

NES Update and Next Steps

Briefing to StART

Don Scata

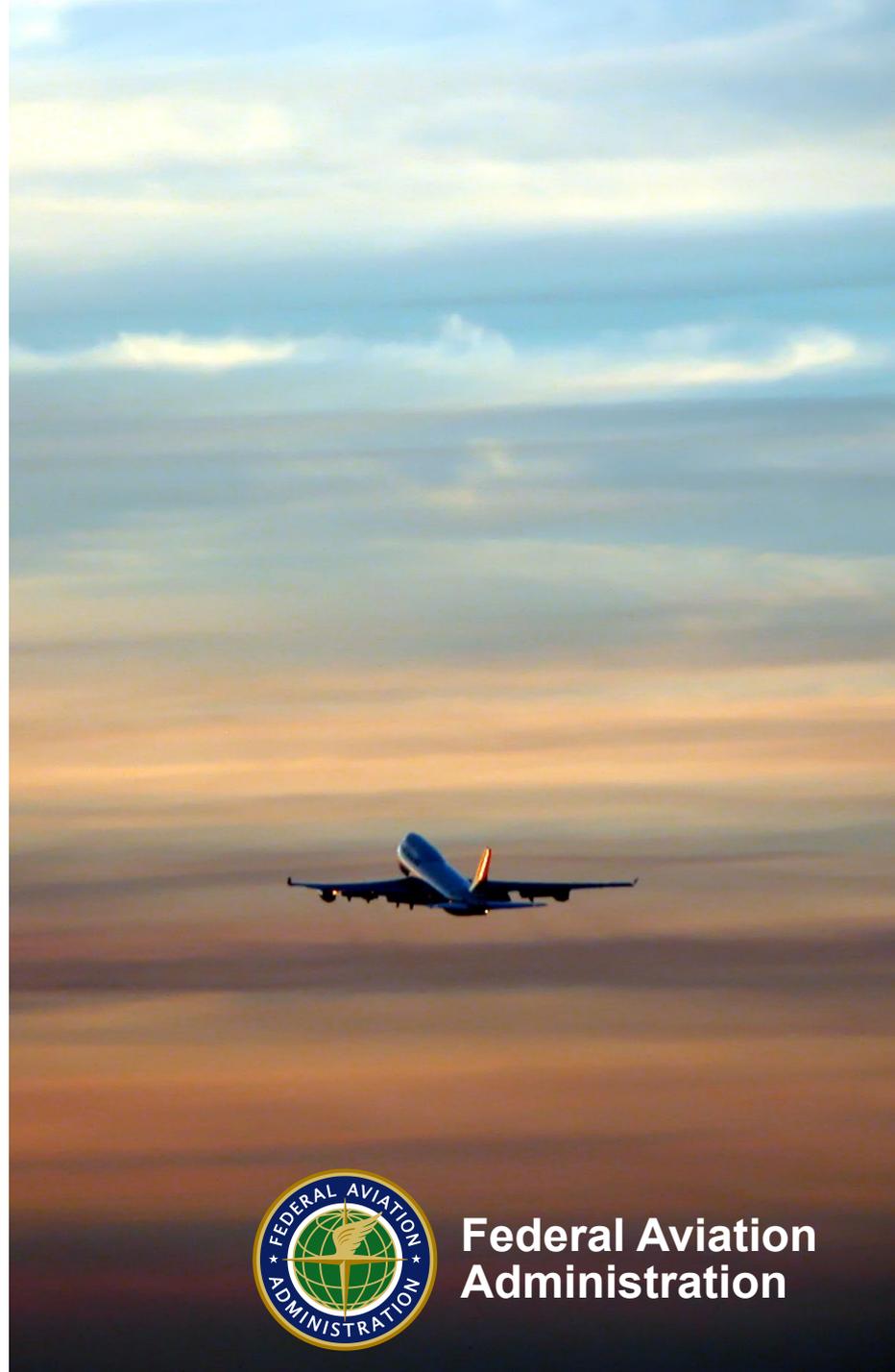
Manager

FAA Office of Environment and
Energy – Noise Division

February 22, 2023



**Federal Aviation
Administration**



Agenda

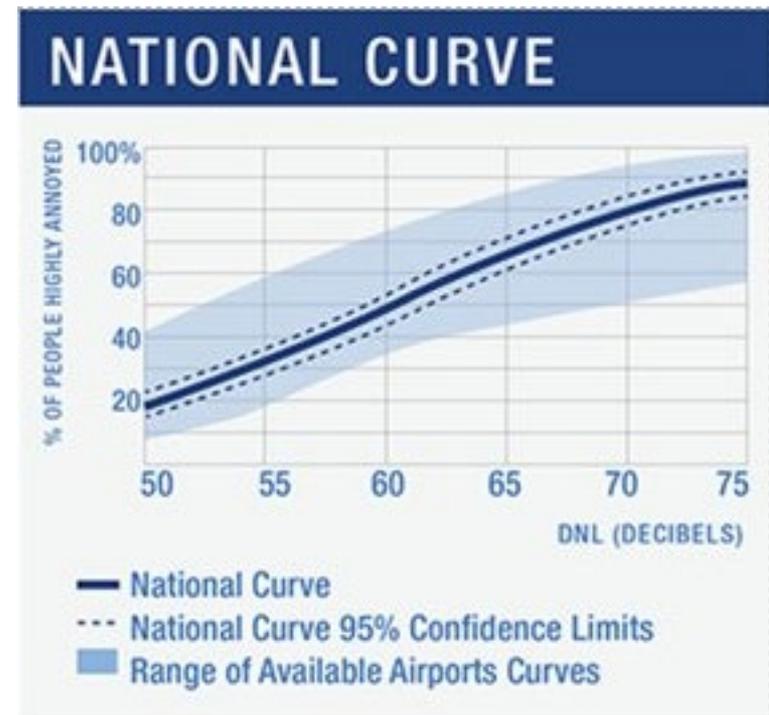
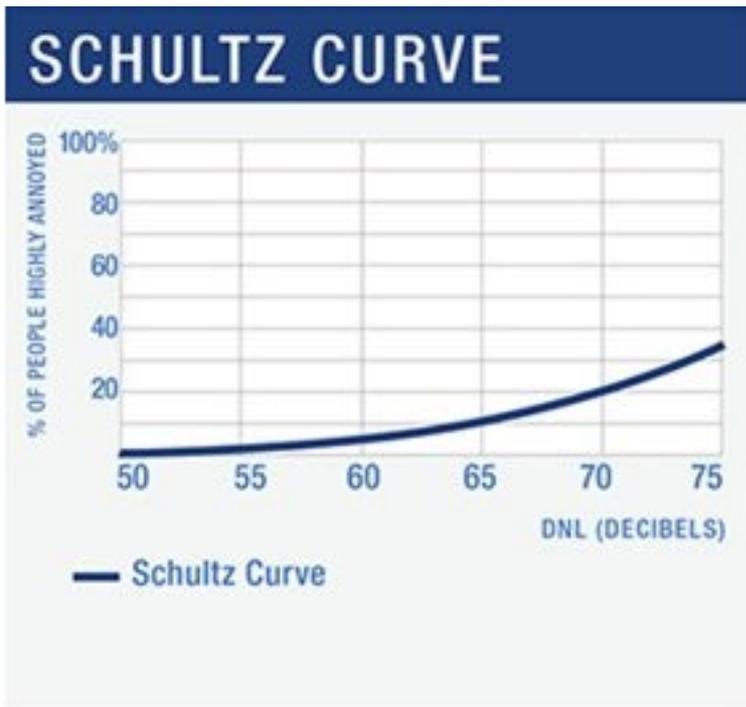
- **Reminder – NES Results**
- **Overview of January 13, 2021 FAA Noise Research Federal Register Notice**
- **Summary of Comments Received**
- **Noise Policy Review**



Reminder: NES Results

The NES results support an observed increase in Annoyance from Aircraft Noise:

- The results show a substantial increase in annoyance for the population living in the vicinity of airports
- The increase in annoyance is generally consistent across various levels of noise exposure



FAA Noise Research Federal Register Notice

The FAA released a Federal Register Notice on January 13 2021, to provide an update on the agency's noise research programs, including the results of the Neighborhood Environmental Survey (NES) and to request public comment on

- Input on three questions was requested through a 90-day comment period



Factors that may be contributing to the **increase in annoyance** shown in the Survey results



Additional investigation or analysis on:

- Effects of Aircraft Noise on individuals and Communities
- Noise Modeling, Noise Metrics, and Environmental Data Visualization
- Reduction, Abatement, and Mitigation of Aviation Noise



Additional categories of **investigation, analysis, or research** that should be undertaken to inform FAA noise policy

- ***Over 4,000 comments were received***
- ***Comments were then aggregated by category to look for any patterns of interest recommended for FAA's noise research program***
- ***Comment themes are being assessed as part of the Noise Policy Review***



FAA Noise FRN Comment Responses Summary (1)

Distribution of Sub-topics for Additional Research (Number of Tags)

1,226 Tags

1,008 Submissions

972 Distinct Commenters

No additional research	780	You ask in the summary of the FAA aircraft noise policy and research efforts "What, if any, additional investigation, analysis, or research should be undertaken..." The answer is none.
NAS Consensus Report on Health Effects	164	Commission the National Academies Division of Medicine to produce a consensus report on the health effects of noise and pollution. Commission the National Academies Division of Sciences to produce a consensus report on ultrafine particles.
Impact of Next Gen or Metroplex	110	In addition to noise, narrow flight routes concentrate pollution and contaminants falling on people under those routes, potential impairing their health. Any study should monitor over time potential health effects of people living under these concentrated routes compared with people living within a few miles of these routes.
Other/General	69	An additional category of investigation, analysis, or research I recommend should be undertaken is to closely study and consider the number of people who do not experience annoyance as it pertains to aircraft noise, and compare their lived experience to those in the cohort who do.
Sleep Disturbance/Speech Disruption/Children's Learning	34	Research in aviation noise disturbance should focus on issues that are more pertinent to wide sectors of the population, for example, sleep disturbance and children's learning, not on niche issues such as cardiovascular health.
Research by Flight Purpose/Aircraft Type	25	I believe more needs to be done to characterize and respond to the disturbance created by touch and go operations, in addition to the larger area disturbance represented by large commercial jets.
Land Use/Noise Mitigation Strategies	22	I hope the FAA will continue to research and develop equitable polices for the mitigation of aircraft noise.
Property valuation and/or enjoyment	14	I think another vector to study would be the source and duration of the noise - i.e., are new levels of noise more annoying than long-standing sources of noise? For example, I purchased my house ten years ago before recent changes to the flight patterns at DCA that take departing planes over our neighborhood. Had the change happened before I purchased my house, would I be less annoyed by the plane noise than a recent change that suddenly happened?
Psychoacoustics	8	Joby recommends the FAA monitor ongoing industry and academic research into psychoacoustics. Psychoacoustic research seeks first to understand whether it is physically and physiologically possible to hear a sound, both in the absence and presence of background ambient noise environments.



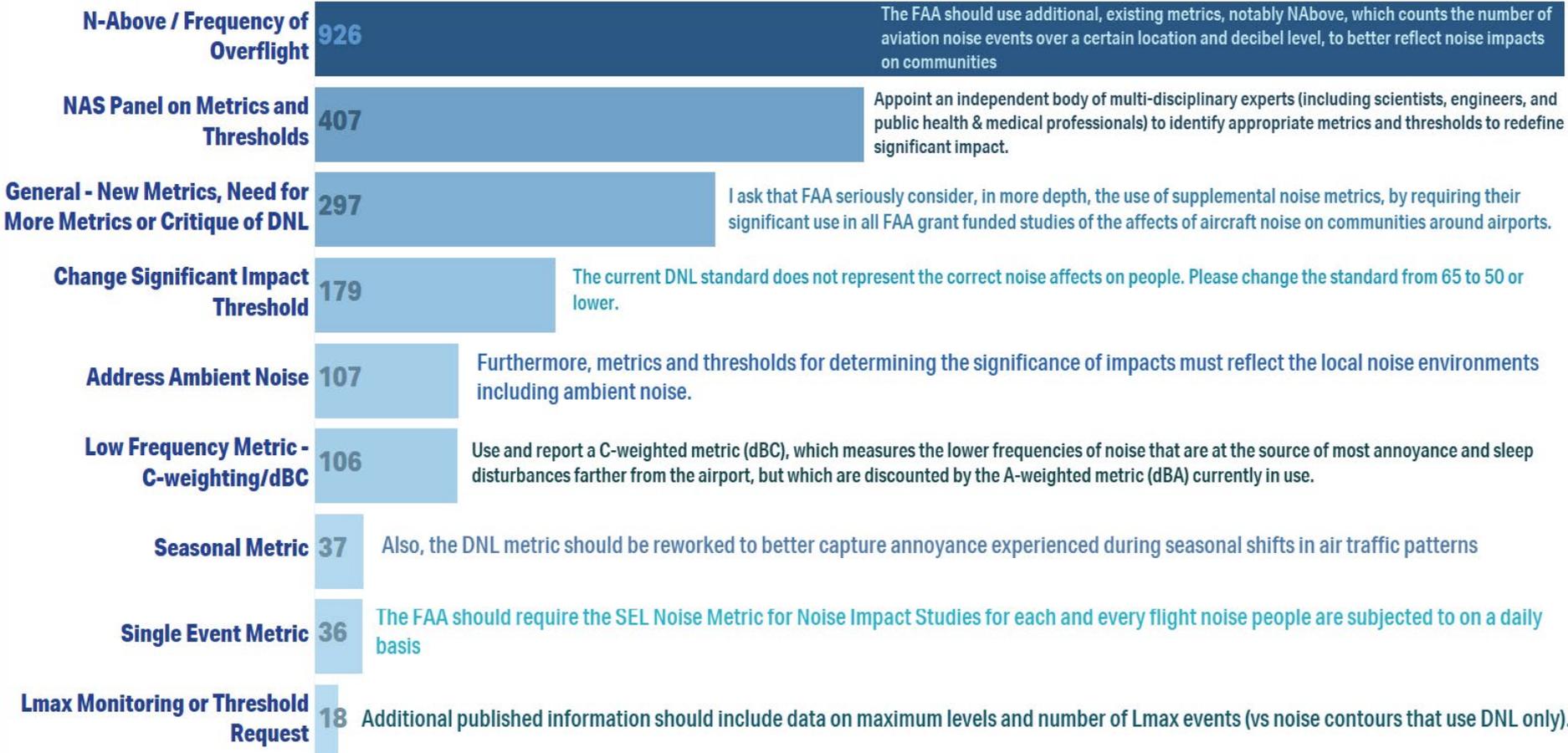
FAA Noise FRN Comment Responses Summary (2)

Distribution of Sub-topics for Noise Metrics and Thresholds (Number of Tags)

2,113 Tags

1,151 Submissions

1,113 Distinct Commenters



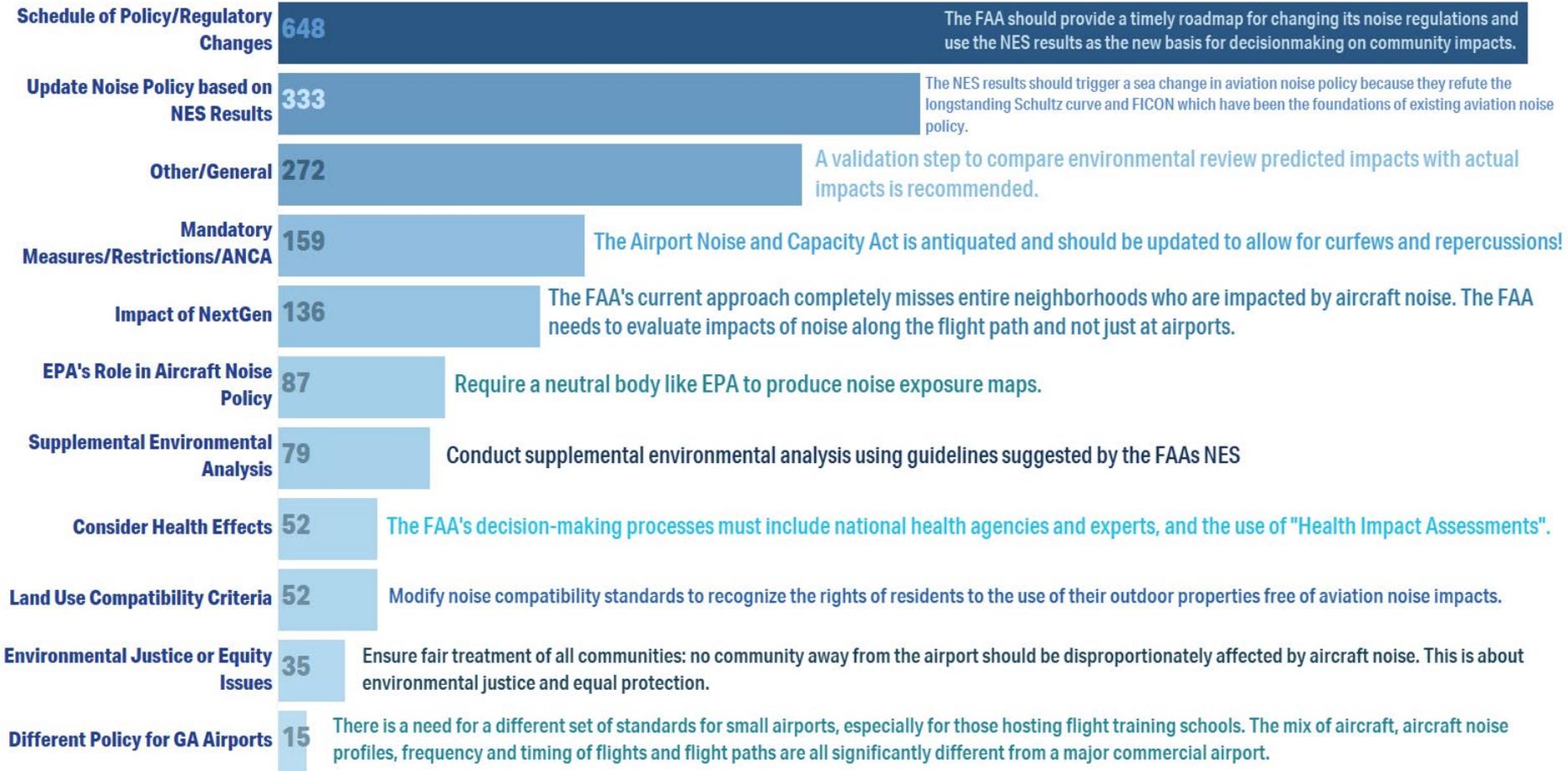
FAA Noise FRN Comment Responses Summary (3)

Distribution of Sub-topics for Noise Policy (Number of Tags)

1,868 Tags

1,155 Submissions

1,101 Distinct Commenters

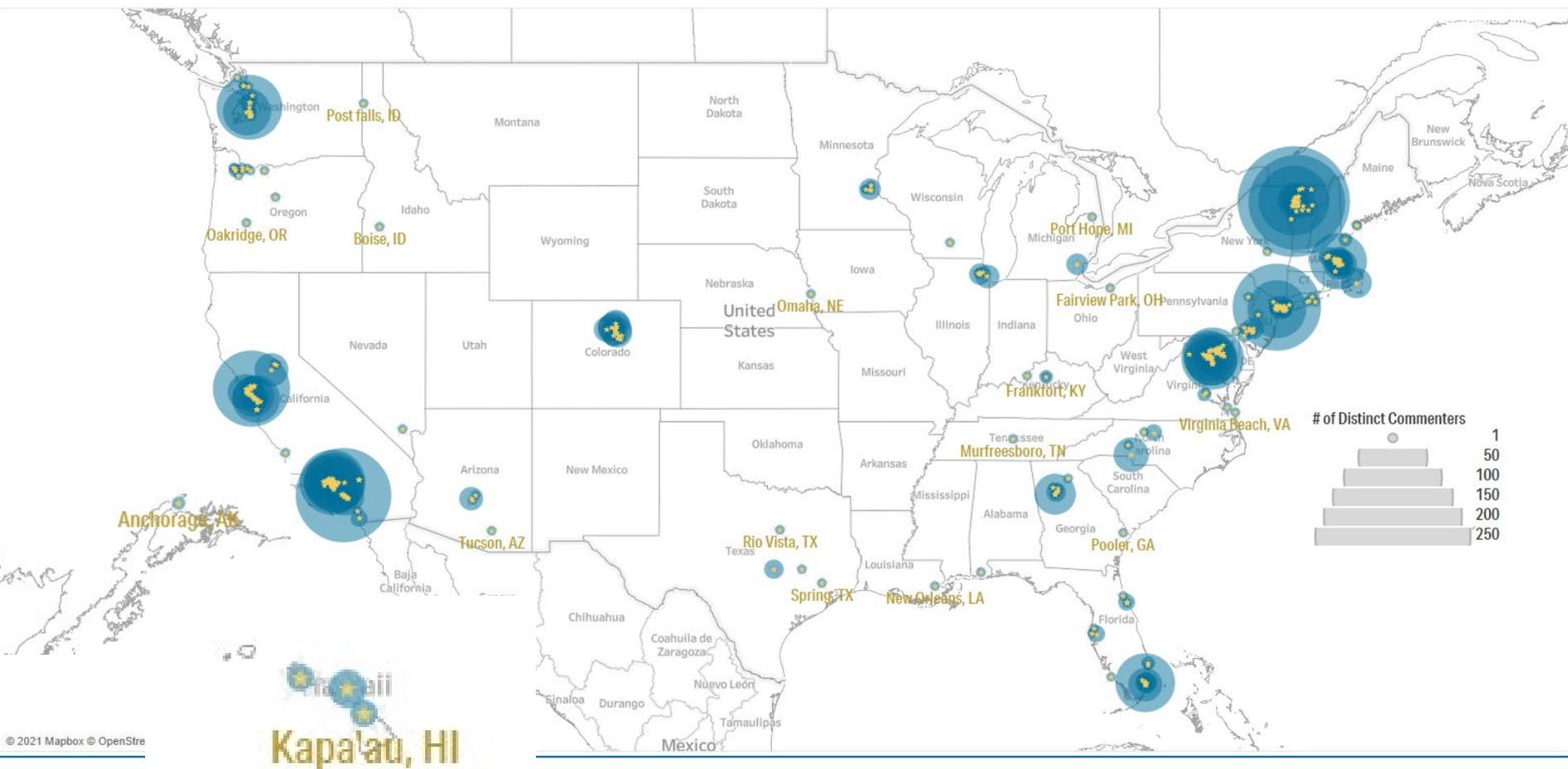


FAA Noise FRN Comments Distribution

Map of Distinct Commenters by City

4,023 Submissions

3,811 Distinct Commenters



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FAA Noise FRN Comments Top City Contributions

4,023 total submissions

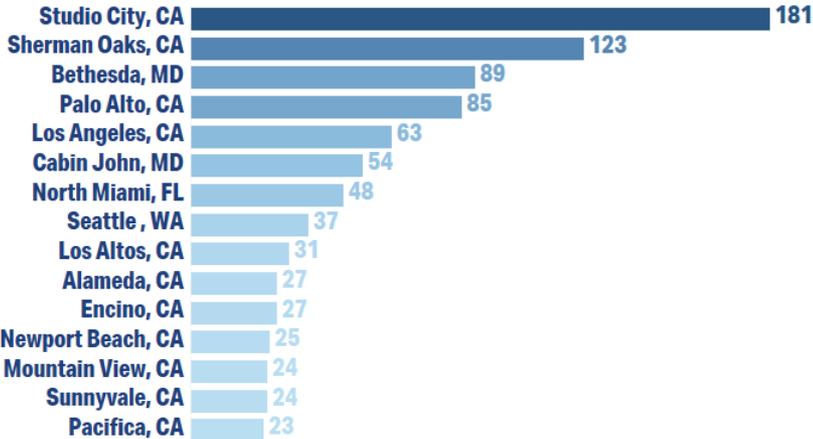
Research/National Policy Focused
 1,808 submissions
 44.9% of total

Other Considerations
 2,145 submissions
 53.3% of total

Organization
 124 submissions
 3.1% of total

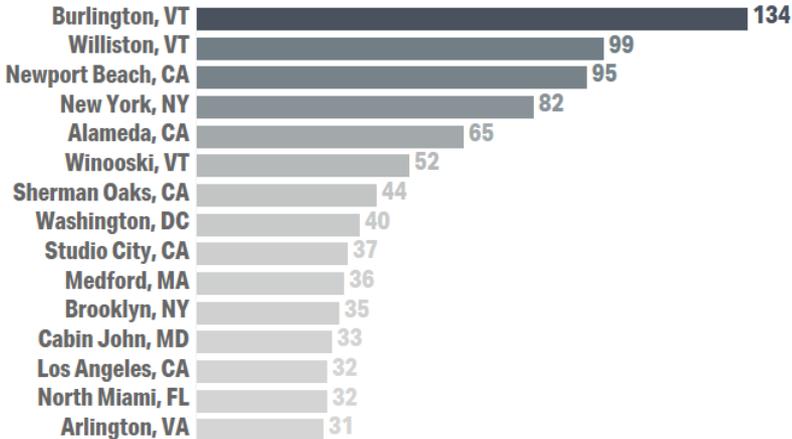
Research/National Policy Focused vs. Other Considerations by City

Top 15 Cities for Research/National Policy Focused Submissions



*Note: Residents of **201** cities had **1,702** research/national policy focused submissions. **827** or **48.6%** are shown in the top 15 cities

Top 15 Cities for Other Considerations Submissions



*Note: Residents of **309** cities had **2,198** other considerations submissions. **874** or **39.8%** are shown in the top 15 cities



FAA 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

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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
 - **Thresholds:** Consider NES findings and other research, investigate lowering our significance threshold below DNL 65 dBA
 - For new metrics, consider how they may be used, whether it is appropriate to establish a threshold, and their potential value



FAA Noise Policy Review landing Page

- FAA has published an **initial landing page** for the noise policy review [https://www.faa.gov/about/office org/headquarters offices/apl/ae/e/noise/noise_policy_review](https://www.faa.gov/about/office_org/headquarters_offices/apl/ae/e/noise/noise_policy_review)
- The landing page will be revised as the noise policy review progresses.
- Expanded content *may* include:
 - Project information and status;
 - Resources (education materials, videos, FAQs, primary sources, etc.);
 - Links to register for virtual webinars; and
 - Links to subscribe to FAA project updates.



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Next Steps

- **Aim to initiate stakeholder engagement this Spring (2023)**
- **Engagement will include opportunities to:**
 - Learn more about aviation noise
 - Hear from FAA
 - Provide input to FAA
- **Click link at bottom of [landing page](#) to sign up for updates**

