

Send comments identified by docket number FAA–2023–0855 using any of the following methods:

- *Federal eRulemaking Portal*: Go to <https://www.regulations.gov> and follow the online instructions for sending your comments electronically.
- *Mail*: Send comments to Docket Operations, M–30; U.S. Department of Transportation (DOT), 1200 New Jersey Avenue SE, Room W12–140, West Building Ground Floor, Washington, DC 20590–0001.

Comments that focus on the issues and questions identified below will be most helpful. These questions are meant as a guide and commenters may provide their views or submit general comments related to how the FAA describes and discloses aviation noise impacts. The more specific the comments, the more useful they will be in agency deliberations. If relevant, commenters are requested to provide technical information, data, or other evidence to support the comment submission. Finally, the FAA requests that commenters identify the number of each question to which a response is submitted.

1. *Vehicle Type*. When the FAA published the ANAP <sup>[27]</sup> in 1976, the impacts of aviation noise were related to commercial jet service at or in the immediate vicinity of airports. What types or elements of current or future air vehicle activity ( *e.g.*, unmanned aircraft systems (also known as UAS or drones), advanced air mobility, rotorcraft, subsonic fixed wing, supersonic, or commercial space) should the policy describe and disclose? How should this information be described using noise metrics? Should the FAA use this information to make decisions or for public disclosure only? Please explain your reasoning.

*PhilB: AAM operations should be considered because, unlike current airport traffic with relatively fixed approach/departure paths, the AMM ‘air taxi’ concept could well have vehicles landing in my front yard. Theoretically those will be electric and relatively lower noise, but there are all sorts of airspace issues having them deployed potentially anywhere and everywhere over Huntington Beach CA and the combination of all of them during peak times could well be quite disturbing.*

2. *Operations of Air Vehicles*.

a. What elements of aircraft operations ( *e.g.*, en-route, takeoff, landing) should the noise metric evaluate and disclose? Should the FAA use this information to make decisions or disclose to the public noise impacts? Please explain your reasoning.

*PhilB: Huntington Beach CA is directly underneath departure, arrival, and en-route patterns every day from three airports: LCG arrivals are 2500’ and below; SNA arrivals are around 5000’; LAX arrivals are around 7000’ and departures from all three are over 10000’ and en-*

*route higher than that. There are specific flights coming at 1600' or lower that are definitely noisy but also the constant 'drip drip drip' factor of planes overhead every few minutes that causes accumulated noise level the residents hear and complain about.*

b. What interests or concerns do communities in the vicinity of airports have? How can these concerns be addressed using noise metrics? What noise metrics would address these concerns? Please explain your reasoning.

*PhilB: Huntington Beach CA had a huge outpouring of noise complaints when NextGen was implemented due to the concentrated flights paths and additional approaches that affected the City. Clearly that demonstrates huge concern. The only other concern is simply the potential for an airplane at 1600' or lower having a failure that would cause an unexpected crash landing over residential neighborhoods in the City.*

c. What interests or concerns do overflight communities [\[28\]](#) have? How can these concerns be addressed using noise metrics? What noise metrics would address these concerns? Please explain your reasoning.

*PhilB: Huntington Beach CA has a large number of en-route overflights daily. Especially early in the morning as people are trying to get the last few minutes of sleep, there is a large number of commercial cargo flights, many from Ted Stevens, that are 747-400 heavy type aircraft. Although they are high, the noise path is low, rumbly, and lengthy. You can sometimes feel it as much as hear it.*

d. What interests or concerns do communities in the vicinity of commercial space transportation operations have? How can these concerns be addressed using noise metrics? What noise metrics would address these concerns? Please explain your reasoning.

*PhilB: Huntington Beach CA currently has no space transport facilities and likely never will. Those that do clearly have noise issues during launches and of course safety issues if something catastrophically fails.*

e. What interests or concerns do communities in the vicinity of UAS (drone) package delivery or other newly emerging technology operations have? How can these concerns be addressed using noise metrics? What noise metrics would address these concerns? Please explain your reasoning.

*PhilB: Huntington Beach CA has some 70,000+ homes and a population of over 200,000. As drone deliveries and other technologies like AAM proliferate, the high-pitched whine that the electric powered devices emanate will be individually annoying but in combination will likely lead to a City that sounds like a beehive. As a minimum there needs to be limits on hours of operation (6:00AM to 11:00 PM or something) so you can actually sleep at night. Many of our residents live here because we can have windows open at night for cool ocean breezes and buzzing drones at 3:00 Am would not be welcomed.*

3. *DNL*. What views or comments do you have about the FAA's core decision making metric, *DNL*? How would these views regarding *DNL* be resolved if the FAA employed another noise metric (either in addition to, or to replace *DNL*) or if the FAA calculated *DNL* differently? Please explain your reasoning.

*PhilB: Huntington Beach CA has overhead traffic mostly all day long. However, we are blessed with the facts that both LGB and SNA facilities have grandfathered-in noise abatement hours-of-operation. As a result, between 10:00 PM and 7:00 AM the following morning, we have a lot less traffic. HOWEVER, DNL is by definition a 24-hour metric. Thus, our noise threshold is actually such that nearly twice the plane traffic during the day averaged over 24 hours would still be within 64 DNL. Besides an alternative to DNL, if it is kept (or adjusted), there needs to be an option that integrates of actually hours of operation for a given facility, not just 24 hours period.*

4. *Averaging*. *DNL* provides a cumulative description of the noise events expected to occur over the course of an entire year averaged into a representative day, described as an Average Annual Day (AAD).

a. Do you believe an AAD is an appropriate way to describe noise impacts? Please explain why or why not.

*PhilB: Huntington Beach CA sits underneath two approach paths that limit hours of operation. The representative day utilized in the AAD calculation does not have a factor for operational hours and it should. The other issue is that AAD really needs to be broken into sections of a day. For example, when airports near Huntington Beach CA open at 7:00 AM, there is a constant stream of both departures and arrivals only minutes apart. After the initial rush, there is a bit of a lull which then picks up again in the afternoon starting around noon and then later about 4:00 PM or so where end-of-day flights begin arriving. Averaging all this together implies relatively smooth operations during an entire day, which is quite unrealistic to actual operations. Adjustments such as CNEL take this into account.*

b. If not, what alternative averaging schemes to AAD should be considered and why? What information would the use of an alternative averaging scheme capture that AAD does not?

*PhilB: AAD with modifications for early, mid-day, afternoon, and late evening modifications to account for the general daily life patterns of people on the ground would be useful.*

5. *Decision making Noise Metrics*. The FAA currently uses *DNL* as its primary decision making metric for actions subject to NEPA and airport noise compatibility planning studies prepared pursuant to [14 CFR part 150](#).

a. Should different noise metrics be used in different circumstances for decision making?

*PhilB: yes*

b. If the answer to Question 5.a. is “yes,” please identify: the metric, the information it provides that DNL does not, and explain when and how it should be employed by the FAA in its system ( e.g., should the FAA use a noise metric other than DNL to evaluate noise exposure in quiet settings, such as national parks, national wildlife and waterfowl refuges, etc.)? Should this metric be used when the FAA is making decisions that affect noise in these settings? Should this metric be used alone or in combination with another metric?

*PhilB: Utilizing another metrics such as CNEL would help Huntington Beach CA. Penn State has some interesting research into Time Above (TA) as a metric that again would help modulate the difference between a 1600’ arrival overhead for 25 seconds versus a 7000’ arrival overhead for anywhere from 90 to 120 seconds.*

c. If the metric should be used in combination with another metric, please describe how they should be used together for decision making.

*PhilB: the concept of an “average day” has to take into account either by CNEL, DNL based on operating hours, or a TA based approach such that the average actually reflects operational truths instead of a flat 24-hour period.*

d. If the answer to Question 5.a is “no,” should DNL remain the core decision making metric or should another metric be substituted in all circumstances?

e. How would the use of the metrics that you recommend support better agency decision making? Please explain and illustrate with specific examples how the use of the recommended metric(s) would benefit agency decision making.

*PhilB: Huntington Beach CA has one approach path into LGB that has an an IFR procedure to cross a waypoint “LUCIG” at 3000’ and do a CDA into the LGB RW30TZ. On VFR, pilots can fly close to that given permission from TRACON and no safety issues. Roughly 80% of the time that happens with one particular carrier’s flights. However, other carriers have not been as sympathetic and TRACON, without prompting from pilots, directs these flights to cross the City at 1600’. There is likely a > 1.5dB shift between crossing LUCIG at 3000 and 1600 (sometimes lower). By using better metrics especially as related to time-of-day, a simple solution of defaulting to all commercial traffic to 3000’ at LUCIG would make a big difference to the City’s noise exposure footprint and reduce noise complaints into LGB.*

## 6. Communication.

a. Please identify whether and how the FAA can improve communication regarding changes in noise exposure ( e.g., what information FAA communicates, where and with whom FAA communicates, what information methods FAA uses to communicate and the venues at which FAA shares this information). Please explain your reasoning.

*PhilB: “communication” is a bi-directional activity. After asking for some type of meeting with the FAA, Huntington Beach CA finally got a meeting that was essentially a “presentation” as opposed to “communication”. The folks on the call were not particularly interested in looking at*

*the real data and used the “safety” umbrella as one reason they could not support a simple proposal that in fact is already utilized 80% of the time (but has to be requested by pilots). There should be opportunities for discussion as opposed to directives.*

b. Should the FAA consider revisions to its policy on the use of supplemental noise metrics in the FAA's NEPA procedures? Please explain how this policy should be modified to improve FAA communication of noise changes when the FAA is making decisions that affect noise. Please explain your reasoning.

c. What information about the change in noise resulting from civil aviation operations ( e.g., UAS or drones, helicopters, fixed wing aircraft, rockets/commercial space transportation vehicles, and new entrant technologies) should the noise metric communicate to the public? Please explain your reasoning.

d. Please explain how the public will benefit if the FAA implements your proposal in response to Questions 6.a and 6.b.

*PhilB: in the case of Huntington Beach CA, if the FAA implemented the IFR 3000' LUCIG CDA approach into LGB as the default rather than exception, the overall noise footprint over the City would be reduced. If that were then coupled with modified metrics such that peak operational hours were smoothed out some, much of the noise impacts on the mental and physical health of the residents would be minimized.*

7. *NEPA and Land Use Noise Thresholds Established Using DNL or for Another Cumulative Noise Metric.* The FAA has several noise thresholds that are informed by a dose-response curve (Schultz Curve <sup>[29]</sup>), which historically provided a useful method for representing the community response to aircraft noise. Two of the noise thresholds informed by the Schultz Curve are the FAA's significant noise impact threshold for actions being reviewed under the National Environmental Policy Act and the land use compatibility standards established in [14 CFR part 150, Appendix A](#). Both of these rely on the cumulative noise metric DNL and are referred to collectively in this question and questions 8–10 as “the FAA noise thresholds.” On January 11, 2021, the FAA published the results of the Neighborhood Environmental Survey,<sup>[30]</sup> a nationally representative dataset on community annoyance in response to aircraft noise. The Neighborhood Environmental Survey results show higher percentage of people who self-identify as “highly annoyed” by aircraft noise across all DNL levels studied in comparison to the Schultz Curve.

a. How should the FAA consider this information ( i.e., the Schultz Curve and Neighborhood Environmental Survey findings) when deciding whether to retain or modify the FAA noise thresholds <sup>[31]</sup> established using the DNL metric or to establish new FAA noise thresholds using other cumulative noise metrics? Please explain your reasoning.

*PhilB: there is reasonable debate over whether the Schultz curve is still valid some 45 years later. The Finegold “Updated” Schultz curve of 1994 is at least a more recent attempt at defining annoyance. Note the annoyance often starts as low as 45DNL. To date, the FAA has responded to Congress with why DNL is the right answer as opposed to really trying to evaluate other alternatives as was requested in the previous FAA Authorization funding measure.*

*And of note is that the EPA in response to the 1972 NCA actually recommended 60DNL but that was never adopted.*

b. Should the FAA consider other or additional information when deciding whether to retain or modify the FAA noise thresholds that were established using the DNL metric or to establish new FAA noise thresholds using other cumulative noise metrics? Please describe the reason for the recommendation and identify the data, information, or evidence that supports the recommendation.

*PhilB: some research has been done showing that oftentimes people directly under approach/departure paths have other health situations besides noise “annoyance”. A more wide-spread view of overall health impacts should be considered.*

c. How should research findings on auditory or non-auditory effects ( e.g., speech interference, sleep disturbance, cardiovascular health effects) of noise exposure caused by civil aircraft and vehicles be considered by the FAA when it decides whether to retain or modify the FAA noise thresholds <sup>[32]</sup> that were established using the DNL metric? How should the FAA consider this same research when deciding whether to establish new FAA noise thresholds using other cumulative noise metrics? Please explain your response.

*PhilB: some research conducted near LAX has shown a 14% increase in premature births as compared to the control case for women with 15km of LAX from 2008-2016. Noise is related to altitude, aircraft type, and many other factors. The same goes for particulate emissions, which in that study shows particles as small as .1 micrometers can enter human blood streams. The point is that noise is just one component of overall human health impact.*

d. In examining whether to change its metrics and thresholds for noise, the FAA needs reliable information to support any changes. One type of information that the FAA can rely on is epidemiological evidence. This means the study (scientific, systematic, and data-driven) of the distribution (frequency, pattern) and determinants (causes, risk factors) of health-related states and events (not just diseases) in specified populations (neighborhood, school, city, state, country, global). What amount of epidemiological evidence is sufficient to provide the FAA with a sound basis for establishing or modifying the FAA noise thresholds <sup>[33]</sup> either using the DNL metric or another cumulative noise metric? Please explain your response.

e. Should the FAA consider using factors other than annoyance to establish FAA noise thresholds <sup>[34]</sup> using the DNL metric or other cumulative noise metrics? What revisions to existing FAA noise thresholds or new noise thresholds do you recommend be established and why? Please explain your response.

*PhilB: the FAA has said they plan to revisit the SoCal metroplex and likely modify creatin classifications. But there is also a big push trying to establish electric plane fleets which of course completely changes the noise characteristics of any given aircraft (mostly to a higher frequency range). The implications of these loner-term items are hard to evaluate.*



8. *FAA Noise Thresholds Using Single-Event or Operational Metrics.* As the FAA learned from the results of the NES, people are bothered by individual aircraft noise events, but their sense of annoyance increases with the number of those noise events. Should the FAA consider employing new FAA noise thresholds <sup>[35]</sup> using single-event or operational metrics? If the answer is “yes,” which metrics should be used to establish the FAA noise thresholds? What should be the relevant noise exposure level for the new noise thresholds you propose? Please explain your reasoning. If the answer is “no,” please explain your reasoning.

9. *FAA Noise Thresholds for Low-Frequency Events.* Should FAA establish noise thresholds <sup>[36]</sup> for low-frequency events, such as those associated with the launch and reentry of commercial space transportation vehicles authorized by the FAA Office of Commercial Space Transportation? If the answer is “yes,” which metrics should be used to establish the noise thresholds? What should be the relevant noise exposure level for the new noise thresholds you propose? Please explain your reasoning. If the answer is “no,” please explain your reasoning.

10. *Miscellaneous.* 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, <sup>[37]</sup> or FAA's method of communicating the change in noise exposure? Please explain your response.

11. *Literature Review.* In this review, the FAA will examine the body of scientific and economic literature to understand how aviation noise correlates with annoyance as well as environmental, economic, and health impacts. The FAA also will evaluate whether any of these impacts are statistically significant and the metrics that may be best suited to disclose these impacts. A bibliography of this body of research is available for review in the Background Materials tab in the Docket and as Appendix 1 to the FAA framing paper entitled, *The Foundational Elements of the Federal Aviation Administration Civil Aircraft Noise Policy: The Noise Measurement System, its Component Noise Metrics, and Noise Thresholds*. This framing paper is available at: <https://www.faa.gov/noisepolicyreview/NPR-framing>. Please identify any studies or data regarding civil aviation noise not already identified by the FAA in the bibliography that you believe the FAA should evaluate. Please explain the relevance and significance of the study or evidence and how it should inform FAA decisions regarding the policy.

*PhilB: the FAA provided “studies” and presentations before NextGen was implemented. They stated that Huntington Beach CA would see no significant impact whatsoever and made available the KML data that showed model results over a grid view of the area. A representative verbally stated there would be no increase in noise. Now of course the definition of +/-1.5dB to be significant has to be remembered. It turned out that although perhaps if one measured it, that would be true, but the actual annoyance factor of concentrated flight paths, two re-routed paths, and the well known A320 whine caused a huge uptick in noise complaints from the residents.*

*The FAA should strive to really assess the situation and not rely on outdated models (which were used in the SoCal metroplex analysis) and then present the findings with a true spirit of cooperation and communication instead of the usual top-down approach.*