

Advancing Aircraft Noise Impacts Research

Presented to: International Forum on
Noise Impacts Research

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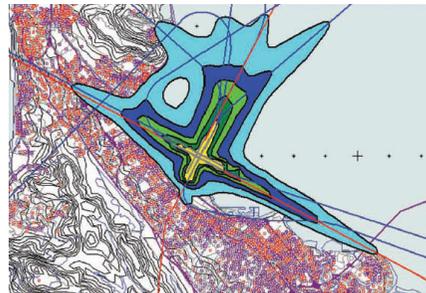
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Federal Aviation
Administration



Welcome



Objectives for today

- **Provide FAA background**
- **Discuss key research questions regarding impact of aircraft noise on sleep and annoyance**
- **Prioritize research**
- **Describe relevant ongoing or planned research / highlight opportunities to collaborate**

Starting point for mapping out research program



Noise research drivers

- **US policy and law, e.g.,**
 - ❑ Noise Control Act: *The Congress declares that it is the policy of the United States to promote an environment for all Americans free from noise that jeopardizes their health or welfare.*
 - ❑ National Environmental Policy Act
 - **FAA 2009-2013 Strategic Plan Goal**
 - ❑ Provide increased capacity and better operational performance in the United States airspace system that reduces congestion and meets projected demand in an environmentally sound manner
 - **Achieving this goal through**
 - ❑ Airspace redesign
 - ❑ Airport capacity expansion
 - ❑ Other NextGen initiatives
- depends on a robust environmental program**

Noise remains a key environmental concern



Our goals for noise impacts research

Provide scientific basis to

- **Advance analysis and determination of aircraft noise impacts**
- **Develop optimal environmental solutions**



FAA State-of-the-practice

- **DNL 65 dB**
 - Threshold of significant impact under National Environmental Policy Act (NEPA)
 - Threshold below which all land uses are deemed compatible; deference to local authorities
 - Based on FICON (1992) re-affirmation of Schultz (1978)
- **Case-by-case supplemental analysis**



Critical research needs

- 1. Noise effects on health and welfare**
- 2. Noise in National Parks and wilderness**
- 3. NextGen noise modeling enhancements:
other operational regimes and
unconventional aircraft**
- 4. Overall costs of aircraft noise on society**

Described in

“Advancing Aircraft Noise Impacts Research: A White Paper”



How we would like to proceed

- **Systematic / comprehensive / collaborative / innovative / practical approach**
 - Develop focused research roadmaps
 - Mine existing data
 - Build on state-of-the-art research
 - Cultivate research partnerships: with international community, beyond “traditional” noise researchers
 - Pool research resources
 - Leverage advanced technologies: IT, noise measurement, etc.



Planning panels for forum and workshops

❑ **Annoyance**

Kenneth Hume (UK researcher)

Sandy Lancaster (DFW airport)

Arlene Mulder (Mayor of Arlington Hts, IL; ONCC)

Paul Schomer (Consultant)

Kevin Shepherd (NASA)

Catherine Stewart (US Army)

❑ **Sleep Disturbance**

Mathias Basner (German researcher, soon-to-be US-based)

Patricia Davies (US PARTNER researcher)

Jim Fields (US researcher)

Barbara Griefahn (German researcher)

Nick Miller (Consultant)



Timeline

- International forum - InterNoise Conference, Ottawa, Canada, 27 August 2009
- First research roadmapping workshop – Keck Center of the National Academies, Washington DC, 10-11 December 2009
- If needed, follow-on workshop, Spring 2010
- Annual meetings to track research progress
- Research results needed AS SOON AS POSSIBLE (2-5 years)



Funding

- Modest for FY10 and FY11
- Currently planning for FY12
- Opportunities for Airport Cooperative Research Program (ACRP) FY11 and beyond



Our challenges

- Balancing pressures for quick answers against technical rigor
- Competing environmental concerns: climate change, air quality, water quality
- Making efficient use of limited resources



In closing

We look forward to

- **Today's discussions**
- **Continuing dialogue**
- **Working together**

in identifying practical research that will improve how we address impacts of aviation noise on society.



Planning Panels

InterNoise 2009 Organizers

International Forum Participants

Thank You!

FAA

- **AEP/AEE**
- **AGC**
- **APP-400**
- **ATO Sys Ops**

FAA REDAC E&E Subcommittee

FICAN

US DOT Volpe

PARTNER

HMMH



**Federal Aviation
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