Part 150 Noise and Land Use Compatibility Study Overview

Highline Forum
November 15, 2023
Part 150 Study Basics

- Airports must follow those guidelines to obtain FAA Airport Improvement Program (AIP) grant funding for sound insulation and noise abatement projects
- Part 150s focus on airport noise and land use incompatibilities within the 65 dB Day/Night Level (DNL) contour
- Updated 65 DNL noise contours are a required outcome of a Part 150
- FAA-approved mitigation measures become eligible for AIP funding at 80%
SEA Part 150 Studies

• Initial study completed in 1985
• Study updates
  – 1992
  – 2002
  – 2014
• Extensive public involvement essential, and is FAA requirement
DNL Noise Contour

• Day Night Level (DNL) – annual average of noise from aircraft operating at SEA – with a weighted nighttime penalty
• 65 DNL is the FAA-required metric and level
• Contours must be produced using the FAA-required Aircraft Environmental Design Tool (AEDT)
• Contours are depictions of the cumulative impacts of aircraft noise, and must be reviewed and approved by the FAA
• FAA will not allow the use of noise monitoring data to assess impacts
• The 65 DNL contour is the basis for land use analysis in the Part 150
• Current and future (5-year) noise impacts will be assessed in study
Noise Remedy Boundary is determined by the noise contour
Part 150 Land Use Planning

• Identify noise incompatibilities within surrounding communities - below 65 DNL is compatible with all uses
• Incompatible land uses at or above 65 DNL:
  – Residential
  – Schools
  – Places of worship
  – Hospitals
  – Nursing homes
  – Daycare facilities with licensed educators
• Evaluate new potential noise abatement initiatives
• Evaluate ongoing programs from past Part 150 Studies
Two main phases of a Part 150:

• Noise Exposure Maps (NEM) – noise data collection
  Flight path data
  Aircraft fleet mix
  Air traffic forecasts
  Local land-use inventory
• Noise Compatibility Plan (NCP) – what programs within federal regulation can the airport initiate to address impacts?
  FAA Record of Approval
2014 Part 150 Study Record of Approval

– Sound Insulation/Noise Mitigation
  • Updated noise remedy boundary
  • Continuation of single-family sound insulation
  • New: Condominium sound insulation
  • New: Apartment sound insulation
  • New: Places of Worship sound insulation
  • Voluntary acquisition of residential in 3rd runway South Approach Transition Zone (ATZ)
2014 Part 150 Study Record of Approval

– Noise Abatement examples
  • Continuation of Aircraft Maintenance Run-up restrictions
  • Continuation of the Fly Quiet Program including monitoring noise abatement procedures in place
  • Ongoing monitoring of the Noise Abatement Corridors
  • Evaluate and Upgrade the Noise Monitoring System
  • Continue to operate the Noise Programs Office
New SEA Part 150 Study Update

• Consulting firm Environmental Science Associates (ESA) has been procured to lead the study and provide technical expertise
• Development of initial study scope and public involvement plan currently underway
• Study data collection to begin early 2024
• Full public study outreach efforts early 2024
• Multi-year study that may take 4-7 years to complete
Discussion/Questions

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