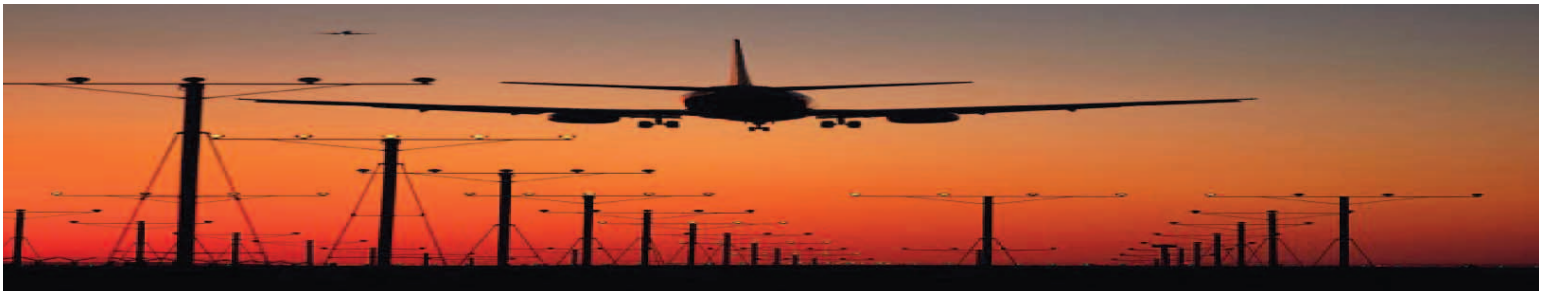

AWG NEWSLETTER

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— Visit our website: www.awgoc.com or on Facebook: AWGOC —

JOHN WAYNE AIRPORT AIRLINE NOISE MITIGATION WORKSHOP

Airport Working Group organized and is now facilitating a series of workshops with the six largest commercial passenger carriers at JWA. We have partnered with the City of Newport Beach administration and their aviation consultants to ensure a collaborative initiative approach for the broad community of impacted residents.

As communicated earlier in AWG Newsletters, the workshops launched with a scoping session in September 2018, and there were three in-person workshops in 2019 and three virtual Zoom sessions in 2020. Participation by the airlines was entirely voluntary, but we have 100% support, with several carriers sending two and even three senior flight operations experts.

The singular objective is to reduce the net noise generated by departing aircraft on takeoff and initial climb to 4000' altitude (roughly, just past the shoreline). To that objective, the AWG facilitator prepared a list of seven operational issues to be addressed by the group, and a request was made for each airline to make a commitment on an action to address each of these over the course of the workshops, like flying test flights to measure improvements using their committed solutions, or unilaterally changing procedures to comply.

Photo courtesy of Derin Allard

The 7 target issues put forward were:

1. Discipline on each departure to execute the first aircraft turn post takeoff. Early turns, even by a few seconds, negatively impact the east side of the bay (East Bluff, etc.), whereas a "late" turn puts the aircraft over the westside (Dover Shores, etc.). A precise turn, per the flight plan filed, balances the noise across the east and west.
2. Request that airlines continue the departure route precision on the FAA-approved departure procedures to the offshore waypoint as this further optimizes the sharing of noise across different neighborhoods.
3. Set Noise Abatement Departure Procedure-1 (NADP-1) as the preferred procedure for all south departures versus their prior procedures. NADP-1, as long-term residents will recall, is the steep takeoff at near full engine power, and then a cutback to a much lower – i.e., much quieter – engine power. (Until our workshop, of the major carriers, only Southwest was flying NADP-1 – three additional carriers have since adopted NADP-1).
4. Raise the NADP-1 cutback altitude to 1200 feet or higher, compared to the standard NADP-1 cutback at 800'. This will get the aircraft higher before it reaches the more densely populated neighborhoods, reducing neighborhood noise.
5. Reduce Climb 1 throttle x% (% TBD). Climb 1 is the next step in the departure procedure post takeoff, i.e., immediately after the NADP-1 power cutback.
6. Maintain the Climb 1 lower engine throttle setting until past shoreline (ex., 4000' or the offshore waypoint). Lower throttle means less noise for the community.
7. Request FAA approval for the new "two-turn departure procedure" by JWA airlines – identified as STAYY3, so that aircraft stay over the Back Bay and avoid as many residences as possible.

Obviously, our highest request has always been for the airlines to buy & fly newer, quieter aircraft like the Airbus 320 NEO, Airbus 220, or the Boeing 737-800 Max at John Wayne. While AWG continues to work actively with the City and airlines to implement fleet

AIRLINE NOISE MITIGATION WORKSHOP (cont'd)

upgrades, we are focused on short-term solutions for immediate noise relief.

Workshop successes

The support from the airlines has been superb and there is a real desire to help us achieve our noise reduction objective. Each airline made commitments at the very first 3-hour workshop in January 2019 and have carried forward on those with some success. Some of these changes require test and monitoring of results, so there is no need for every airline to make the same changes simultaneously. Instead, a single airline can test a significant change and report results back to the group, providing evidentiary documentation of improvements to other airlines, who can in turn incorporate that change. Southwest Airlines, which already flies NADP-1, immediately requested FAA STAYY approval, which was granted, and now they fly STAYY (two-turn departure procedure) on all east and south destination departures. Based on their positive feedback, the other five carriers have requested FAA approval. United Airlines stepped up to test-fly NADP-1 at different cutback altitudes (#'s 3 and 4 above) and requested and received approval for STAYY (#7). UA and Delta are also holding back on a power increase until after the shoreline (#6 above). American Airlines and Delta Air Lines initially test-flew different procedures that had been successful for them at other airports, but with less success at John Wayne, so at the request of AWG and Newport Beach, they committed to flying the standard NADP-1 departures at 1200' (AA) or higher (DL @ 1500').

Quieter aircraft have been introduced at John Wayne by Frontier, flying 100% Airbus 320 NEO's, and Delta, introducing the Airbus 220 to replace the older Boeing 717. Both changes have reduced noise by five to 10 decibels and other airlines will try to incorporate the quieter MAX and Airbus equipment when possible.

In summary, the workshop format has been a very successful approach where all parties can speak honestly and make commitments for change. All parties are invested in continuing these workshops, as there are always areas for further improvement, and our work on the original seven issues is still in progress. Sometime in mid to late 2021, we will organize a public session in Newport Beach, where workshop participants can celebrate these ongoing successes with the community, who can in turn share appreciation to the airlines for their sincere efforts and support.

RECENT ACADEMIC STUDY OF AVIATION SOURCES ULTRAFINE PARTICLE POLLUTION

ENVIRONMENTAL & OCCUPATIONAL HEALTH SCIENCES | UNIVERSITY of WASHINGTON | SCHOOL OF PUBLIC HEALTH
CIVIL & ENVIRONMENTAL ENGINEERING | UNIVERSITY of WASHINGTON

In December, 2019, the University of Washington released findings from a two-year study (MOV-UP) of the air quality impacts on communities near and below the flight paths of Seattle-Tacoma International Airport. This study is of particular interest to AWG as we believe the pollution emitted from aircraft is a potential health hazard, specifically to JWA's neighboring communities.

The MOV-UP study conducted by the University of Washington research team, in coordination with an esteemed group of stakeholders, was designed to investigate the implications of aircraft traffic at Sea-Tac by assessing UltraFine Particle concentrations (UFPs) within 10 miles of the airport in the direction of aircraft flight.

The study found:

- UFPs derive from both roadway traffic and aircraft sources, with the highest UFP counts found nearest major roadways.
- Size of UFP and black carbon concentration distinguished aircraft from roadway pollution.
- Air quality model results suggest communities underneath and downwind of landing aircraft may be exposed to relatively higher concentrations of smaller sized UFPs (10-20nm).
- UFPs emitted by jet engines have a coagulation half-life of about an hour, meaning they linger in the air in the surrounding neighborhoods.
- Findings are consistent with previous literature on UFPs. Similar monitoring campaigns conducted in airport communities near Los Angeles, Atlanta, Boston, New York, and Amsterdam identified elevated levels of UFPs.
- Toxicological studies suggested UFPs may be more relevant to health than larger-sized particles. Health impacts of UFPs are still unclear and need further research.

While the MOV-UP study provides insight specific to the air quality and UFPs near the SeaTac airport, these findings in combination with the monitoring results from other airports can assist in beginning to understand the change in air quality caused by aircraft. Further studies are needed to fully realize the health effects from aircraft related UFP exposure and how we can reduce human impact from increased UFPs.

For more information or to view the full study, please visit *https://deohs.washington.edu/sites/default/files/Mov-Up%20Report.pdf*

FAA SIDESTEPS CONGRESSIONAL MANDATE TO EVALUATE ALTERNATIVE NOISE METRICS

Originally posted by Barbara Lichman on Aviation & Airport Development Law News (www.aviationairportdevelopmentlaw.com), June 10, 2020

In the FAA Reauthorization Act of 2018, Pub. L. 115254, § 188, Congress required the Federal Aviation Administration ("FAA") to "evaluate alternative noise metrics to current average day-night level standard, such as the use of actual noise sampling to address community airplane noise concerns." In its April 14, 2020 Report to Congress ("Report"), the FAA thumbed its nose at that mandate, and chose instead to enumerate the various available metrics, without any attempt at analysis of their efficacy at representing real-world noise impacts when compared to Day/Night Average Sound Level ("DNL"), currently required by FAA for analysis of airport noise impacts.

From the FAA's purely technical perspective, the DNL metric "captures all the acoustic energy within a 24-hour period, adding a 10 dB penalty between the hours of 10 p.m. and 7 a.m. to account for people's increased sensitivity to noise at night" (Report, p. 11, § 4.1). What is most notable, however, is what is not said. The FAA mentions in passing, but fails to evaluate the comparative benefits of, the alternative metrics, with the most obvious omission that of the Cumulative Noise Equivalency Level ("CNEL") metric long used to evaluate aircraft noise in California. That section imposes an additional 5 dB penalty between the hours of 7 p.m. and 10 p.m., hours when families are already at home and particularly sensitive to the noise of overflights. Instead, the FAA relentlessly defends DNL, with no attempt to catalogue its failures as, for example, an average of noise created by aircraft operations over a 24-hour period which gives short shrift to the impacts of individual operations, and without the mitigation of the additional 5 dB penalty.

Even more surprising is the FAA's off-hand dismissal of "noise monitoring," the use of fixed points at which specialized machinery records the noise created by each operation, even though that information is later used to calibrate the noise models' estimations of which the FAA appears to be so fond instead. The FAA seeks to justify its own reliance on the mathematical exercise of modelling by asserting that "real-world situations," like "monitoring," can include "various sources of error" including non-aircraft sounds (Report, § 7). Ironically, most, if not all large airports have rejected modelling as the exclusive mechanism for determining noise impacts and, instead, utilize complex systems of monitors which record the "real world" incidence of aircraft impacts.

"In short, the FAA's mandated 'evaluation' of alternative noise metrics has turned into nothing more than an apologia for its own flawed analytic tool. What Congress plans to do with the FAA's letter – demand a supplement or allow it to stand – remains a question."

Finally, the FAA claims that "rigorous noise measurement procedures are used in the aircraft certification process" (Report, § 2.2). Although not further discussed in its letter, the FAA discloses that in the aircraft certification process, "rigorous noise measurement" (that can only be obtained from monitoring) are used to determine "the maximum noise level that an individual aircraft can emit" (Id.). The FAA's logic in verifying the noise of individual operations with independent, individual, noise measurement in the case of aircraft certification, but not where community noise analysis is concerned, remains opaque.

In short, the FAA's mandated "evaluation" of alternative noise metrics has turned into nothing more than an apologia for its own flawed analytic tool. What Congress plans to do with the FAA's letter – demand a supplement or allow it to stand – remains a question. Stay tuned for the answer.

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If you would like further information, visit our website at:

www.awgoc.com

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PLEASE SUPPORT THE EFFORTS OF AWG BY MAKING A CONTRIBUTION TODAY.

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REQUEST FOR DONATIONS!

AWG's Board and volunteers work hundreds of hours per year with no compensation and try very hard to be of value to the community. AWG is urgently appealing to members and community residents for donations. This newsletter is sent to over 5500 residents to keep you appraised on a small sampling of issues we are actively working on, or researching, to protect the health and lifestyle of our community. AWG was founded over 35 years ago as a "not-for-profit" LLC. We have typical expenses, such as newsletters, accounting audit fees, website hosting, mailings, and insurance, but also, extraordinary expenses such as legal fees, participation in industry aircraft noise conferences, and hosting participants in workshops. Cashflow has been negative the past few years and even worse with the pandemic. So, if you can, please use the enclosed envelop to send a donation or go to our website- ***www.awgoc.com****, and use the PayPal link. It will be much appreciated!!*
The AWG Board thanks you for your support.

WE NEED YOUR EMAIL ADDRESSES!

To reduce our mailing costs and allow us to communicate with you more easily, we need your email addresses. That way, we can send you digital newsletters, let you know when our revamped website launches, and other exciting (but not too frequent) updates. We have thousands of physical street addresses, but less than 10% of members' email addresses.

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