise exposure.", "Reviewing whether to continue to use the DNL 65 dB level as the metric and threshold for determining significant noise impacts in environmental reviews under the National Environmental Policy Act or the definition of the limit of residential land use compatibility.", and "Considering if and how alternative noise metrics may be used in lieu of or in addition to DNL to better inform agency decisions and improve FAA's disclosure of noise impacts."



# **STATUS OF COMMENT REVIEW AND PRELIMINARY COMMENT STATISTICS**



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# COMMENT REVIEW PROCESS AND STATUS



- Upon closure of the Noise Policy Review Federal Register Notice FAA began reviewing all 4,857 comments submitted to the docket
- **Comment review process:**
  1. Develop a database of comments
  2. Categorize the comments and generate statistical summaries of who submitted comments, where comments were submitted, and what topics were identified with regards to noise impacts and policy recommendations
  3. Identify common themes from the comments and synthesize relevant excerpts to aid in policy deliberations
- Currently engaged in Step 2 of this process



# PRELIMINARY SUMMARY OF COMMENTS RECEIVED ON NPR FRN



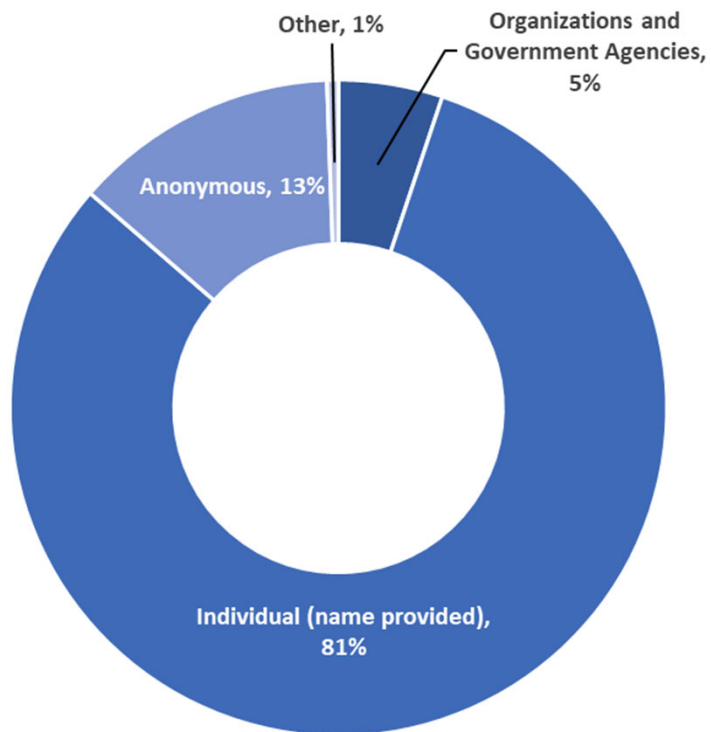
- **Received 4,857 comments**
  - 4,608 comments from individuals
  - 249 comments from organizations
- **Approximately, 75% of comments had locations specified**
- **643 (13%) comments were endorsements of a comment made by the Aviation-Impacted Communities Alliance (AICA)**
- **Roughly only 4% of comments directly responded to questions posed in the Federal Register Notice**



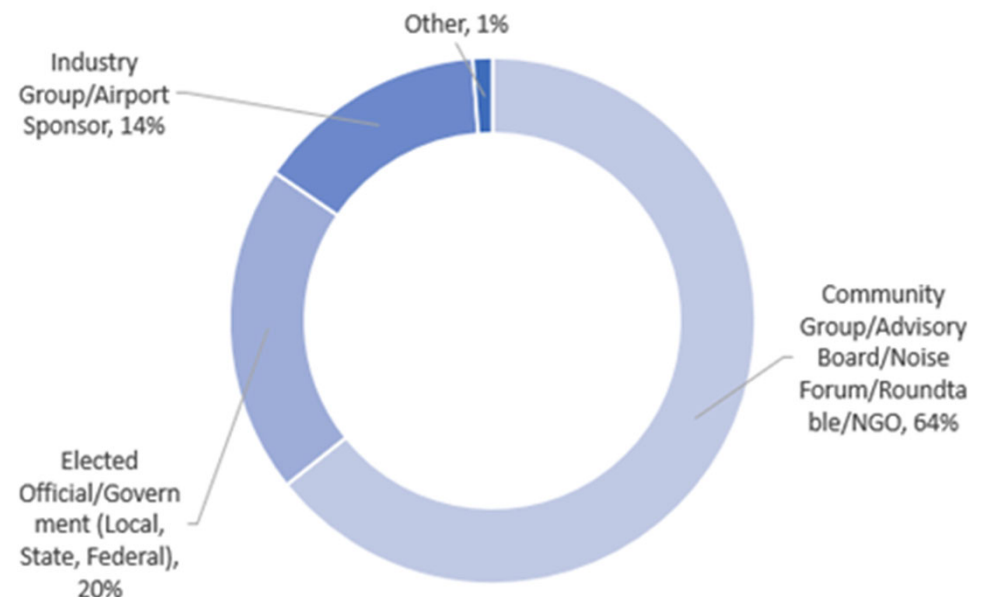
# PRELIMINARY STATISTICS: CATEGORIZATION OF COMMENTORS



Categories of Commentors



Categories of Commenting Organizations  
and Government Agencies

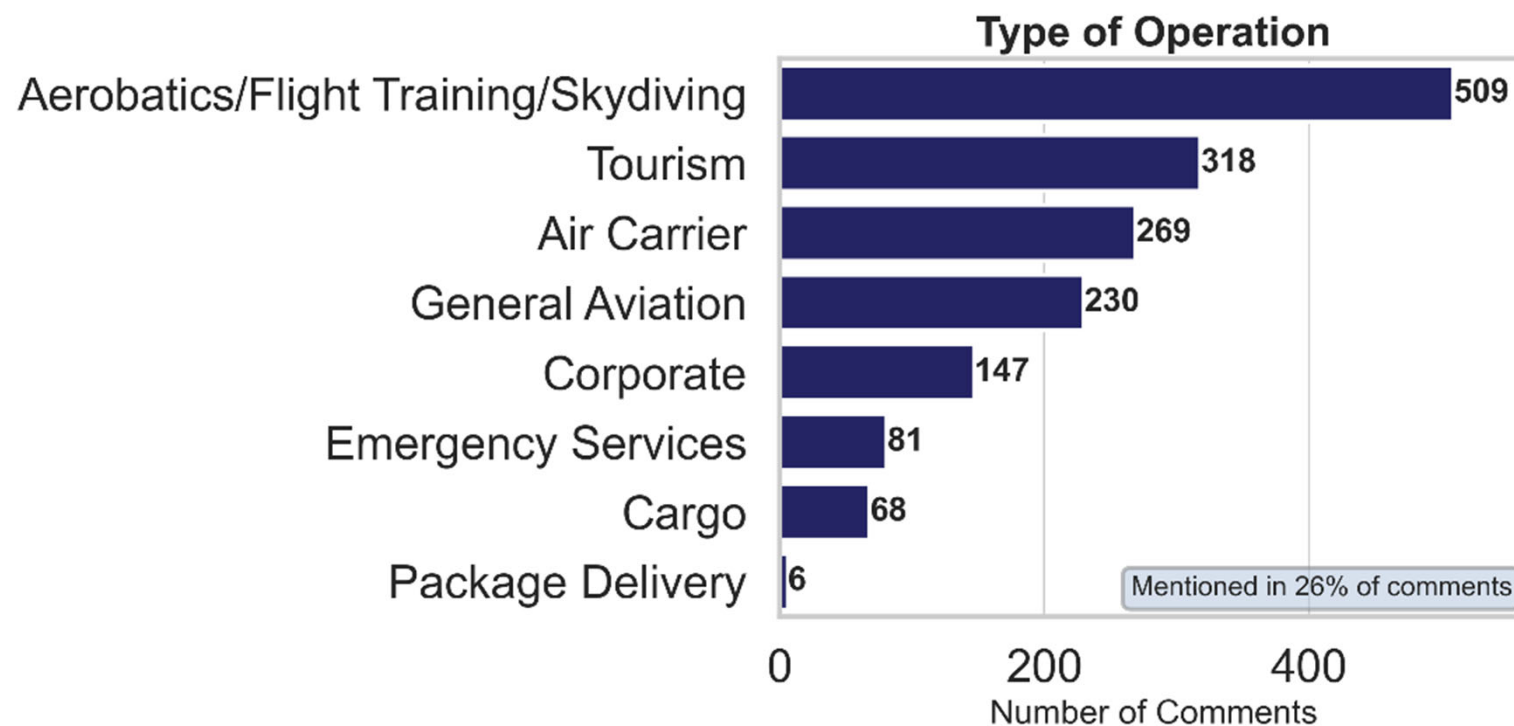


- 
- Note: Numbers represent comments submitted by individuals who entered their location in the Docket.
- | State          | Comments |
|----------------|----------|
| Alabama        | 1        |
| Alaska         | 1        |
| Arizona        | 23       |
| Arkansas       | 0        |
| California     | 1457     |
| Colorado       | 622      |
| Connecticut    | 1        |
| Delaware       | 1        |
| Florida        | 86       |
| Georgia        | 12       |
| Hawaii         | 1        |
| Idaho          | 0        |
| Illinois       | 10       |
| Indiana        | 0        |
| Iowa           | 1        |
| Kansas         | 1        |
| Kentucky       | 7        |
| Louisiana      | 0        |
| Maine          | 0        |
| Maryland       | 1        |
| Massachusetts  | 1        |
| Michigan       | 28       |
| Minnesota      | 14       |
| Mississippi    | 0        |
| Missouri       | 0        |
| Montana        | 0        |
| Nebraska       | 1        |
| Nevada         | 3        |
| New Hampshire  | 0        |
| New Jersey     | 32       |
| New Mexico     | 0        |
| New York       | 411      |
| North Carolina | 2        |
| North Dakota   | 2        |
| Ohio           | 0        |
| Oklahoma       | 0        |
| Oregon         | 45       |
| Pennsylvania   | 1        |
| Rhode Island   | 0        |
| South Carolina | 10       |
| South Dakota   | 1        |
| Tennessee      | 0        |
| Texas          | 6        |
| Vermont        | 0        |
| Virginia       | 96       |
| Washington     | 69       |
| West Virginia  | 0        |
| Wisconsin      | 15       |
| Wyoming        | 0        |
| D.C.           | 155      |

# PRELIMINARY STATISTICS: COMMENTS REFERENCING SPECIFIC AIRPORTS

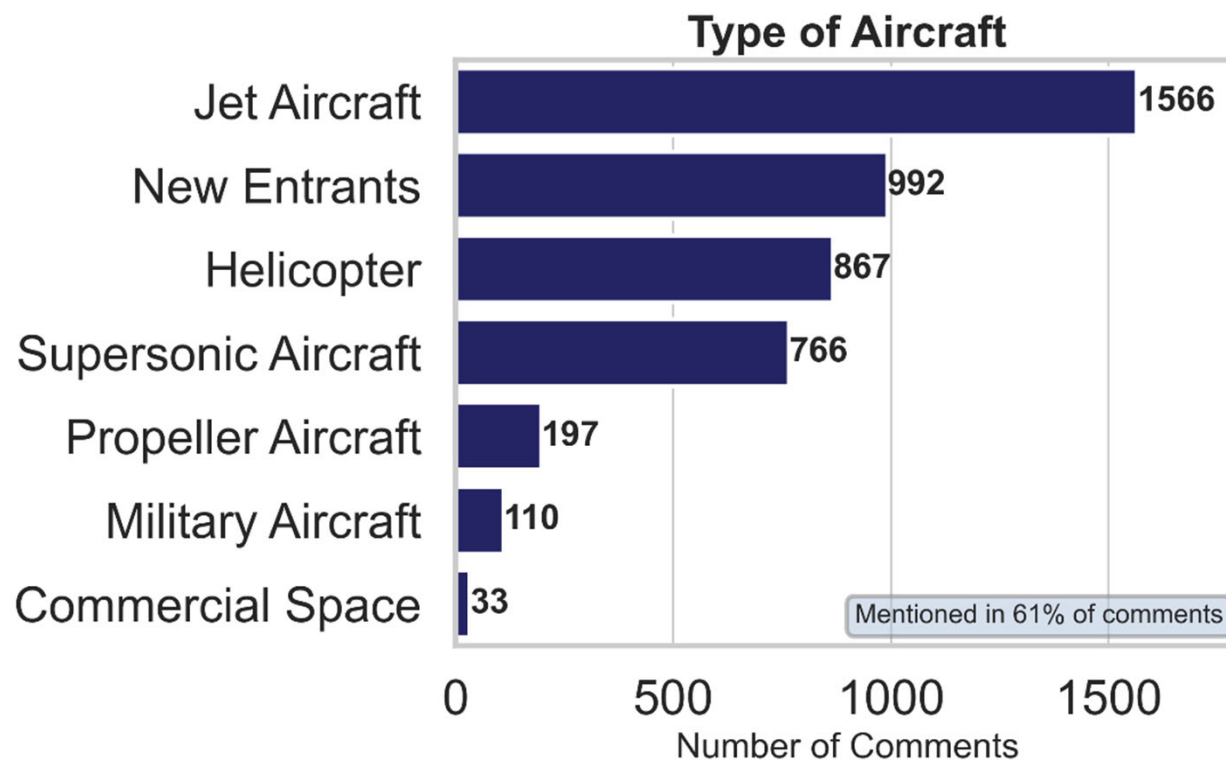


# PRELIMINARY STATISTICS: COMMENTS REFERENCING TYPE OF OPERATION

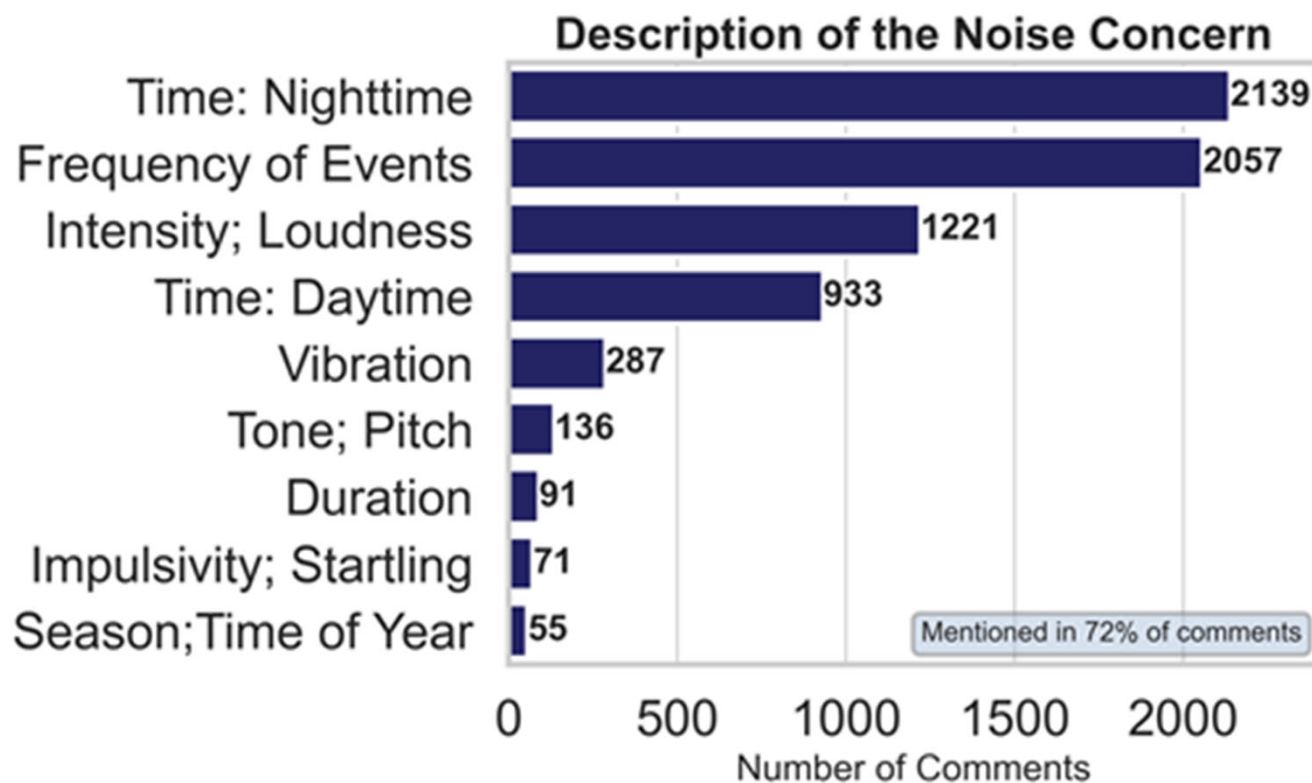




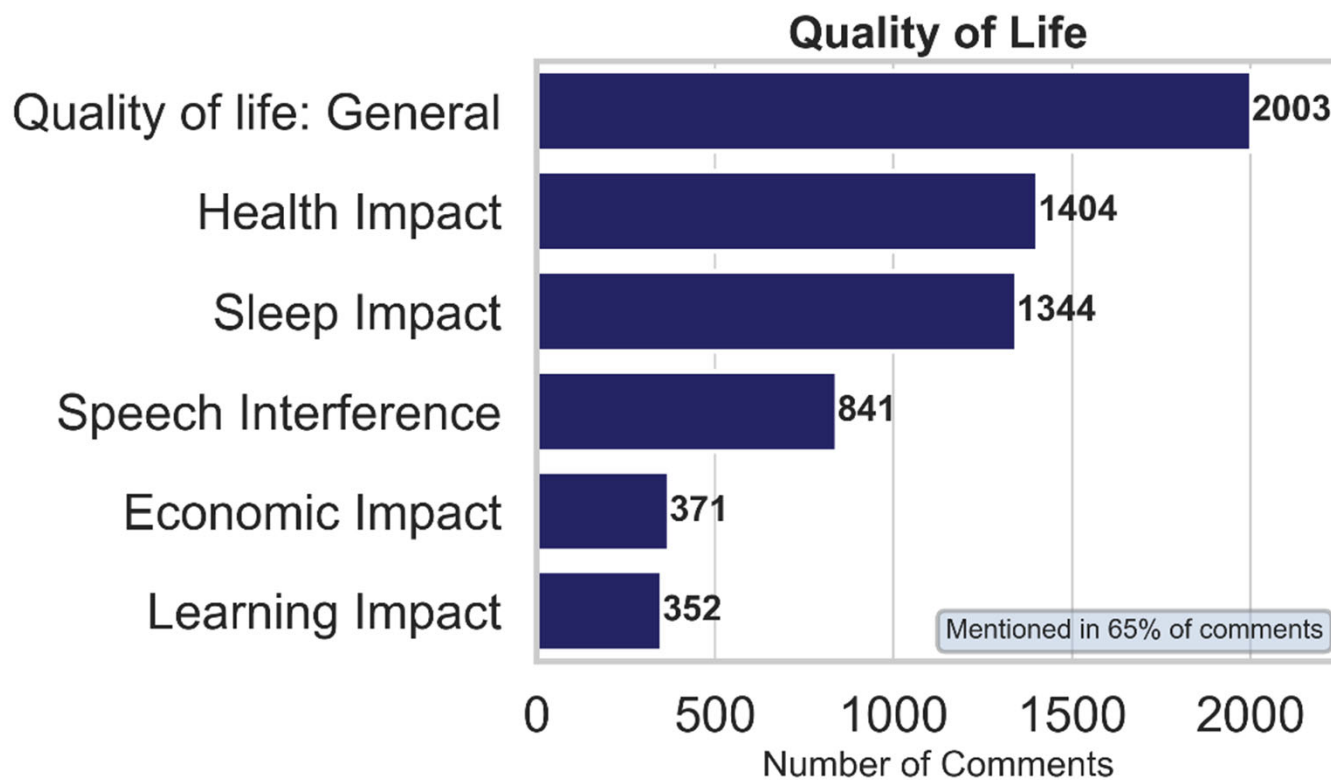
# PRELIMINARY STATISTICS: COMMENTS REFERENCING TYPE OF VEHICLE/AIRCRAFT



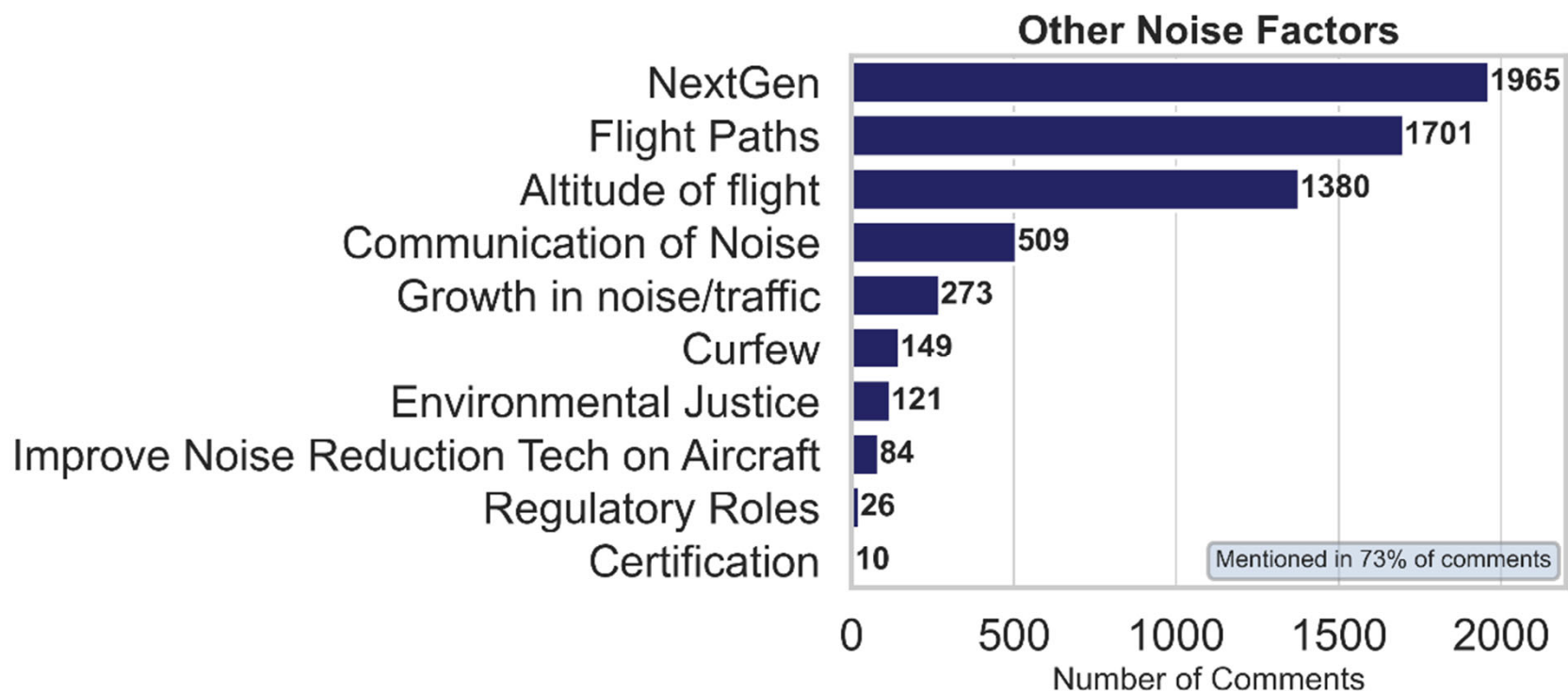
# PRELIMINARY STATISTICS: COMMENTS DESCRIBING NOISE CONCERN



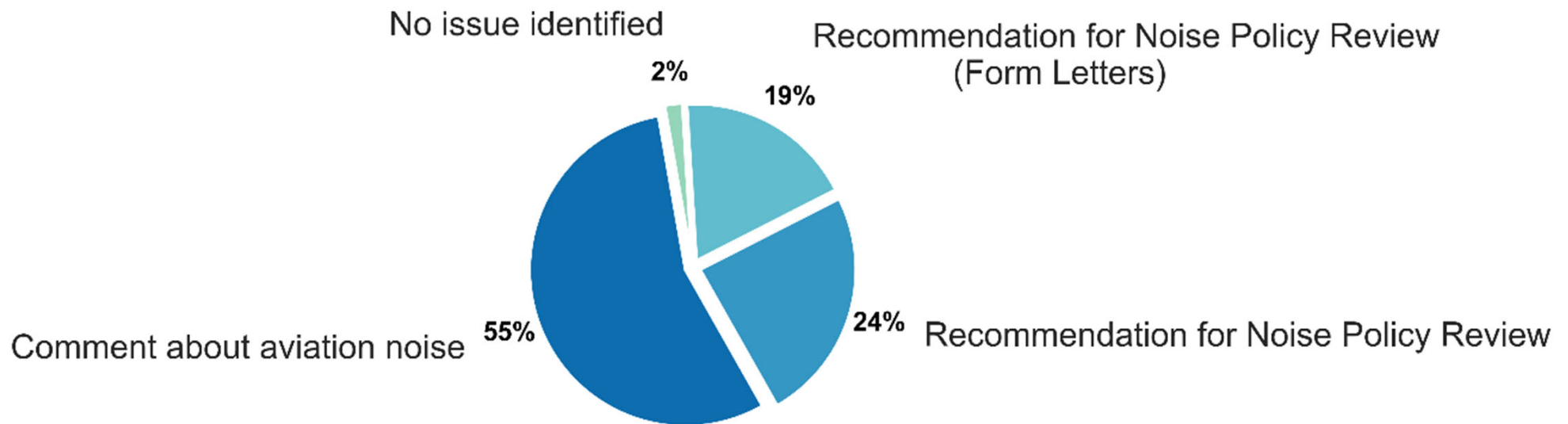
# PRELIMINARY STATISTICS: COMMENTS DESCRIBING NOISE IMPACTS



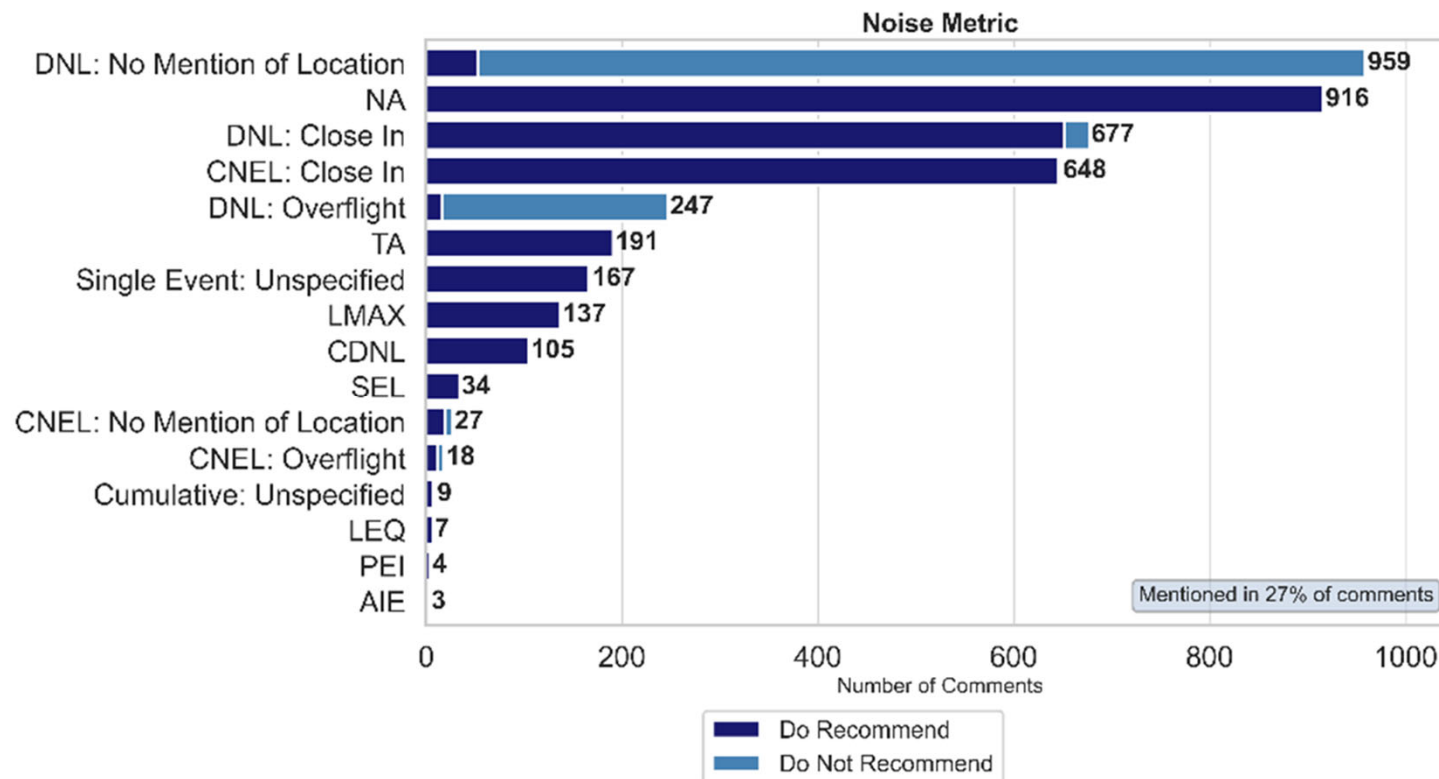
# PRELIMINARY STATISTICS: OTHER NOISE FACTORS IDENTIFIED



# PRELIMINARY CATEGORIZATION OF COMMENTS BY RECOMMENDATION

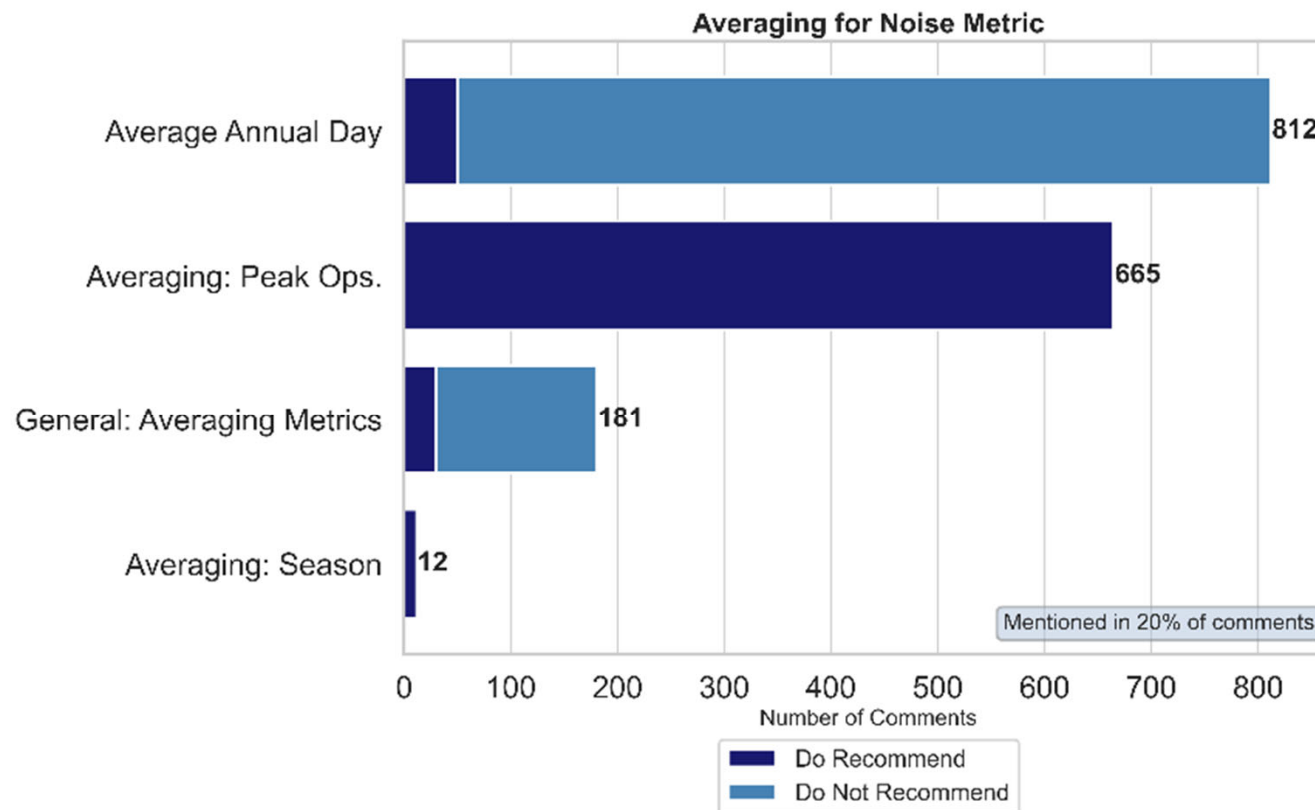


# PRELIMINARY SENTIMENT ANALYSIS: NOISE METRICS





# PRELIMINARY SENTIMENT ANALYSIS: AVERAGING FOR NOISE METRICS



# NEXT STEPS



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# NEXT STEPS



- Following completion of the review of the comments on the Noise Policy Review Federal Register Notice issued in May 2023, we will publish another Federal Register Notice announcing any revisions we expect to make to our policy
- The timing of this second Federal Register Notice is to be determined, as we are in the middle stages of reviewing and analyzing the comments
- For updates on the Noise Policy Review and next steps, as well as links to reference and educational materials, please refer to the landing page at: <https://www.faa.gov/noisepolicyreview>



# QUESTIONS



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# LIST OF ACRONYMS



- AIE – Average Individual Exposure
- CNEl – Community Noise Equivalent Level
- CDNL – C-Weighted Day-Night Average Sound Level dB – Decibel
- dBA – A-weighted decibel
- DNL – Day-Night Average Sound Level
- $L_{eq}$  – Equivalent Sound Level
- $L_{max}$  – Maximum Sound Level
- NA – Number Above
- NES – Neighborhood Environmental Survey
- PEI- Person Event Index
- SEL – Sound Exposure Level
- TA – Time Above



# SUPPLEMENTAL SLIDES



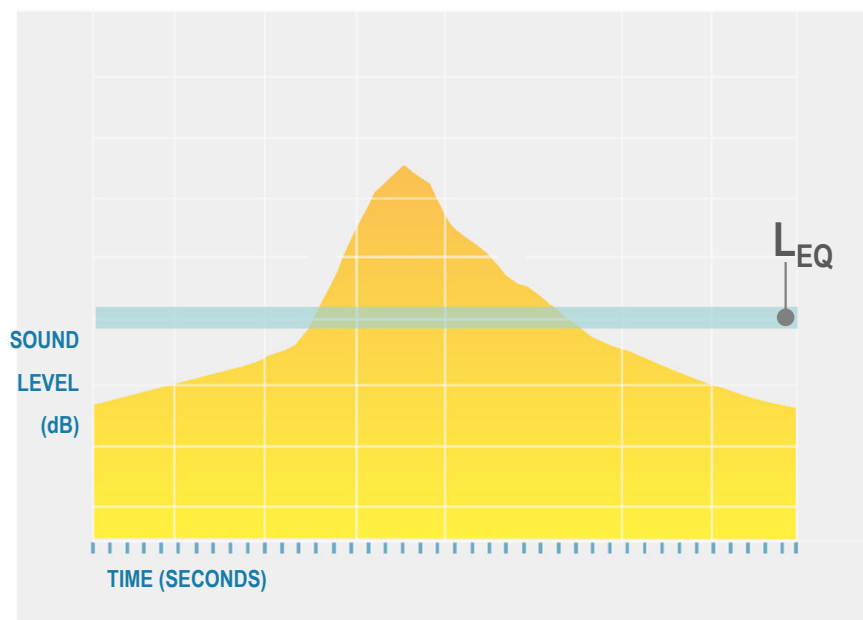
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## CUMULATIVE NOISE METRIC: EQUIVALENT SOUND LEVEL ( $L_{EQ}$ )



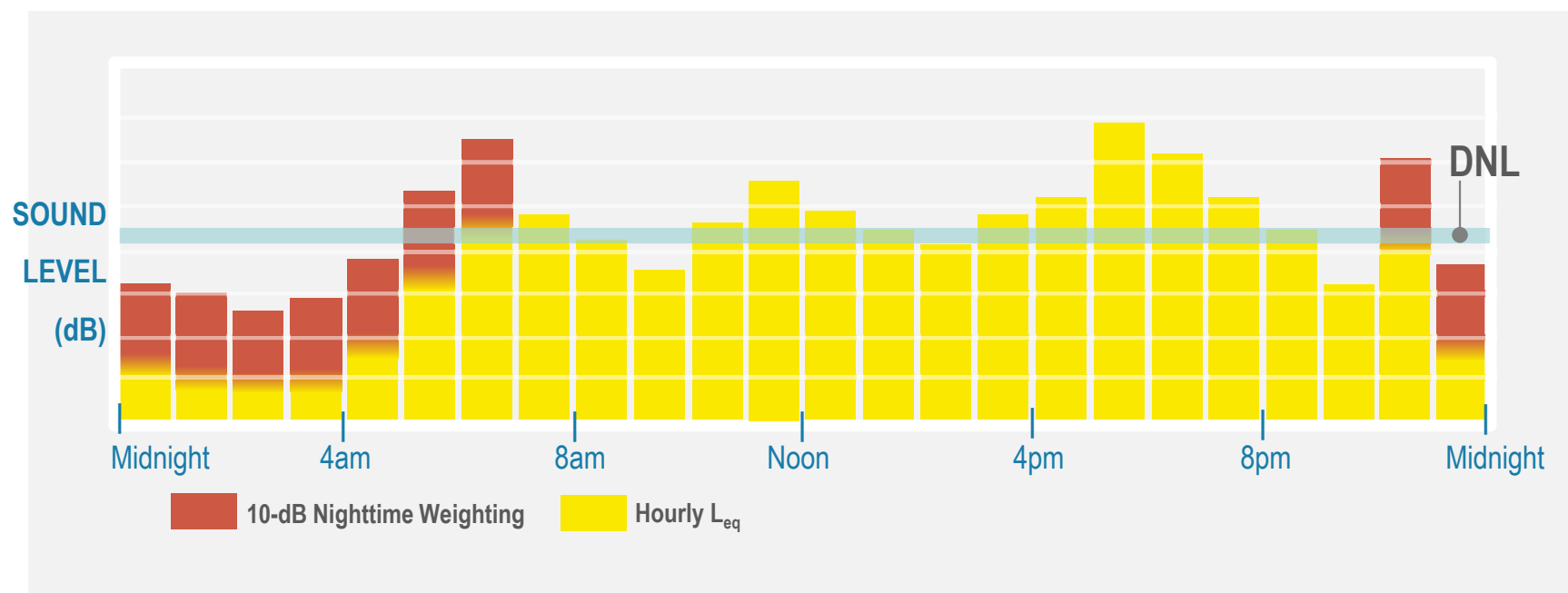
- $L_{eq}$  is the steady level delivering the same amount of acoustic energy as the actual, time-varying sound
- Can be used to represent any period of time



# CUMULATIVE NOISE METRIC: DAY-NIGHT AVERAGE SOUND LEVEL (DNL)



DNL is the 24-hour  $L_{eq}$ , but with 10 dB added to nighttime events, occurring between 10 p.m. and 7 a.m.



## CUMULATIVE NOISE METRIC: COMMUNITY NOISE EQUIVALENT LEVEL (CNEL)



CNEL is similar to the 24-hour  $L_{eq}$ , with 10 dB added to nighttime events and nearly 5 dB added to evening events, occurring between 7 p.m. and 10 p.m.

