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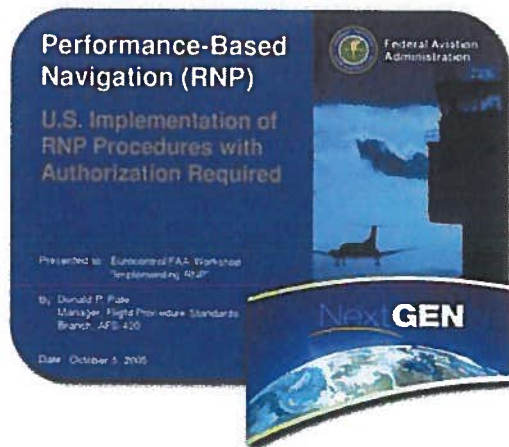
NextGen Noise: RNP's Concentrated IMPACT May Justify Substantive Change In FAA Policies Under A Proper Study

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TOPICS: Airport Noise FAA NextGen



POSTED BY: CYNTHIA SCHULTZ DECEMBER 28, 2015

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Aviation noise is being heard and objected to in higher volumes than in the past. It is hard to quantify the level of negative reactions in the metrics of engineering

Her aviation experience includes:

- Airport Director Great Falls International Airport
- Director of Construction and Maintenance for Buttrey Food & Drug
- Senior Engineer for The Boeing Company
- PE

measurement, but the qualitative response is hard to ignore.

→ **Where are the complaints being registered?** As evidenced by the below two articles and **numerous other reports**, citizens in

- Boston,
- Charlotte,



- Chicago,
- New York,
- Phoenix,
- San Diego,
- San Francisco,
- Seattle
- Washington, DC and
- Other places

are vociferously making their objections known.

→ **What do these cities have in common?** As shown by the FAA website on NextGen, **all of these airports have implemented NextGen procedures.**

- Accredited Airport Executive (AAE)

[Click here](#) to see Cynthia's full bio.



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are too easy; setting a **Priority among existing NPRMs** should be a requisite to such designation

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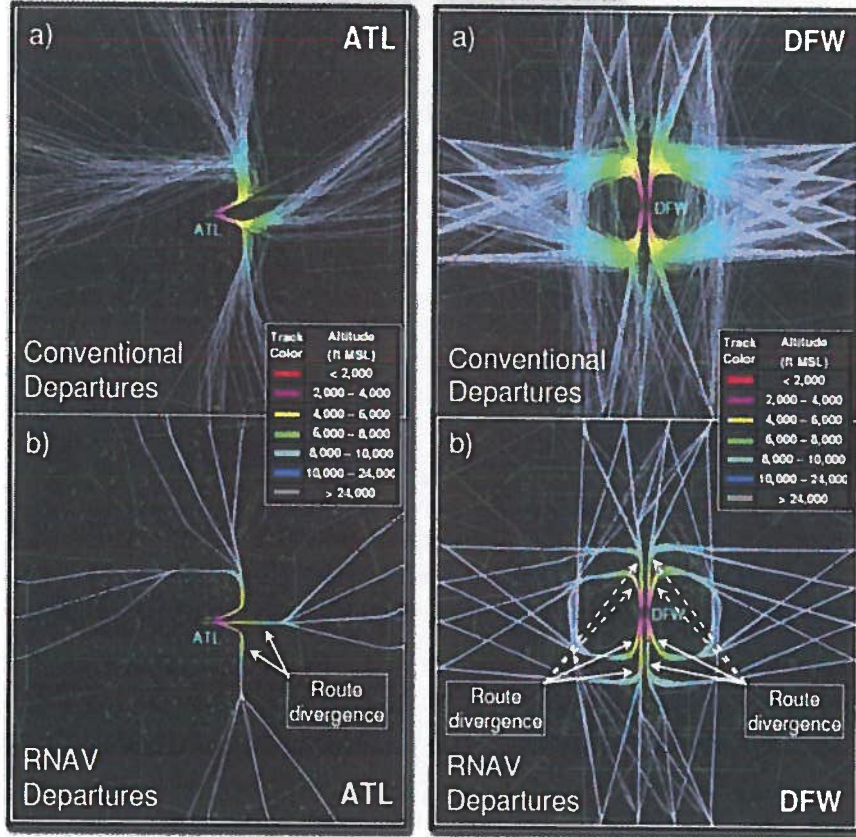
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This article did not

explain the difference between FAA Enforcement & Compliance

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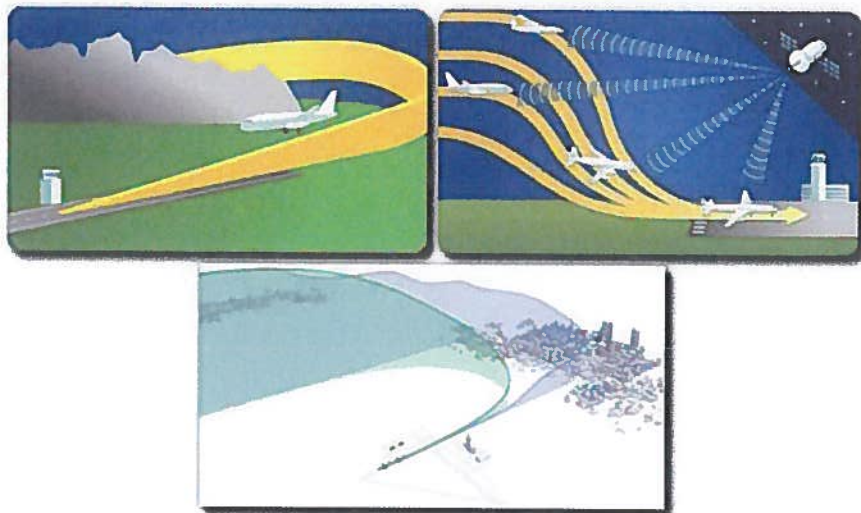
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→ What can be gleaned from looking at these noise patterns? There is both good news and bad news.

- The environment on a **macro basis** is better off; because the generalized area of impact is significantly decreased.



- There is also BAD NEWS on a *micro basis*; in that the precision of the **RNP technology** and **implementation** **CONCENTRATES THE NOISE IN A SMALLER AREA**. The residents in these areas may be experiencing substantial increases over their historic noise levels (+10 points on the scale equals a doubling of the loudness). Further, the RNP addition to the noise may not reach the FAA’s long standing threshold of **65 dBA**; so the NEPA review may find that this change does not preclude the implementation. What sets the DNL “energy average” apart from a mathematical average is that for every increase of 10 dBA in a noise level, the energy is increased by a factor of 10. For example, an event of 70 dBA contains 10 times the energy of an event of 60 dBA or one hundred times the energy of an event of 50 dBA.

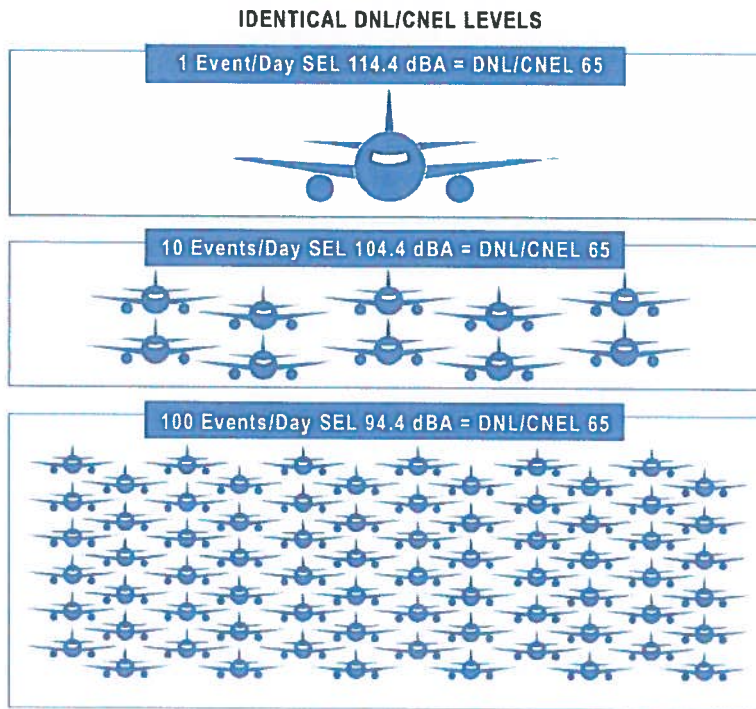
Table 1 Criteria for Determining Impact of Changes in Aircraft Noise

DNL Noise Exposure Level	Increase in DNL with Proposed Action	Aircraft Noise Exposure Change Consideration
DNL 65 and higher	DNL 1.5 dB or higher ^{1/}	Exceeds Threshold of Significance
DNL 60 to 65	DNL 3.0 dB or higher ^{2/}	Information Disclosed When Evaluating Air Traffic Actions
DNL 45 to 60	DNL 5.0 dB or greater ^{3/}	Information Disclosed When Evaluating Air Traffic Actions

Notes

1/ Source FAA Order 1050.1E, Appendix A, Paragraph 14.3 Title 14 C.F.R. Part 150.21 (2)(d) and Federal Interagency Committee on Noise, Federal Agency Review of Selected Airport Noise Issues, August 1992
 2/ Source FAA Order 1050.1E, Appendix A, Paragraphs 14.4c and 14.5e, and Federal Interagency Committee on Noise, Federal Agency Review of Selected Airport Noise Issues, August 1992
 3/ Source FAA Order 1050.1E, Appendix A, Paragraph 14.5e

Source FAA Order 1050.1E, Appendix A, June 8, 2004.



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So the people living under these new HIGH TECH, GREENER flight patterns are told at the end of the FAA study that **there will be “no significant impact,” a term of NEPA art**, which certainly infuriate the affected citizens.

→ **What has Congress conjured up to address this situation?** The elected representatives have proposed reopening the ATC review process; see **FAA Community Accountability Act of 2015 (FCAA)**. First, it should be noted that Congress recently reduced the review requirement for the FAA in implementing NextGen flight patterns (**H.R.658 – 112th Congress (2011-2012), the FAA Modernization and Reform Act of 2012 (FMRA)**). There is **little likelihood that there will be a different outcome under an enacted FCAA** by

- ordering the FAA to **RECONSIDER** its previous determination
- under the FCAA rubric, the process would entail a comparison of the original efficient, safe

architecture vs. an alternative designed without the necessary expertise

- under the original NEPA standard,
- adding an ombudsman,
- placing the airport explicitly in the process and
- little else.

What the Congress has failed to realize is that the average citizen noise group needs significant resources to do anything other than say NO to the FAA RNP proposal. They need more than a new process; they **need technical expertise to offer acceptable options.**

→ **What is the FAA doing?** In a March 27, 2015 letter from Administrator Huerta to a coalition of aviation associations, he announced an “ambitious project to update the scientific evidence of the relationship between aircraft noise exposure and its impact on communities around airports in today’s context of quieter aircraft, but with more aircraft operations than in the 1980s and 1990s and heightened environment awareness.” **The letter noted that the study was specifically in response to implementation of PBN tracks.** The precise nature of the FAA studied was outlined in the Administrator’s letter:

The FAA is currently engaged in the Federal approval processes required for proposed surveys. Once approved, the national survey will be carried out by telephone and mail around selected U.S. airports. These results will then be used to determine whether changes to the FAA’s use of the Day-Night Average Sound Level (DNL) 65 dB noise metric are warranted. If changes are determined to be warranted, revised policy and related guidance will be proposed and will be subject to public review.

This methodical approach is important to assure the scientific and policy integrity of the FAA’s determination of significant noise impact, consideration of the compatibility of land uses with aircraft noise levels, and justification for federal expenditures on noise mitigation measures such as sound insulation.

The data from such a loosely defined and gathered study does not appear to determine the precise impacts of the RNP concentrated procedures and hardly seems to be compelling enough to justify any changes in the FAA’s

historic standards. {Rather tellingly, the letter invites replies NOT to the FAA technical environmental staff, but its Congressional relations office.}

→ **What needs to be done?**

- The predicted noise levels of select Environmental Assessments (perhaps Phoenix) need to be verified by actual noise measurements within the new PBN flight corridors to determine why the reaction to noise impact is so much greater than the predicted noise impact.
- If the predicted noise impact is found to be accurate through physical noise measurements, then the threshold for significant impact needs to be evaluated and adjusted to account for factors such as aircraft operation frequency and differing community tolerance for noise.
- As illustrated above the issue of frequency may not have a significant impact on the DNL value but certainly appears to be having an impact on community tolerance of noise. The current FAA threshold of significance (1.5 Db at 65 DNL and above) does not account for the significant increase in frequency that occurs under the new PBN corridors.

While this noise assessment may take longer than the FAA's phone survey of citizen perceptions, the results of a technical review are **FAR MORE LIKELY TO JUSTIFY A SIGNIFICANT CHANGE IN POLICY.**

ARTICLE: Tired Of Noisy Days And Nights, South Shore Residents Challenge FAA

ARTICLE: FAA's NextGen Noise Problem is Stirring Up Lots of Activism in the NYC Area