



AIRPORT FUTURES

CHARTING A COURSE FOR PDX

Beyond 65 DNL Noise Work Group Work Scope

Purpose: Through a partnership between the City of Portland and the Port of Portland, convene a group to explore ideas related to noise strategies beyond the 65 DNL threshold of significance defined by the FAA, EPA and Oregon DEQ and recommend a comprehensive strategy mix to reduce noise impacts (outside the 65 DNL) to the greatest extent in the most cost effective manner. (The Work Group will revisit purpose statement when establishing underlying goal of project in Work Plan Step 1.)

Context & Recognition of Past Work: Due to the limited time frame for this follow-on study (6 months to one year), it will be essential for work group participants to begin the effort with as much background knowledge as possible. In an effort to provide that background, the core team will assemble binders for work group participants that include a briefing packet on airport noise management; applicable (federal, state, and local) regulations; an overview of the PDX Noise Program; and other pertinent studies, reports, information, and resources. Further, the core team will schedule a Special Information Meeting on the subject of Airport Noise Management open to all work group participants and any other interested individuals. The Work Group will focus on principles of “Avoid, Minimize, Mitigate” when addressing noise impacts beyond the DNL 65.

Work Group Assumptions & Scope Boundaries (“sideboards”):

- PDX will not be moved
 - The population, and demand for air travel, will continue to grow, but slower than in the past
 - Technology will continue to reduce aircraft noise
 - There will be an increasing focus on greenhouse gas (GHG) emissions and potentially increased restrictions
 - Energy efficiency will be accelerated
 - Flight operations, airspace and Part 150 are **not the focus** of this Work Group but may be discussed
 - Land-use planning and regulations are essential in effective airport noise impact mitigation
1. Beyond 65 DNL Noise Work Group establishes underlying goal of project (PAG assignment: Explore ideas related to noise mitigation beyond 65 DNL).
 - a. Define impacts – including annoyance and explore levels of annoyance and factors which influence dose-response
 - b. Recommend measures to reduce noise exposure and noise impacts, both indoor and outdoor
 - c. Address acoustic and non-acoustic noise impacts
 - d. Review of noise-annoyance mitigation at airports through acoustic and non-acoustic strategies. Approaches may include:
 - i. Increase community awareness of noise exposure, noise program, etc. *Focus on communities, e.g., Neighborhood (enhancement) grants*.
 - ii. Reduce indoor noise exposure. *Focus on individuals* (e.g., Individual grants for sound insulation).



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- e. Review of noise-annoyance mitigation at airports through acoustic strategies
 - f. Explore/research emerging technology and innovations
 - i. Regional noise mapping
 - ii. Partner with a university to create some form of noise institute, project or program to study noise issues, impacts and mitigation strategies
 - iii. Affordable technologies for indoor noise mitigation
2. Overview of Airport Noise Management (Special Information Meeting – open to work group participants and other interested parties)
- a. Regulatory Overview
 - i. Why don't more airports look beyond 65 DNL? (Obstacles)
 - 1. Federal regulations
 - 2. Funding issues
 - b. Basics of airport operations
 - c. Acoustics and measuring sound
 - i. Metrics Day-Night Level (DNL)
 - ii. Time Above (TA)
 - iii. Number Above (NA)
 - d. Acoustic and non-acoustic impacts associated with airport noise
 - e. Noise annoyance mitigation at airports by acoustic and non-acoustic measures
 - f. Noise programs (within and beyond 65 DNL - US and abroad)
 - g. Overview of PDX Noise Program (within and beyond 65 DNL)
 - h. Local jurisdictions' noise management programs (cities of Portland and Vancouver)
3. Identification of tools and approaches for mitigating airport noise beyond 65 DNL
- a. Review of available documentation (Materials or references provided in work group binders for prior review)
 - i. ACRP, ACI, ANNA, Wyle Labs, others
 - ii. FAR Part 150 Studies
 - iii. Boeing Airport Noise Regulations Website
 - b. Identify opportunities for new programs or enhancement to current programs:
 - a. Strategies to reduce aircraft noise
 - b. Strategies to reduce/minimize noise impacts
 - c. Focus to include acoustic and non-acoustic strategies
4. Identification of strategies
- a. Link each strategy to specific goal(s) from Step #1
 - i. Establish boundaries – tiered mitigation possible (e.g., multi-faceted/multi-phased approach based on noise exposure level, population density and/or other factors to be determined by work group)
 - ii. Identify/recommend possible phasing



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- iii. Identify responsibility for implementation
- iv. Determine costs and potential funding sources

5. Draft Report

- a. Defines mitigation boundaries
- b. Details boundaries if tiered mitigation is recommended
- c. Identifies mitigation recommendations including: goals, objectives, findings, and implementation plans
- d. Review and comment (CNAC, PDX Community Advisory Committee, Port, cities, other)
- e. Incorporate stakeholder comments (from Step 5d above) and finalize report

6. Final Report

- a. Submission to CNAC, PDX Community Advisory Committee, Port Commission, cities (as applicable)