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September 25, 2023

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

Re: Docket No. FAA-2023-0855 - Culver City, California Response to Request for Comments on the Federal Aviation Administration's Review of the Civil Aviation Noise Policy

To Whom It May Concern:

As Counsel to the City of Culver City, California, I am providing the City's response to the Federal Aviation Administration's ("FAA") request for comments on its review of the Civil Aviation Noise Policy published in the Federal Register of May 1, 2023 at 88 Fed. Reg. No. 83, 26641, *et seq.*

Culver City is a California municipal corporation located to the East of, and under the Arrival paths to, Los Angeles International Airport ("LAX"). Since the advent of NextGen, and, more specifically, the changes to the HUULL, IRNMN, and RYDRR Arrival routes, implemented without documentation under the National Environmental Policy Act, Culver City citizens have experienced increasingly burdensome noise impacts, not merely "annoyance", as the Federal Aviation Administration would characterize them, but interference with their daily lives. The comments set forth below are, therefore, the product of that continuing experience, and offer potential remedies for the continuing impacts, not merely for Culver City, but also for numerous public entities and their citizens throughout the United States.

1. VEHICLE TYPE

The FAA Noise Policy should describe and disclose information on all current and future aircraft types. The impacts of aviation noise have evolved over the years with the evolution of aircraft, and it is essential that FAA's Noise Policy keep pace with technological advancements and emerging aircraft types. By including such aircraft types as UAS or Drones, Advanced Air

Mobility, Rotorcraft, sub- and supersonic fixed wing, and commercial space vehicles, the policy can address the full spectrum of noise sources. In addition, when describing this information, It would be beneficial to use noise metrics that accurately capture the characteristics and potential effects of each aircraft type. It is also crucial to consider the immediate noise impacts and the cumulative effects of these aircraft types. FAA should not only use this information for public disclosure purposes, but also as a basis for making informed decisions. For example, empirical data can be used by FAA to establish evidence-based regulations and policies that effectively manage and mitigate noise from the scrutinized aircraft types. This approach guarantees that decisions are grounded in scientific research and empirical observation.

2. OPERATIONS OF AIR VEHICLE

a. What elements of aircraft operations (*e.g.*, en route, takeoff, landing) should the noise metric evaluate and disclose?

All the operational conditions/elements, should be considered, depending on the altitudes and types of aircraft. Typically, takeoff and landing are at lower altitudes than "en route," and, thus, will have greater impacts on those populations affected, although in smaller numbers than the total number of aircraft in overflight. Overflight noise will be more influenced by the types of aircraft evaluated (*e.g.*, supersonic, 777 versus typical commercial aircraft). Thus, not only should FAA take into account the operation itself, but also the noise signature of the individual aircraft type and the altitudes at which its takeoffs and landings normally take place. This analysis might be required to incorporate a variable for altitude, based on data from a variety of airport types, sizes, and limitations on each.

b. and c. What interests or concerns do communities (including overflight communities) in the vicinity of airports have?

Communities in the vicinity of airports, both within and outside the FAA's currently defined significant noise contours, have the same concerns, *i.e.*, to properly define, segregate and mitigate the impacts of noise created by landing, takeoff and often overflights of aircraft.

Noise metrics that can adequately address those concerns include, but definitely are not limited to, Cumulative Noise Equivalent Level ("CNEL"), Single-Event Noise Equivalent Level ("SENEL"), and Time Above. CNEL is a cumulative metric that varies from DNL in the incorporation of a 5 dB noise weighting for noise created between hours of 7:00 p.m. and 10:00 p.m. when families are normally at home, and thus, more likely to be "annoyed," or, more cogently, impacted by aircraft operations.

SENEL, as FAA is aware, measures the noise from each single event. As determined in the General Accounting Office, Report to Congressional Requestors, September 2021, Aircraft Noise – FAA Could Improve Outreach Through Enhanced Noise Metrics, Communication, and

Support to Communities ("GAO Report"), p. 19, "because DNL takes into account both the amount of noise from each aircraft operations, as well as the average annual flights per day at a given location, the same DNL may be associated with vastly different numbers of flights above that location."

Finally, the time above metric records the duration of the noise impacts at a given altitude. While the level of impact may not be independently significant, when coupled with numerous single events maintaining low altitudes for extended periods of time, the public may perceive highly significant noise impacts.

d. Interests or concerns of communities in the vicinity of commercial space operations.

Obviously, communities are concerned with the potential noise impacts of the launch and landing noise levels. These operations produce significant acoustic disturbances that can be experienced not only close to the launch site, but also at significant distances. Public notice mechanisms can play a crucial role in addressing these concerns but can't allay them.

e. What interests or concerns do communities in the vicinity of UAS (drone) package delivery or other newly emerging technology operations have?

Communities in the vicinity of UAS (drone) package delivery and other newly emerging technology have the same concerns as set forth above, although at a greater level. Most property owners are reluctant to entertain flying vehicles, no matter how small, at low altitudes over their properties, at as yet unknown single-event noise levels. Moreover, the noise from UAS is not amenable to the type of averaging used to create the DNL metric, because the numbers of flights, their altitudes and single-event noise levels are not constrained by airport facilities in the manner that limits the operation of commercial aircraft. The creation of a metric incorporating these operations has not yet occurred and will be a challenge, at best.

3. <u>DNL – WHAT VIEWS OR COMMENTS DO [COMMUNITIES] HAVE ABOUT THE FAA CORE DECISION MAKING METRIC DNL</u>?

FAA need not look farther than the GAO Study to find cogent, and still accurate analyses. Specifically, GAO finds that" because the DNL metric is intended to combine the effects of individual aviation noise components into a single metric, it does not provide a clear picture of expected changes in noise." GAO goes on to lay out its reasoning. It reaches the conclusion, based on an exhaustive analysis exploring the relationship between number of flights per day and SEL to DNL, that "a change in DNL of 3 dB could result from either a relatively small change or a very large change in the number of added flights per day," p. 21, overhead. Thus, the DNL metric can "mask large swings in daily flight operations and associated noise," p. 23. In other words, what the public hears is the noise of individual aircraft at varying altitudes,

not their "average" over 24 hours. Consequently, the salient metrics are SEL and time above, both of which should be used at minimum as supplemental to the averaging metric, DNL.

4. AVERAGING – SEE ALSO RESPONSE TO NO. 3 ABOVE

The DNL metric uses as its basis the Average Annual Day, in which, simplistically stated, noise is averaged over the 24 hours and again over 365 days to supply the "average." While AAD provides a cumulative description of noise events experienced over the period of a year, it fails to capture the specific events and variations that occur on a daily basis. Noise impacts are heavily dependent on time of day, weather conditions and specific conditions. Averaging these factors into a representative day may overlook significant noise peaks and variations.

Thus, even if an "average" were appropriate, which it is not, the "average" should be calculated only over the time period during which aircraft operations and their noise is most impactful. In other words, the DNL metric's 24 hour average purposefully dilutes the impact of noise by spreading the calculation into the night hours where aircraft operations at most airports are diminished. In short, even if an average is used, it should reflect the hours during which aircraft operations are likely to collectively produce calculable noise impacts.

5. DECISION MAKING NOISE METRICS – SEE ALSO RESPONSE TO NO. 3 ABOVE

a. Should different noise metrics be used in different situations?

Different noise metrics should be used in ALL circumstances. As GAO concluded, the DNL metric is manifestly misleading in its calculation of aircraft noise impacts because it is based on a 24-hour average which incorporates the relatively lightly traveled night hours, and that masks the actual impact of both numbers of aircraft overflights and individual noise signatures. However, if accommodation to individual circumstances were appropriate, additional metrics such as Time Above, and SENEL should be used in environmentally sensitive areas around airports, including parks and historic districts at minimum, while CNEL, a variant of DNL, could still be used in heavily populated areas where evening noise between 7-10 p.m. has a strong impact. The dispositive benefit of the use of CNEL over DNL is CNEL's sensitivity to evening hours, when many working people are more likely to be heavily impacted by noise impacts than during the daytime hours.

6. COMMUNICATION

a. How FAA can improve communication regarding changes in Noise Exposure

The answer to this question is covered more fully in prior responses in which the position is stated that FAA should, at minimum, supplement its cumulative noise metrics with single-event, and or the more realistic CNEL metric already in use in California. FAA has, to date, been spectacularly unsuccessful in communicating to the public changes in noise exposure from, for example, its NEXTGEN project, partially because of FAA's reluctance to utilize the National Environmental Act ("NEPA) process, and, instead, using Categorical Exclusions that exempt it from disclosing the impacts of its decisions. In short, part of its problem with communication could be conclusively solved by the full and proper use of NEPA as a vehicle for disclosure.

b. Should FAA consider revisions to its policy on the use of supplemental noise metrics in FAA NEPA procedures?

See also response above. Disclosure under NEPA should be even more in depth, including use of supplemental noise metrics as it is in the NEPA process that disclosure becomes more than merely voluntary, but is transformed into a legal requirement. Note also that, because FAA has solicited and received extensive responses to its noise policy regarding calculation and communication of noise exposure impacts, its failure to perform the analysis requested, even if only for disclosure purposes and not for decision-making, in a future NEPA analysis regarding changes to aircraft operations over heavily populated areas may be regarded as a failure to disclose important environmental impacts as required by NEPA. For that reason alone, FAA should revise its policy on the use of "supplemental metrics in FAA's NEPA procedures."

c. What Information about the change in noise resulting from civil aviation operations should the noise metric communicate to the public?

Put simply, the information should include single-event and cumulative increases and decreases in noise, by time of day and altitude of operation. For example, metrics which focus on specific time periods can provide more nuanced assessment of noise impacts during sensitive time periods when communities expect quieter environments. A more detailed picture of noise impacts should include metrics that account for peak noise levels, sound characteristics and/or specific time frames, among other circumstances.

d. Please explain how the public will benefit.

In response to FAA's inquiry as to "how the public will benefit" if FAA implements a more inclusive metric, the answer is not obscure. If one of the purposes of the analysis is to develop "potential improvements to how FAA analyzes, explains, and presents changes in

exposure to civil aviation noise," then a broader utilization of mechanisms to analyze and disclose the variables that are part of the analysis is per se critical to public understanding of FAA's calculations which is critical to allow members of the public to make better decisions about where to live and work.

7. NEPA AND LAND USE NOISE THRESHOLDS BASED ON SCHULTZ CURVE AND NEIGHBORHOOD ENVIRONMENTAL SURVEY

a. How should FAA consider, among others, the Schultz Curve and Neighborhood Environmental Survey when deciding whether to retain or modify FAA noise thresholds?

Based on FAA's earlier comments, it is difficult to understand the justification for this question. The Schultz Curve was created 50 years ago, long before the advent of current, more noise efficient aircraft, the EPA's air quality regulations, and huge increase in the size of airports and numbers of operations. The fact that the public's level of annoyance is beyond that anticipated by the Schultz Curve should not be a surprise to FAA.

With respect to inquiry a, FAA's own analysis, as well as that of the GAO Study, demonstrates that the Schultz Curve should be discarded as the primary basis for the determination of aircraft noise significance. Moreover, as set forth above, other cumulative metrics such as CNEL exist which are more accurate in reflecting the impact of noise, especially during most vulnerable times of day.

b. Should FAA consider other additional information?

As also set forth in detail above, FAA should, at minimum use the data and analysis in the GAO Study when deciding whether to retain or modify current FAA noise thresholds. Another governmental agency has done the work of providing a basis for determining FAA's options which FAA apparently has not yet done for itself.

c. How should research findings on auditory and non-auditory effects of noise from civil aviation and vehicles be considered by FAA?

See response to b above.

d. Provide FAA with reliable information on epidemiological effects.

Here, FAA demands that the public provide epidemiological evidence of the health impacts of aircraft noise. This is a job the FAA should have done for itself long ago, and should not now demand the affected public provide the same evidence that is now, and has always been, available to FAA.

e. Should FAA consider relying on factors other than "annoyance" to establish noise thresholds?

FAA solicits the public's view on whether it should consider adoption of noise "thresholds" other than "annoyance." FAA purports to define "annoyance" as a generic combination of the "general adverse reaction of people to noise that causes interference with speech, sleep, the desire for a tranquil environment, and the ability to use the telephone, radio or television satisfactorily." FAA history of Noise, p. 4

In asking this question, and relying on its definition of "annoyance," FAA dramatically understates the physical and emotional impacts of aircraft noise. Moreover, depending on the true definition of "annoyance" (*i.e.,* irritation, damage, other), FAA's own Neighborhood Environmental Survey provides at least a partial answer where it finds that more than one-half the affected population is "highly annoyed" at 60 dB DNL. First, before attempting to understand how aviation noise correlates with "annoyance," FAA should more specifically define the dependent variable, annoyance. It should determine if that variable adequately reflects response to noise impacts, or if there is another such as SEL or Time Above that can be accurately incorporated such that the public response to noise is better understood. Only then can FAA look at the various variables that contribute to the "dose - response" relationship to determine which of affects public perception.

8. FAA NOISE THRESHOLDS USING SINGLE-EVENT OR OPERATIONAL METRICS. – SEE RESPONSE TO QUESTIONS 3, 4 AND 7 ABOVE. [SEE SFO ROUNDTABLE, 2016 ROUND TABLE, 2021/23 GROUND BASED NOISE MODELLING STUDY

The City of Culver City thanks the FAA for this opportunity to comment and hopes that FAA listens to the voices of the numerous citizens impacted by airport noise.

Sincerely,

BUCHALTER
A Professional Corporation

Barbara Lichman

BL:ldu

An official website of the United States Government.

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Meetings: Civil Aviation Noise Policy (/document/FAA-2023-0855-0001)

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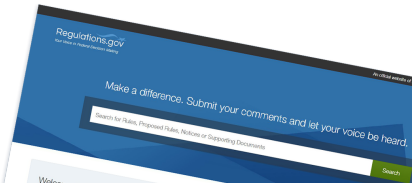

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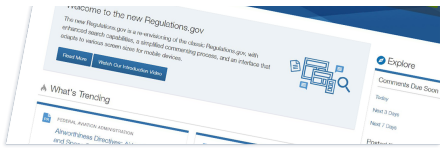

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