


# Part 150 Noise and Land Use Compatibility Study Overview

Highline Forum  
November 15, 2023



# Part 150 Study Basics

- Code of Federal Regulations 14 (CFR 14) Part 150 – FAA established study guidelines
  - 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%
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# SEA Part 150 Studies

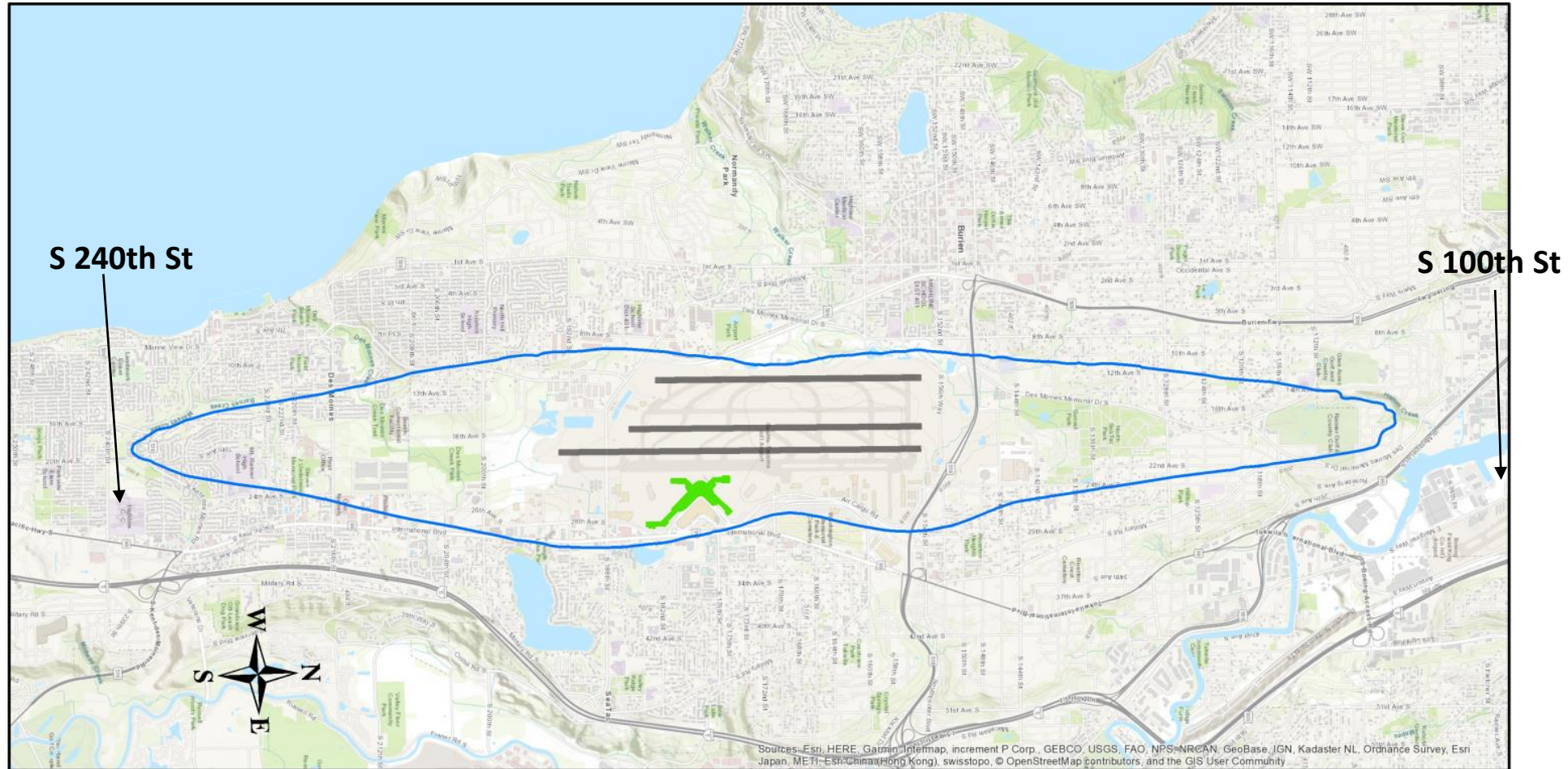
- Initial study completed in 1985
- Study updates
  - 1992
  - 2002
  - 2014
- Extensive public involvement essential, and is FAA requirement



# 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

# SEA 2018 DNL Contour



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

# Phases of this multi-year Study

## 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 3<sup>rd</sup> 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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