

USING 20TH CENTURY TOOLS FOR A 21ST CENTURY PROBLEM: LEGAL TOOLS FOR ADDRESSING AIRPORT NOISE

Peter J Kirsch
Kaplan Kirsch LLP

January 15, 2025



Today's presentation

- How we got here
- A brief history of noise measurement and reporting
- Today's inflection point
- A modest proposal for addressing cooperation and communication



Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aliquam mattis mauris vel elit ultricies egestas. Quisque rutrum eu lorem vel ultrices. Donec a congue odio, a sollicitudin mi. Donec vestibulum ultricies ornare. Donec aliquet leo diam, id bibendum lorem fringilla id. In ullamcorper tellus nec turpis mollis, et consectetur lorem dapibus. Aliquam iaculis ornare rhoncus. Fusce condimentum, odio id pretium fermentum, leo nibh rhoncus urna, vel tempor sem tortor non justo. Integer ullamcorper mi vitae nunc lacinia tempus non et mi. Vivamus congue ante vulputate leo tempus dictum. Nulla fermentum consectetur risus in maximus. Donec non maximus mi. Nullam sed posuere nisi.

Suspendisse risus orci, vulputate eget sem id, bibendum elementum nunc. Vestibulum eget arcu in dolor ultrices consectetur et sed urna. Suspendisse potenti. Nam nec convallis sem, eget porta mi. Aliquam sodales odio et viverra laoreet. Vivamus eu dolor dui. Nullam diam risus, dapibus rutrum sagittis dictum, ultrices vitae tellus. Cras dapibus luctus dolor, eget faucibus sapien blandit at. Suspendisse nec purus in augue molestie maximus vel nec ipsum. Nunc mattis neque vitae eros efficitur pulvinar. Ut laoreet tellus ut pharetra sagittis.

Nunc a lorem ipsum fermentum placerat. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc tristique dictum eleifend. Nulla venenatis nisi nec arcu sed pretium sed. Sed turpis id ipsum conull posuere. Nam turpis ipsum, volutpat ac mauris eget, ultrices viverra ipsum. Ut rutrum tortor sapien, sed cursus nulla ultricies sit amet. Orci varius natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus.

Ut lectus tellus, fringilla in risus in, fringilla congue libero. Morbi tristique leo sed turpis bibendum, sed tempus ligula volutpat. Mauris rutrum odio nec aliquam interdum. Vivamus congue magna a ultricies rutrum. In eu mollis mi. Vestibulum nec sem lorem. Etiam non sagittis augue. Nunc interdum cursus efficitur. In hac habitasse platea dictumst. Duis at enim ut quam accumsan bibendum. Suspendisse pulvinar mauris sed ex sagittis malesuada. Donec vulputate dolor quis enim dictum tempus. Curabitur finibus ultricies dictum. Praesent elementum, felis vitae luctus aliquam, magna est elementum augue, ac fringilla diam tellus sit amet nisl. Phasellus purus odio, lacinia non erat quis, volutpat cursus nibh. Quisque convallis interdum massa sed congue.

Pellentesque congue purus ac lorem facilisis venenatis. Cras finibus turpis nec feugiat egestas. Vestibulum et arcu tincidunt, bibendum augue sit amet, posuere magna. Ut et tempor lorem, nec tincidunt lectus. Aenean luctus eget elit vel aliquet. Phasellus ultricies metus nibh, at gravida odio facilisis nec. Mauris tristique felis felis. Cras nec condimentum dolor, vel scelerisque erat. In et gravida augue. Sed eget enim id mauris tristique euismod.

What you expect to hear from lawyers

Alternatively



Instead, let me get boring and technical....

INTERNET ARCHIVE

WayBack Machine





1970s

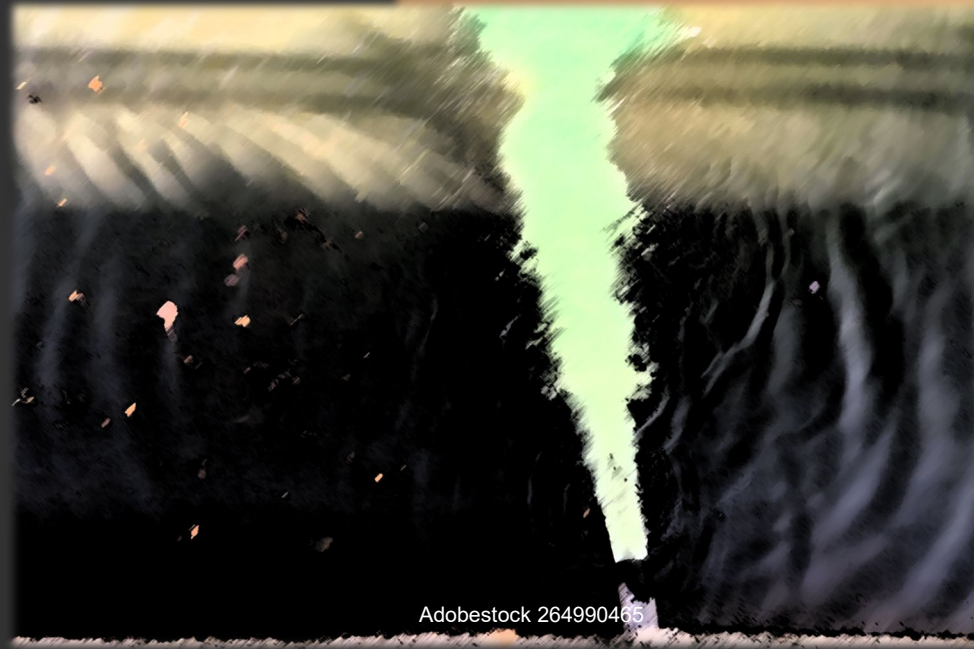




Wikipedia https://en.wikipedia.org/wiki/1970s_in_fashion



Adobestock 140806806



Adobestock 264990465



Wikipedia https://en.wikipedia.org/wiki/Rotary_dial



Remember these?



Wikipedia https://en.wikipedia.org/wiki/McDonnell_Douglas_DC-10



Wikipedia https://en.wikipedia.org/wiki/Boeing_747



Wikipedia https://en.wikipedia.org/wiki/Boeing_727





1970s-80s

A first inflection point



How DNL and 65 dB were selected

- Noise Control Act of 1972
 - EPA to select cumulative noise metric
 - Publish “levels of ...noise ... requisite to protect public health and welfare with adequate margin of safety”
- Technical studies including 1974 “Levels Document”
- FAA Noise Policy 1976
 - **Balance** between “desirable and technical and financially achievable”



Equal
65 dB DNL

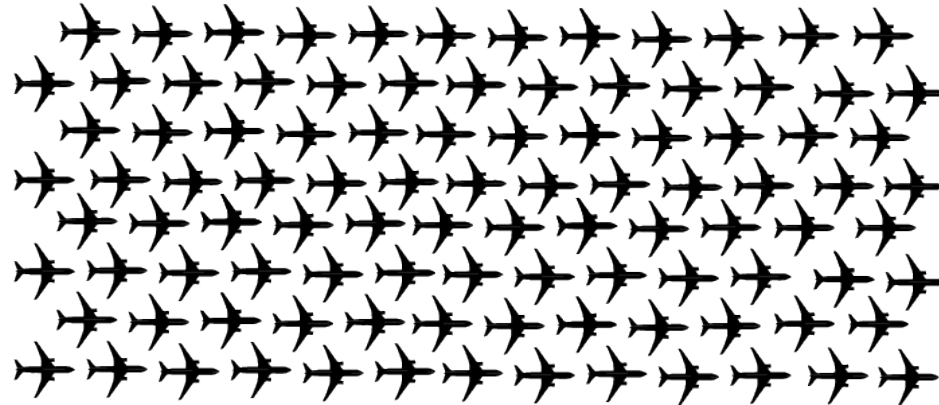
——1 event per day = 114.4 dBA SEL ——



——10 events per day = 104.4 dBA SEL ——



——100 events per day = 94.4 dBA SEL ——



More history

- Aviation Safety and Noise Abatement Act of 1979
 - Establish single system of noise measurement
 - Identify land uses normally compatible with various noise exposures
- Part 150 (1980)
- Airport Noise and Capacity Act and Part 161 (1990)
- FAA Proposed Noise Policy (2000)



Important distinctions

- **Regulation** of noise (Part 36)
- **Reporting** of noise (ASNA and Part 150)
- **Planning** for future noise (Part 150; AIP/PFC)
- **Mitigation** of noise (Part 150; AIP/PFC)
- **Abatement** of noise (some environmental statutes)

Should the measurement and reporting tools be the same?

Bootstrapping ASNA and Part 150

- The 65 dB DNL threshold was developed for a narrow purpose in the 1970s-80s for reporting noise
 - (ASNA: single system requirement)
- Acceptance evolved, gradually becoming more widespread
 - Reporting, Planning, Mitigation, Abatement, Funding
- Enshrined in law
 - NEPA: FAA Orders 1050, 5050, various directives and A/C
 - Section 4(f) and Section 106 criteria
 - Part 161 analysis
 - Multiple court decisions over 50 years
 - FAA discretion
 - Deference by courts
 - No meaningful alternative available

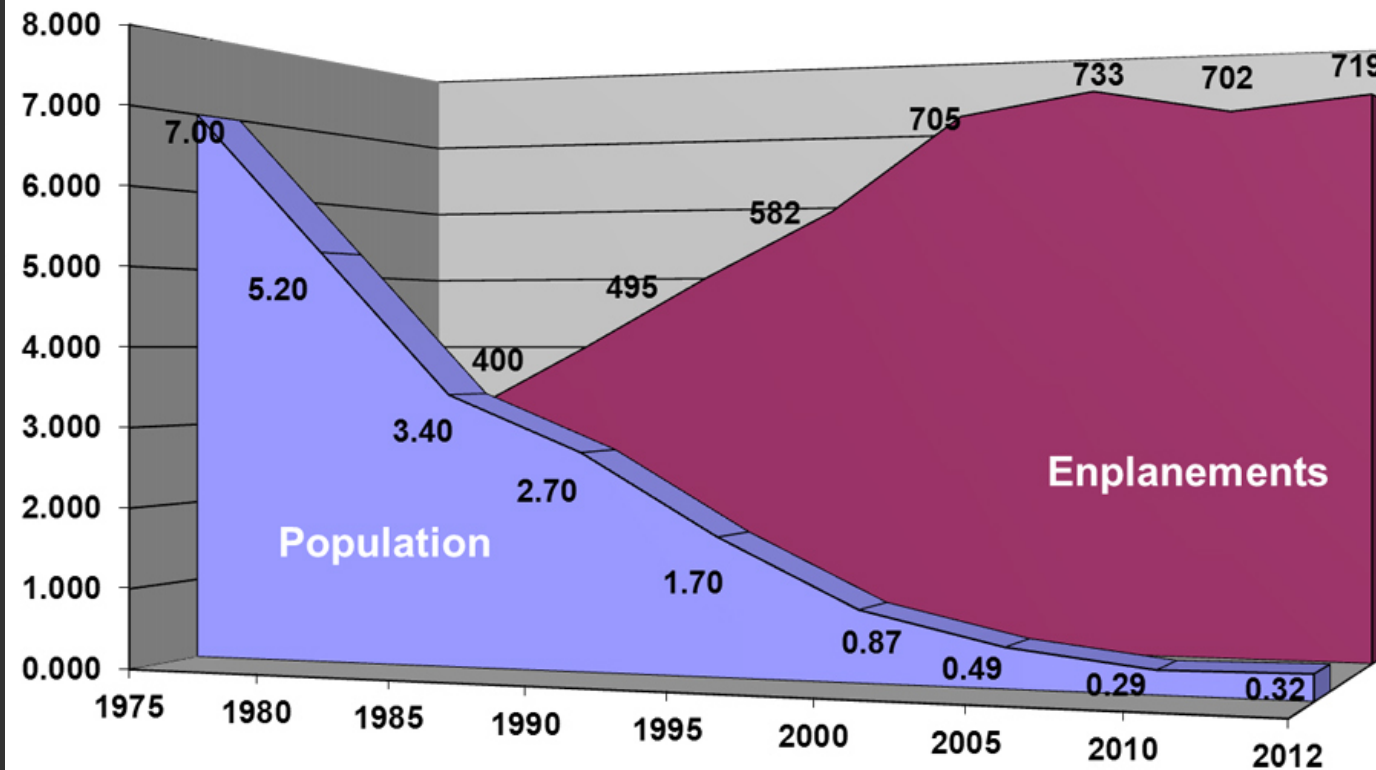


DNL and 65 dB: the reality

- Not the only available metric
 - Might have been best given ASNA mandate
- One methodology for assessing noise levels
- Based upon dozens of studies in 1960s-1980s – until recently
- Choice of metric
 - Intended to strike a policy balance
 - Practicality and widespread applicability
- Conflating of metric and threshold
- Not used for noise source regulation



The Historical Record: Order of Magnitude Noise Exposure Reduction Despite Traffic Growth



Population within 65 DNL has declined sharply,
despite increasing numbers of airline passengers



Report Card - 2021

1. DNL metric. A-
2. 65dB threshold. B
3. Local land use planning. C-
4. Reducing conflict B-
5. Avigation easements. C-
6. Part 150. B+
7. Community-airport-FAA cooperation. C-



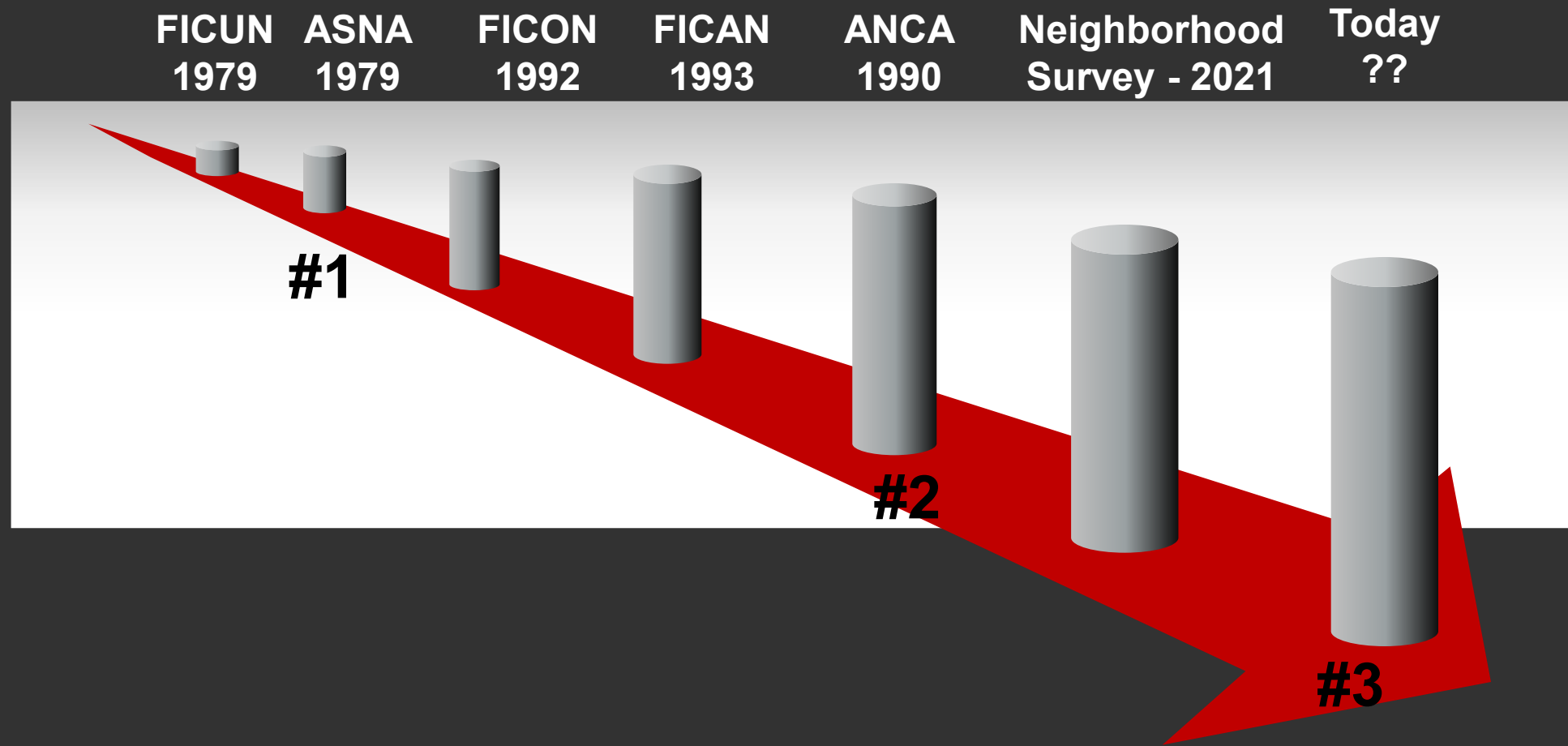


Fast forward to 2020s

(Another) inflection point



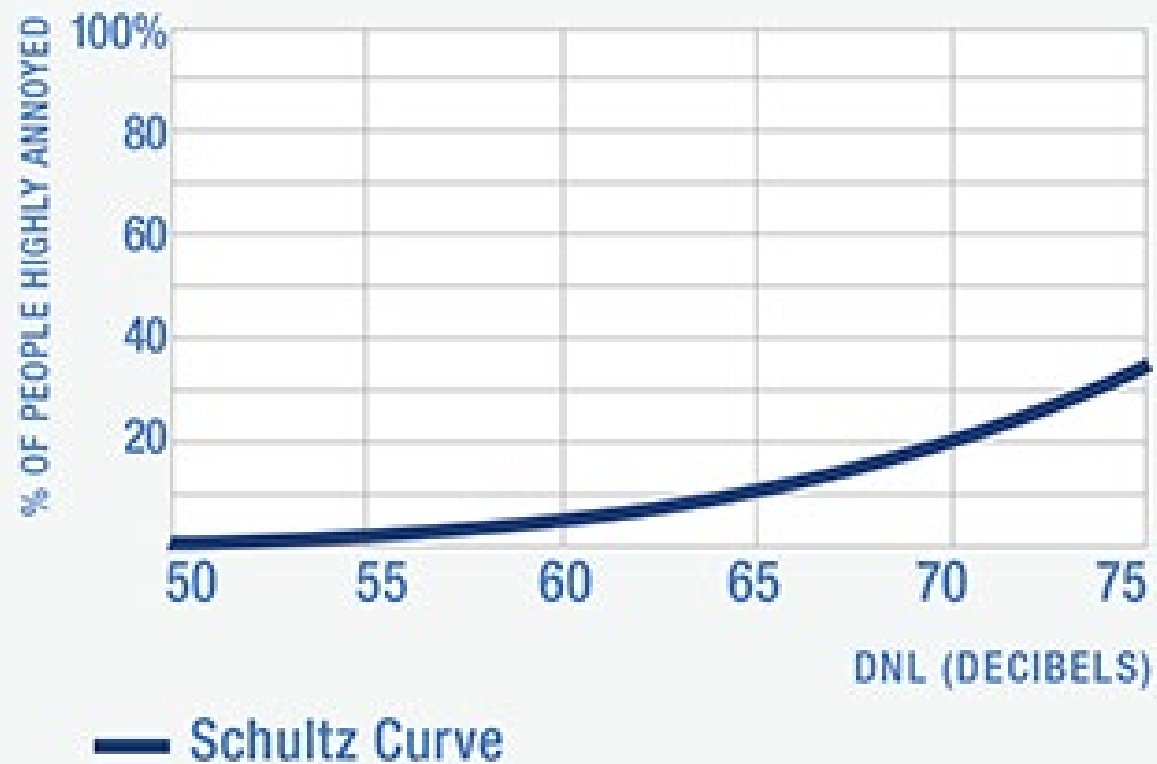
Reevaluation of noise reporting and regulation



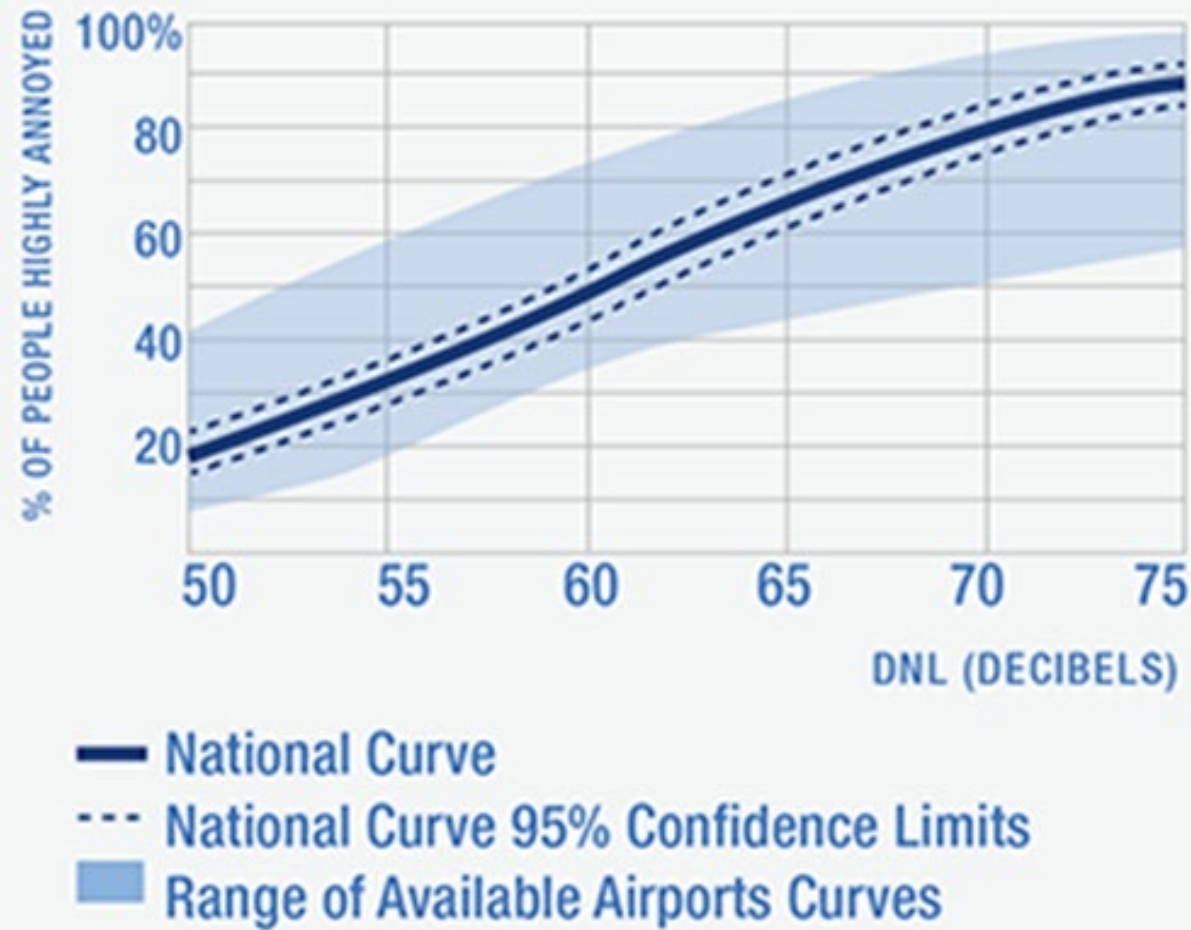
Neighborhood environmental survey

- Study conducted at direction of Congress
- Release 2021
- FAA sought feedback – 4000+ comments
- Notice of review of noise policy (2023)
 - Not formal revision yet – only request for feedback
 - 4800 comments

SCHULTZ CURVE



NATIONAL CURVE



Neighborhood environmental survey

- Could be a basis for new discussions of historic components of noise policy – metric, threshold, and significance of impacts
 - Noise Policy Review
- Pressure on regulators (FAA) and legislators (Congress) and sponsors (airports) to adapt to findings from *Neighborhood Environmental Survey*
 - FAA Reauthorization language
- Big question: Will opponents try to use study to try to undermine legal underpinning of noise policies?

Legal considerations

- Distinguish metric (ASNA) and threshold (regulatory)
- Distinguish law from policy
 - Is legislative change necessary or even desirable?
- Any changes to threshold or metric must be –
 - Transparent
 - Thoughtful
 - Collaborative (public comment)
 - Consider different uses of such data
- What about state law and policy on noise reporting and impacts?
- What about *Chevron* and other principles of deference?

Some reasonable options (FAA only)

- Revisions agency-wide in metric (DNL) or threshold (65 dB DNL)
- Selected revisions –
 - NEPA/ Section 4(f)/ NHPA
 - Part 150
 - Part 161
 - Airport revenue use
 - AIP/PFC funding
- Policy flexibility in (some) instances without abandoning metric and threshold
- Just FAA or government wide? (EPA, HUD, VA, other DOT modal agencies, state agencies)



Growing consensus: there's no consensus

- ACI: *“it is critical for the FAA to take into account . . . – and reflect – the different experiences in different communities.”*
- Congress: my community is special and deserves different treatment
- Gradual acceptance of alternative, supplemental metrics
- Local determinations on land use compatibility
- Déjà vu to 1970s and 1990
 - Lack of consensus
 - Splintered approaches
 - Litigation as leverage



What's next - triggers/policy considerations

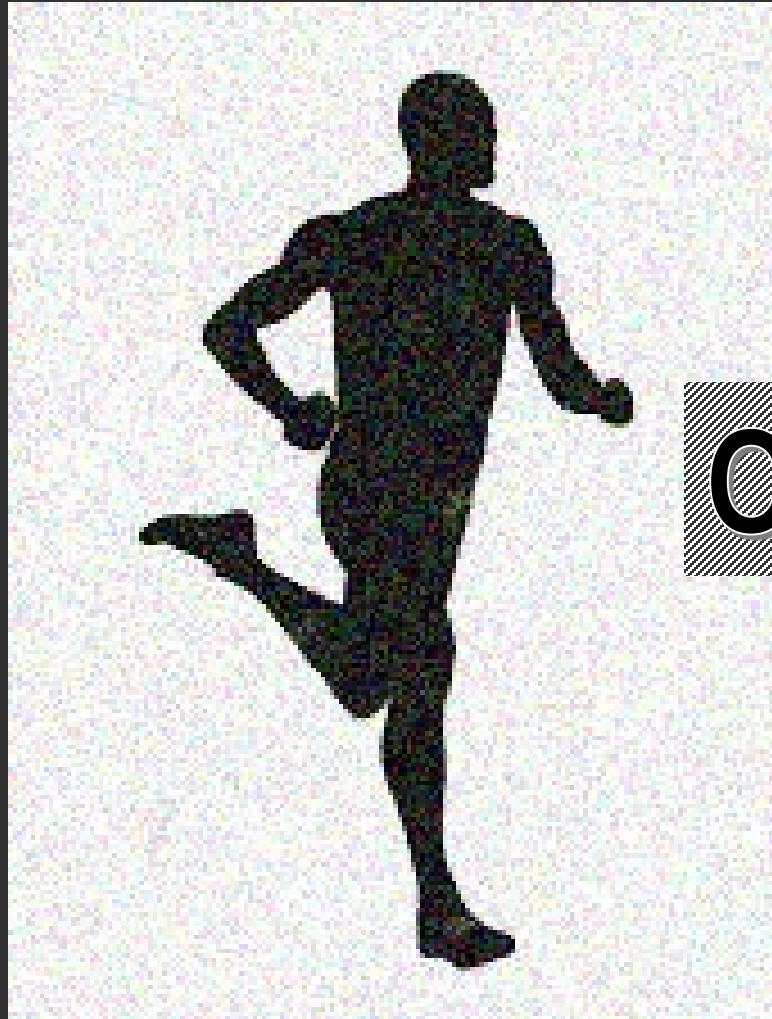
- Administration focus on climate change and environmental justice
- Will public, Congress accept more studies?
- Pressure to act
- Transition – what does that look like?
- Will there be new legal challenges to use of 65 dB DNL?
- Do we want (trust?) Congress to find or dictate the answer?

What if FAA or Congress changes threshold or metric?

- ✓ NEPA documentation (scope)
- ✓ State environmental reviews
- ✓ Section 4(f) determinations (parks, historic properties)
- ✓ Part 150 mitigation funding (new or supplemental)
- ✓ Airspace redesign
- ✓ Federal funding for other mitigation (AIP/PFC eligibility)
- ✓ Revenue use by airport sponsors (outside 65 dB DNL)
- ✓ Noise reporting generally
- ✓ Legal precedents



Where do we go from here



OR



A modest proposal – a Performance Plan



Assignments - 2024

1. Adapt to community differences
2. Take responsibility for land use planning
3. Accept other ways of reporting noise
4. Accept limited airspace inefficiencies
5. Share responsibilities
6. Go to Congress as last resort



1. Accept that not all communities are alike



Shutterstock 248799484

2. Take responsibility for *real*/land use planning

Shutterstock 205934269



3. Recognize that noise energy (decibels) is not the only way to *report* noise impacts

- What are we measuring and why?
- Decibels vs occurrence metrics
- Low noise energy but high frequency
 - eVTOL?
 - UAS?
- Concentration of aircraft paths



Wikipedia <https://en.wikipedia.org/wiki/Measurement>

4. Accept *limited* inefficiencies in the balancing

- Changes will always be controversial
- NextGen integration



5. Adopt true shared responsibility

- ~~Airports must adapt to their communities~~
- ~~Communities must adapt to their airports~~
- ~~FAA should direct traffic based upon NAS efficiency and safety alone~~
- Local governments do their part;
- FAA will do its part;
- Airports will do their part



6. Last resort: Federal legislation

- Only if necessary
- Only if everything else fails?

History of legislation
Is not particularly
substantive
(see most recent
FAA reauthorization laws)



Selected Sources

- FAA Orders 1050 and 5050 (various versions)
- FAA Proposed Civil Aviation Noise Policy (2023)
- FAA Advisory Circular(A/C) 150/5190.4B (Land Use Compatibility Planning)
- FAA A/C 150/5050-4A (Community Involvement)
- FAA Desk Reference for Environmental Actions
- FAA noise policy review
- <https://www.faa.gov/noisepolicyreview>
- FAA Community Involvement Manual
- FAA Neighborhood Environmental Survey
https://www.faa.gov/regulations_policies/policy_guidance/noise/survey
- FAA, Final Report of the Study Group on Compatible Land Use (1995)
- Fidell and Mestre, *A Guide to US Aircraft Noise Regulatory Policy* (2020)
- Fidell et al, A systematic rationale for defining the significance of aircraft noise impacts, 136 J. Amer. Acoustical Soc. 1129 (2014)
- Bell et al, Bibliography of Noise Policy and Research Documents (2002)
- TRB ACRP Web Document #17, Research Methods for Understanding Noise Annoyance and Sleep Disturbances (2014)



Thank you.

Peter J. Kirsch

202-596-1112

pkirsch@kaplankirsch.com

www.airportlawyers.com

www.kaplankirsch.com

