Appendix E.

Consultation and Correspondence

This Appendix includes correspondence and consultation associated with the Seattle-Tacoma International Airport Part 150 Study.

- SEA Part 150 Technical Review Committee
  - Appendix E-1: Charter
  - Appendix E-2: Meeting #1 – June 10, 2024
  - Appendix E-3: Meeting #2 – October 14, 2024
  - Appendix E-4: Meeting #3 – June 9, 2025
  - Appendix E-5: Meeting #4 – August 11, 2025
  - Appendix E-6: Meeting #5 – December 8, 2025

- SEA Stakeholder Advisory Roundtable (StART) Briefings
  - Appendix E-7: Part 150 Status Briefing December 13, 2023

- Appendix E-8: SEA Local Jurisdiction Briefings
  - City of Tukwila – August 29, 2025
  - City of Burien – September 11, 2025
  - City of Des Moines – September 23, 2025
  - City of SeaTac – October 6, 2025
  - King County – November 5, 2025

E-1 SEA Part 150 Technical Review Committee Charter

Charter of the Technical Review Committee for the Seattle-Tacoma International Airport Part 150 Study

Introduction

The Port of Seattle (Port) created a Technical Review Committee (TRC) to obtain feedback throughout the Seattle-Tacoma International Airport (SEA) 14 Code of Federal Regulations (CFR) Part 150 Study. The SEA Part 150 Study (Study) will determine current and future noise levels from aircraft, evaluate land use impacts according to federal standards, and look for ways to reduce those effects to the greatest extent possible within 14 CFR Part 150 guidelines. The Port has asked a variety of key stakeholders to join the TRC to represent their community/organization and to provide technical advice on the Study.

Committee Role

The TRC's role is to provide technical input and feedback to the Port and is solely limited to the Study. It is expected that TRC members will advise their organizations of the TRC's discussions and shall bring input from their organizations back to the TRC discussions.

The Port will consider the TRC's technical input, but shall retain its responsibility for, and decision-making authority on, the Study. The Federal Aviation Administration (FAA) is responsible for accepting Noise Exposure Maps (NEMs) and for approving the recommended measures in the Noise Compatibility Program (NCP). As such, The Port will prepare and submit NEMs and an NCP that comply with 14 CFR Part 150 and other relevant federal regulations including, but not limited to, the conditions contained in the Port's federal grant assurances.

Committee Members

The TRC consists of approved members who act on behalf of their community/organization throughout the Study, which is expected to last 3-4 years. TRC members shall try to participate in every TRC meeting during the Study. If a member cannot join a meeting, the member will inform the Port Project Manager before the meeting. If the primary member cannot continue to be part of the TRC, the Port will appoint a new representative.

Conduct of TRC Meetings

The TRC benefits from the technical expertise of its members, which is best utilized under the guidance of a professional meeting facilitator. TRC members are expected to share their opinions and respect the diversity of opinions of their fellow TRC members.

The Port will provide an agenda before each TRC meeting. The meeting facilitator has the duty of helping the TRC follow the meeting agenda and schedule. The meeting facilitator may adjust the duration of a discussion related to an agenda item, based on input from the TRC or at their discretion.

The Port requires that the TRC meetings be held in a professional and respectful manner. If any disrespectful or disruptive behavior occurs at TRC meetings, the Port or its facilitator may cancel or postpone at their sole discretion. TRC members who display hostile, disrespectful, uncooperative, or other similar negative behaviors may be removed from the TRC.

Meeting Notes
The Study team will provide notes of the TRC meeting discussions. TRC members shall review the meeting notes prior to each meeting and offer any corrections in the presence of the entire TRC.

Meeting Information
For the convenience of the TRC members, the Port anticipates that many of the meetings will be held virtually. However, at key points in the study, in-person meetings will be requested for optimal participation and cooperation.

The Port currently anticipates up to 20 TRC meetings throughout the Study. The frequency of TRC meetings will depend on the needs of the Study team. Accordingly, the frequency of TRC meetings may vary.

TRC meetings will last up to two (2) hours. There may be homework assigned in advance of a TRC meeting, which could require up to one (1) hour of independent reading/review per meeting.

Voluntary Service
TRC membership is on a voluntary basis. TRC members will not be compensated for their time or expenses related to their service.

Duration of the Committee
The Committee will dissolve after the Study is complete.

Amendment
The Port, at its sole discretion, may amend and reissue this Charter as needed.

E-2 SEA Part 150 Technical Review Committee Meeting #1
June 10, 2024

SEA Part 150 Technical Review Committee

TRC meeting summary

Working Partners: Port of Seattle, ESA, PRR
Date: **Monday, June 10, 2024**
Location: **Zoom/Virtual**
In Attendance:

Alaska Airlines – Lynae Craig -- ATM & Airfield Operations Director
Delta Air Lines – Kalena Glover – Senior Engineer
Federal Way – Bill Vadino for Brian Davis – Federal Way City Administrator
Des Moines – Jason Woycke – Senior Planner
Normandy Park – Nicholas Matz – Community Development Director
Burien – Liz Stead – Community Development Director
SeaTac – Zach Shields – Senior Planner
Tukwila – Neil Tabor – Senior Planner
FAA – Joseph Bert – Acting Group Manager
FAA – Matt Prevo – Environmental Protection Specialist
Port of Seattle – Tom Hooper – Aviation Planning Program Manager
Port of Seattle – Tom Fagerstrom – Noise Programs Manager
Port of Seattle – Ryan McMullan – Noise Programs Senior Manager
Port of Seattle – Paris Edwards – Noise Programs Coordinator
ESA – Autumn Ward, Project Manager
ESA – Justin Cook, Assistant Project Manager
ESA – Mike Arnold, Senior Project Manager

Subject: Introductory Technical Review Committee (TRC) Meeting

---

Andres Mantilla initiated the Part 150 Technical Review Committee meeting by reviewing expectations and meeting format. He also invited members of the StART Aviation Noise Working Group to stay and participate.

Technical Review Committee meeting (5:45pm – 6:45pm)
Tom Fagerstrom introduced ESA as the technical consultant on the Part 150 Study and asked the Technical Review Committee members to introduce themselves.

The Technical Review Committee is made up of:

TRC Members

- Alaska Airlines – Lynae Craig
- Delta Airlines – Kalena Glover
- Des Moines – Jason Woycke
- Burien – Liz Stead
- Federal Way – Brian Davis
- Normandy Park – Nicholas Matz
- SeaTac – Zach Shields
- Tukwila – Neil Tabor

TRC Liaisons

- FAA
  - Western Service Center ATO – Joe Bert
  - FAA Seattle ADO – Matthew Prevo
  - FAA SEA ATCT – TBD
- Port of Seattle
  - Tom Fagerstrom
  - Ryan McMullan
  - Paris Edwards
  - Tom Hooper

In this meeting, Bill Vadino filled in for Brian Davis for Federal Way.

Part 150 overview:
Mike Arnold and Autumn Ward from ESA went over the role of the TRC members, which is to review assumptions, provide technical feedback, and respectfully offer their opinions. They also described the Part 150 process, the Airport's history of Part 150 studies, and how airport noise is regulated.

The key priorities for the Part 150 Study are to:

- Understand community concerns about aircraft operations
- Meaningful engagement with the community
- Communicate the Part 150 Study process and manage expectations
- Avoid confusion about ongoing Port programs that are separate from the Study.

Airport noise modeling overview:
Justin Cook gave a primer on measuring and modeling aircraft noise. He explained terms like Day-Night Average Sound Level (DNL), weighted decibels, Lmax (Maximum Sound Level), Leq (Equivalent Sound Level), and SEL (Sound Exposure Level). He also reviewed the noise model that the Study will use (FAA's Aviation Environmental Design Tool version 3f), and the data inputs, which include:

- Airport layout
- Aircraft types
- Terrain
- Daytime and nighttime flights
- Runway utilization rates
- Flight track use
- Weather conditions

The Study will also look at land use compatibility. Levels below DNL 65 dB are compatible for all land uses, and levels above DNL 65 dB are not compatible with residential land use or other sensitive uses, including, but not limited to:

- Places of worship
- Schools, colleges, universities
- Libraries and cultural institutions
- Hospitals

The Noise Compatibility Program (NCP) phase of the Study will explore mitigation measures that can help in reducing noise impacts on noise-sensitive land uses above DNL 65 dB.

Frequently asked questions:

- Will the study fix all of SEA's noise issues?
    - Unfortunately, no. But we can institute efforts that can improve the situation, which will be evaluated in the NCP.
- Will noise monitoring be conducted?
    - We can use noise monitors for informational purposes or to identify trends for further evaluation in the operational areas of the Airport.
- What does a Part 150 Study not cover?
    - Anything outside of noise such as aircraft emissions, quality of life, and safety.
- Benefits to communities?

- Mitigation measures such as the current sound insulation program
- Encourage jurisdictions to implement building codes that meet sound insulation requirements
- Building relationships with communities
- Encouraging voluntary noise reduction programs such as updates to the voluntary Fly Quiet program

Schedule:

Autumn Ward shared the preliminary Study schedule:

- Noise Exposure Maps (NEMs)
  - Summer 2024 – Aircraft operations and land-use data collection
  - Summer/Fall 2024 – Continuing public outreach
  - Spring/Summer 2025 – Noise modeling, Draft NEM report, and public workshops
  - Fall/Winter 2025 – Final NEM report/FAA review
- Noise Compatibility Program (NCP)
  - Summer/Fall 2025 – Alternatives analysis
  - Fall/Winter 2025-2026 – NCP report
  - Summer 2026 – Public Hearing
  - 2027 – FAA 180-day review

Autumn reported back on the kickoff workshops held during the first week of June:

Three workshops were held in:

- Burien (June 5, 2024)
- Des Moines (June 6, 2024
- SeaTac (June 8, 2024)

Over 150 attendees came between the three workshops and contributed over 60 written comments.

Questions and answers:

- Q – Will there be a new noise exposure map?
  - A – There will be a new map and the new contour may be different than the current boundary based upon SEA operational changes in recent years.
- Q – Are there land use recommendations that come out of the study that jurisdictions could or should already be implementing?
  - A – Yes, and the study would encourage their implementation.
- Q – With the implementation of NextGen technology allowing aircraft to fly closer to each other, are you getting pressure to incorporate more precision technology into the noise modeling? Is there pressure to encourage aircraft to fly closer?
  - A – We will be modeling an entire year of actual flights, so if there are precision operations occurring during the year, then we will model accordingly. We have not had

pressure from the FAA to encourage more precision flying. But we do look at potential alternative measures when we are analyzing noncompatible land uses.

- Q – Is the 65 dB DNL an average over a 24-hour period?
    - A – Yes.
- Q – We won't be using noise monitors to measure noise?
    - A – We will be conducting portable noise monitoring; however, the modeling will be using actual airport operations. The noise monitoring will let us understand if there are deviations between what the model is predicting and what we are actually hearing.
- Q – Are the slides and info available in a project site?
    - A – All information will be on www.seapart150.com. The TRC slides are in your information packet that was sent prior to the meeting.
- Q - As it regards modeling, will proximity between aircraft be decreased?
    - A - As it relates to noise modeling, the corridors through which aircraft travel will be modeled based upon what is actually occurring and the proximity between them will be evaluated.

Andres closed the meeting by thanking attendees and reiterating that the meeting materials will be available at www.seapart150.com

Part 150 Study Technical Review Committee

Meeting #1 | June 10, 2024

Port of Seattle

Agenda

- Welcome and Introductions
- Purpose and Role of the Technical Review Committee (TRC)
- Airport Overview
- Part 150 Study Overview
- Introduction to Aircraft Noise and Modeling
- Overview of Land Use Compatibility
- Project Schedule
- Questions

Welcome and Introductions – Consultant Team

Environmental Science Associates (ESA)

- 700+ person environmental consulting firm
- Experience at more than 230 airports nationally
- Highly complex projects
  - LaGuardia Part 150
  - John F. Kennedy International Part 150
  - Fort Lauderdale-Hollywood International Part 150
  - Los Angeles International Part 150
  - Tampa International NEM Update
  - San Antonio NEM Update
  - San Francisco International NEM Update

Welcome and Introductions – Consultant Team

Barry Technologies, Inc.
Noise Monitoring

BridgeNet International
Visualization/Graphics

Diverse Vector Aviation Consulting (DVAC)
Air Traffic Control/Airspace

PRR, Inc.
Community Engagement

Ricondo
Forecasting, Airspace, Modeling, and Integration

VMC
Airspace/Flight Procedures

Welcome and Introductions – TRC

TRC Members

- Alaska Airlines – Lynae Craig
- Delta Airlines – TBD
- Des Moines – Jason Woycke
- Burien – Liz Stead
- Federal Way – Brian Davis
- Normandy Park – Nicholas Matz
- SeaTac – Zach Shields
- Tukwila – Neil Tabor

TRC Liaisons

- FAA
  - Western Service Center ATO – Joe Bert
  - Seattle ADO – TBD
  - SEA ATCT – TBD
- Port of Seattle
  - Tom Fagerstrom
  - Ryan McMullan
  - Paris Edwards
  - Tom Hooper

Technical Review Committee

Purpose and Role of the TRC

- TRC members represent the interests of their organization and/or constituents
- The TRC's role is to support the SEA Part 150 Study
  - Review study assumptions
  - Provide technical feedback within the context of the Part 150 Study
  - TRC members are encouraged to express their opinions and expected to respect the range of opinions expressed by their fellow TRC members
- TRC members are expected to advise their organization and/or constituents of the TRC's discussions
- The Port will respect and consider the TRC's technical input, but retains responsibility for, and decision-making authority on, the SEA Part 150 Study

Role of the TRC Meeting Facilitator

- To ensure that the TRC meetings are effective, meetings will be facilitated by a professional meeting facilitator
- The meeting facilitator:
  - Is responsible for ensuring that the TRC meetings adhere to the meeting agenda
  - May extend or shorten the length of a discussion related to an agenda item at their discretion
  - As well as the Port, may cancel or suspend a TRC meeting due to disrespectful or disruptive behavior

TRC Charter and Participation Agreement

- The TRC Charter and Participation Agreement are included in today's meeting materials
- The Charter describes the role of the TRC and describes the conduct of the TRC meetings
- Please return the signed Participation Agreement to The Port
- The Port anticipates there will be 15 to 20 TRC meetings during the Study's duration
- TRC meetings will typically be held every other month
- TRC membership is voluntary and TRC members will not be compensated for their time

Airport Overview

SEA Overview

- SEA is one of the Pacific Northwest's leading economic engines
  - 151,400 jobs, including 87,300 direct jobs
  - $7.1 billion in total personal income
  - $22.5 billion in total business revenue
  - $415 million in state taxes reflecting direct and secondary activities
- In 2023, the Airport had 422,500+ operations
- Served 50 million passengers in 2023
- Processed 417,000+ metric tons of cargo in 2023
- The only large hub airport in the PNW
- Non-stop flights to over 120 domestic and international cities

Part 150 History at SEA

The 14 CFR Part 150 process is the Airport Sponsor's mechanism to improve the compatibility between the Airport and surrounding communities

SEA's Part 150 Efforts Span Four Decades

1985
Initial SEA Part 150 Study Completed

→

1992
First SEA Part 150 Update

→

2002
Second SEA Part 150 Update

→

2014
Third SEA Part 150 Update

Part 150 Study Overview

Regulations and Guidelines

- Interim Rule on Federal Aviation Regulations (FAR) Part 150, *Airport Noise Compatibility Planning*, issued in 1981 and finalized in 1985, later recodified as Title 14 Code of Federal Regulations (CFR) Part 150
- Issued in response to provisions contained in the Aviation Safety and Noise Abatement Act (ASNA) of 1979
- Establishes the methodology to be followed when preparing aircraft noise exposure maps and developing airport/airport environs land use compatibility programs
- Part 150 studies are voluntary, but…
- Part 150 studies must adhere to 14 CFR Part 150 guidelines to be considered and accepted and approved by FAA

Regulatory Framework

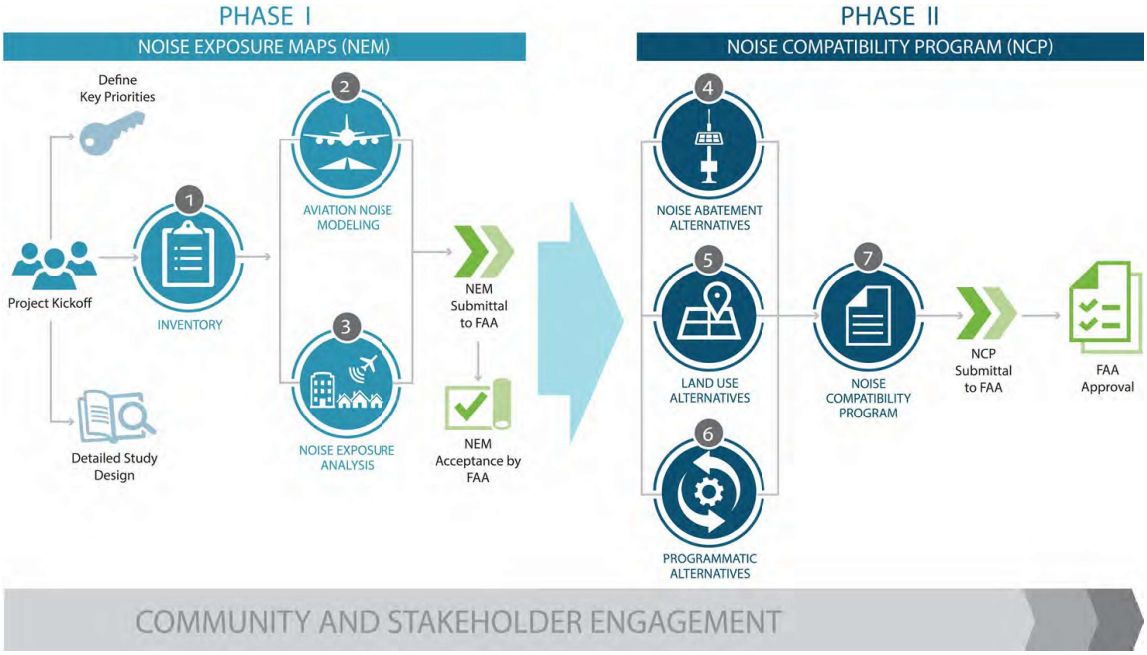
- Three core organizations are involved in aircraft operations at SEA:
  - **Federal Aviation Administration (FAA)** - Directs the safe movement of aircraft in the air and on the ground
  - **The Port:** Manages the airport, improves and maintains airport facilities; has no control over where aircraft fly
  - **Pilots:** The pilot in command has ultimate responsibility for the safe operation of his/her aircraft
- **Federal law**
  - Sets aircraft noise standards, prescribes operating rules, establishes the compatibility planning process, and limits airport proprietor's ability to restrict aircraft operations.
- **State law**
  - Sets forth compatibility planning guidelines and noise standards but aircraft are exempt.
- **Local noise ordinances**
  - Set noise standards and provide for compatible land use planning but aircraft are exempt

Who Can Regulate Airport Noise

- **Federal Aviation Administration**
  - Controls aircraft while in flight
  - Responsible for controlling noise at its source (i.e., aircraft engines)
  - Certifies aircraft and pilots
- **Airport Proprietors/Port of Seattle**
  - Responsible for capital improvement projects and infrastructure.
  - Can establish a "noise office", which services as a bridge between the Airport, FAA, and the community to minimize the impact of aircraft noise while ensuring the Airport operates safely and efficiently.
  - Very limited authority to adopt local restrictions though can adopt and promote voluntary noise abatement measures
- **Local Governments and States**
  - Promote compatible land use through zoning
  - Can require real estate disclosure
  - Can mandate sound-insulating building materials

FEDERAL LAW TAKES PRECEDENCE OVER STATE AND LOCAL REGULATIONS

Phases of a Part 150 Study



Part 150 Study Overview

- **Noise Exposure Map Report (NEM)**
  - Develop a comprehensive database of current conditions
  - Noise contour development and impact analysis
  - Prepare and submit NEM Report
- **Noise Compatibility Program (NCP)**
  - Identify and evaluate noise abatement alternatives
  - Identify and evaluate compatible land use alternatives
  - Identify and evaluate administrative measures
  - Prepare and submit NCP Report
- **Stakeholder Outreach Program**
  - Local Jurisdictions/Agencies
  - FAA
  - Public

Analyze, Evaluate, Educate

- Determine existing and future noise conditions in the vicinity of an airport
- Identify noncompatible uses
- Identify measures to improve compatibility
  - Evaluate the feasibility of possible flight procedure/land use changes
  - Submit locally-endorsed recommendations to the FAA regarding noise reduction measures
  - Approved measures may be eligible for Federal grant funding
- Educate communities on the Federal process and what can and cannot be done to address aircraft noise concerns

Part 150 Studies Must Adhere to 14 CFR Part 150 Guidelines to be Accepted and Approved by FAA

Key Priorities for this Part 150 Study

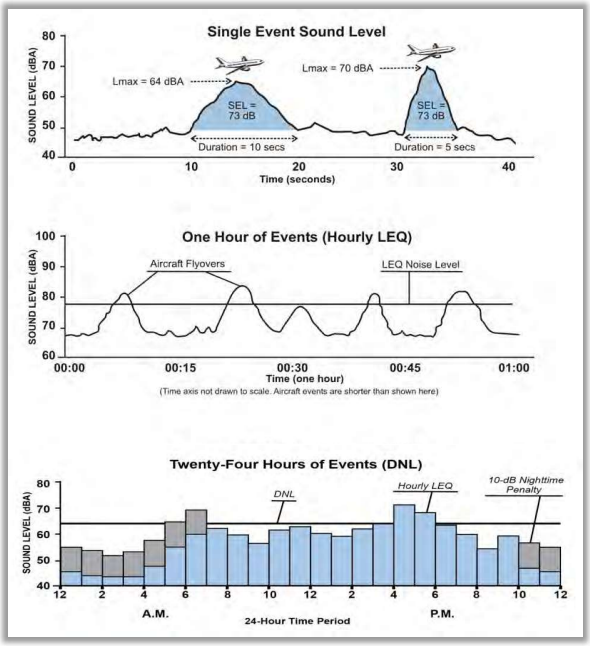
- Understanding community concerns about aircraft operations
  - Seasonal operations (north flow typically in summer)
  - Increase in annual aircraft operations
- Meaningful community engagement
- Communicating the Part 150 Study process and managing expectations
- Avoiding confusion about ongoing Port programs separate from the Part 150 Study:
  - Sustainable Airport Master Plan Near-Term Projects (SAMP NTP)
  - Ongoing Sound Insulation Program
  - Sound Insulation Repair and Replace Pilot Program

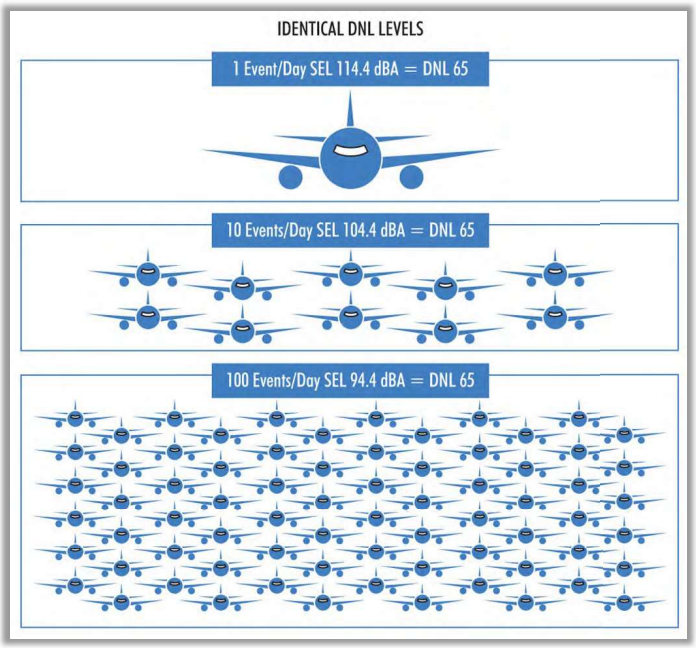
Noise and Noise Modeling

Introduction to Aircraft Noise

- Day-Night Average Sound Level (DNL)
  - 24-hour time weighted energy average noise level based on A-weighted decibels (dBA)
  - Noise occurring between 10 p.m. to 7 a.m. is penalized by 10 dB to account for the higher sensitivity to noise during nighttime hours and for the expected decrease in background levels that typically occur in the nighttime
  - FAA requires the use of DNL for airport noise analyses
  - Average Annual Day (AAD) aircraft noise exposure is calculated over a broad area and then depicted using contour lines of equal noise levels

Introduction to Aircraft Noise





Noise Modeling

- Aircraft noise modeling allows:
  - Calculation of noise exposure at any point
  - Depicting annual average aircraft noise exposure
  - Predicting future aircraft noise exposure
  - Assessing changes in noise impacts resulting from runway configuration changes or new runways
  - Assessing changes in fleet mix and/or number of operations
  - Evaluating operational procedures
- Aviation Environmental Design Tool (AEDT) replaced the Integrated Noise Model (INM) when it was released in 2015. The current version, AEDT 3f, will be used for the SEA Part 150 Study.

Noise Model Inputs

- The Amount of Noise Exposure is determined by:
  - Aircraft types
  - Stage length (AEDT input for takeoff weight based on distance to destination)
  - Number of average annual day operations
  - Nighttime weighting (1 nighttime operation = 10 daytime operations)
- The Noise Exposure Distribution is determined by:
  - Runway configuration and use
  - Flight track locations
  - Flight track use
- Other Factors
  - Meteorological conditions

Aviation Environmental Design Tool (AEDT) Version 3f

Land Use Compatibility

Land Use Compatibility

- 14 CFR Part 150 Appendix A, Table 1 provides noise and land use compatibility guidelines
- Considers levels below DNL 65 dB to be compatible with all land uses
- Allows for the adoption of appropriate local land use standards for land use compatibility planning purposes

The 14 CFR Part 150 process is the Airport Sponsor's mechanism to improve the compatibility between the Airport and surrounding communities

LAND USE	Yearly Day-Night Average Sound Level (Ldn) in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
RESIDENTIAL						
Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
PUBLIC USE						
Schools	Y	N(1)	N(1)	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
COMMERCIAL USE						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
MANUFACTURING AND PRODUCTION						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

Numbers in parenthesis refer to notes.

"The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses."

NOTES

(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB; thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2) Measures to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(3) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(4) Measures to achieve NLR 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal level is low.

(5) Land use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30.

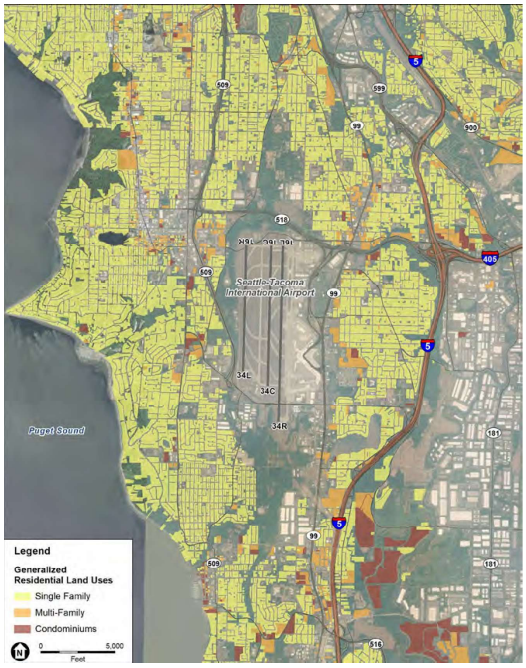
(8) Residential buildings not permitted.

KEY TO TABLE

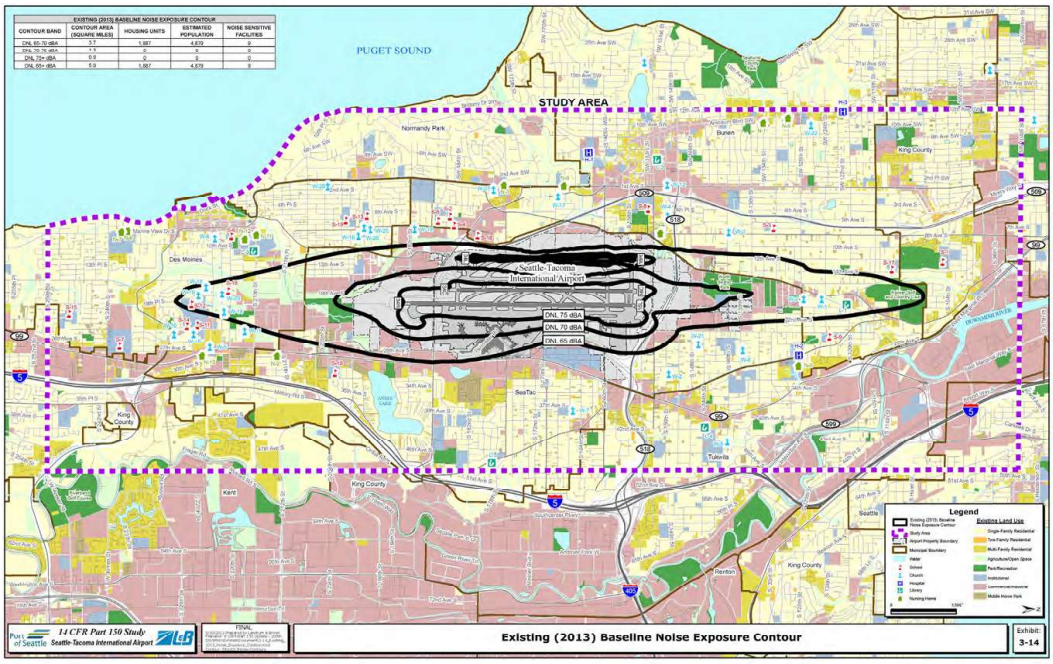
SLUCM	Standard Land Use Coding Manual.
Y (Yes)	Land Use and related structures compatible without restrictions.
N (No)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35	Land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structure.

Land Use Compatibility

- Land Uses
  - Existing and future land use
  - Land parcel data
  - Zoning
  - Jurisdictional boundaries and neighborhoods
- Noise Sensitives Uses
  - Residential
  - Places of worship
  - Schools, colleges and universities
  - Libraries/cultural institutions
  - Hospitals and residential healthcare facilities
  - Daycare and assisted living facilities
  - Historic properties



Sample Noise Exposure Map



Frequently Asked Questions

- Will the study "fix" all the noise issues around the airport?
  - No, overflights of residential areas are unavoidable and sensitivity to noise varies by person
- What type of noise monitoring will be conducted?
  - While all analysis is modeling based, which allows consistency and evaluation of future conditions, noise monitoring will be conducted to identify trends that should be evaluated in the operational data
- Will the Study address concerns about safety, soot, or other concerns related to aircraft operation?
  - The Part 150 process focuses exclusively on noise and land use compatibility

Part 150 Study Schedule

Preliminary Part 150 Study Schedule

Preliminary 14 CFR Part 150 Schedule

- Noise Exposure Maps
  - Data Collection — Summer 2024
  - Public Outreach — Summer/Fall 2024
  - Noise Modeling — Spring/Summer 2025
  - NEM Report/FAA Acceptance — Fall/Winter 2025
- Noise Compatibility Program
  - Alternatives Analysis — Summer/Fall 2025
  - NCP Report — Fall/Winter 2025/2026
  - Public Hearing — Summer 2026
  - FAA 180 Day Review/ROA — 2027

Summary of Kickoff Public Workshops

(1) Gregory Heights Elementary School

16216 19th Avenue SW
Burien, WA 98166
6:00 P.M. – 8:00 P.M.

June 5th, 2024

Attendees shown in yellow

(2) Mount Rainier High School

22450 19th Avenue S
Des Moines, WA 98198
6:00 P.M. – 8:00 P.M.

June 6th, 2024

Attendees shown in red

(3) Glacier Middle School

2450 S 142nd Street
SeaTac, WA 98168
10:00 A.M. – 12:00 P.M.

June 8th, 2024

Attendees shown in blue

Future Meetings

Technical Review Committee

- TRC Meeting #2 (Tentative) — August 2024
- TRC Meeting #3 (Tentative) — October 2024

- Reminder notices will be sent out in advance of each meeting
- Following the meeting, TRC materials will be posted on the Project Website at www.seapart150.com

Communications

- Project Website
  - Project Information
  - Process
  - FAQs
  - Tentative Schedule
  - Public Draft and Final NEM and NCP Reports
  - Reference Material
- Communication and Feedback:
  - Upcoming meetings including location/dates/times
  - Comment portal during public comment periods
  - Links to other websites/resources

Questions?

E-3 SEA Part 150 Technical Review Committee Meeting #2
October 14, 2024

SEA Part 150 Technical Review Committee

TRC meeting summary

Working Partners: Port of Seattle, TRC Members, ESA, PRR
Date: **Monday October 14, 2024**
Location: **Zoom/Virtual**

Technical Review Committee meeting (5:45pm – 6:45pm)
Andres welcomed the members of the Part 150 Study Technical Review Committee and took roll.

TRC member	TRC Liaisons
Alaska Airlines – Lynae Craig	FAA – Seattle EPS – Matt Prevo
Delta Airlines – Kalena Glover	FAA – Western Service Center ATO – Rodney Lindbeck
Burien – Liz Stead	FAA – Western Service Center ATO – Joe Bert - absent
Des Moines – Jason Woycke	FAA – SEA ACTC – Jason Poole - absent
Federal Way – Matthew Blinstrub	Port of Seattle – Tom Fagerstrom
King County – Kaelene Nobis - absent	Port of Seattle – Ryan McMullan
Normandy Park – Nicholas Matz	Port of Seattle – Paris Edwards
SeaTac – Zack Shields	Port of Seattle – Tom Hooper
Tukwila – Neil Tabor	

Jennifer Redding from the FAA's Regional Administrators Office joined as well.

Summary of TRC Meeting 1
Autumn Ward from ESA re-introduced the study team to the TRC members and reiterated the role and purpose of the TRC in the Part 150 process. The TRC members are expected to review assumptions, provide technical feedback, offer ideas for community engagement, report back to their constituents, and offer their opinions. She emphasized that the Port of Seattle is the deciding authority, but that the TRC's input will be respectfully considered.

The key priorities for the Part 150 Study are to:

- Understand community concerns about aircraft operations
- Meaningfully engage the community
- Communicate the Part 150 study process and manage expectations
- Avoid confusion about ongoing Port Programs that are separate from the study.

There are two major phases of a Part 150 study:

- Phase 1 - developing the Noise Exposure Maps (NEM)
    - To draw the DNL 65 and DNL 75 contours
- Phase 2 - developing a Noise Compatibility Program (NCP)
    - To work with local jurisdictions to encourage compatible land use
    - To provide mitigation within the DNL 65-75 range

Both phases include extensive community engagement.

Summary of Kickoff public workshops
The project team hosted three workshops in June, kicking off the NEM phase. These workshops were held at

- Gregory Heights Elementary School in Burien (June 5)
    - 41 attendees
- Mt. Rainier High School in Des Moines (June 6)
    - 61 attendees
- Glacier Middle School in SeaTac (June 8)
    - 37 attendees

Some people attended multiple workshops. Attendees submitted 60 written comments. Half of the comments were from people living south of the airport.

The primary concerns were about:

- Nighttime operations
- South flow
- Arrivals
- Altitude
- Frequency of operations

Other concerns included:

- The sound insulation program
- The boundaries of the Noise Exposure Map and a sense that the boundaries are decreasing while the noise is increasing.
- Health concerns due to sleep disturbances and air quality issues

Other engagement
In addition to the workshops, Port of Seattle staff have been out in the community presenting or tabling at several events starting in May, including:

- May 22 – Presentation at Highline Forum
- July 27 – Tabling at Des Moines Farmers Market
- July 31 – Tabling at SeaTac Summer Market
- August 10 – Tabling at Burien Boulevard Park Block Party
- August 10 – Tabling at Federal Way Community Festival
- August 14 – Tabling at Des Moines Farmers Market
- September 21 – Tabling at Burien B-Town Fiesta

And Port of Seattle staff are planning on continuing to be out in the community to answer questions at the following events in December 2024.

- Normandy Park Winterfest
- South Seattle Community Roundtable

Land use compatibility
Scott Tatro reviewed land use compatibility and introduced 14 CFR Part 150, Appendix A, Table 1. This provides noise and land use compatibility guidelines and allows local jurisdictions to adopt local land use standards for planning purposes.

14 CFR Part 150, Appendix A, Table 1 considers noise levels below DNL 65 to be compatible with all land use, and noise levels above DNL 65 to be incompatible with residential land use or other sensitive uses, such as:

- Places of worship
- Schools, colleges, universities
- Libraries and cultural institutions
- Hospitals

The project team is using the following land use sources to determine if the current land uses are compatible or not:

- State, King County GIS, Port of Seattle, 2020 Census, ACS

The project team is collecting data on exiting and planned land use, where city and county boundaries are, the presence of historic districts and landmarks, park boundaries, libraries, health care facilities, daycare and assisted living facilities, places of worship, schools and universities, as well as transportation infrastructure and bodies of water. Additionally, the project team will meet with each local jurisdiction's representative(s) to discuss any planned development expected in their community.

The project team will add this information to the project mapping tool to generate a map of existing and planned land use in the areas surrounding the Airport. Then they will overlay the noise contours from the Noise Exposure Maps to identify where land use is compatible or not.

Noise monitoring

While the Port of Seattle already monitors noise in several locations, in November the project team is providing additional noise monitoring at five residential locations in Vashon, South Seattle, Burien, Normandy Park, and Des Moines. A second noise monitoring period will be scheduled for March at five additional residential locations around the Airport. Staff will be at these locations to correlate noise events with monitoring information. This work is purely informational and intended to identify trends and determine any anomalies.

Questions and Answers

Q – Zack – Can you schedule future meetings in SeaTac during the weekday evening time frame, as it's difficult for working people to attend meetings on Saturday morning?
A – Scott - We can certainly try to change up the schedule for future public meetings.

Q – Matt – Why is monitoring not during peak time of the year (summer)?
A – Tom – We have a good chance of getting both north and south flow by using November and March as monitoring time periods.

Q – Roger – You indicated that noise monitoring data is not formally recognized. Why not? What is acceptable to be used?
A – Autumn – We cannot use noise monitoring data to calibrate AEDT model. We could use it to see if aircraft are louder than they should be, for example, and to create custom profiles. We are looking to see if we are seeing big disparities.

Q – Roger – Will Vashon have more than one station? That island is very large, and we get a lot of complaints from there.

A – Tom – At this time, we are only planning on one station because staff will be visiting the various sites to match what the monitors are picking up with what we can see happening. We would need to see what it would look like to staff more than five sites. But this is preliminary, and we will see how this goes.

Q – Neil - Is there any potential for temporary monitoring in Tukwila since there are no permanent monitors there?
A - Tom – We can see about adding one there, in the future.

Q – Matthew - Federal Way – To clarify, it sounds like these monitoring studies will determine the 65 DNL?
A – Autumn - No. The project staff are required to use the FAA's Aviation Environmental Design Tool. We use a whole year's worth of data on runway use, flight tracks, fleet composition, and more to develop a picture of the current conditions.

Schedule:
Autumn Ward shared the study schedule and reiterated that the project is currently in the Data Collection phase.

- Noise Exposure Maps
  - Fall 2024/ Winter 2025 – Data collection
  - Ongoing – Public outreach
  - Spring/ Summer 2025 – Noise modeling
  - Fall/ Winter 2025 – NEM report to FAA
- Noise Compatibility Program
  - Fall 2025/ Winter 2026 – Alternatives analysis
  - Fall/ Winter 2025-2026 – NCP report
  - Winter 2026 – Public hearing
  - 2027 – FAA 180-day review

Autumn discussed the immediate next steps. Including:

- Coordinating meetings with neighboring jurisdictions to understand trends in each and to gauge interest in adopting noise compatibility measures.
- Noise monitoring

Autumn reminded the TRC that upcoming meetings would be in February and April 2025.

Andres closed the meeting by thanking attendees and reiterating that the meeting materials would be at www.seapart150.com

Part 150 Study Technical Review Committee

Meeting #2 | October 14, 2024

Port of Seattle

Agenda

- Welcome and Introductions
- Summary of TRC Meeting #1
- Community Outreach
- Land Use Data Collection
- Noise Monitoring Program
- Preliminary Part 150 Study Schedule
- Q&A

Welcome and Introductions – TRC

TRC Members

- Alaska Airlines – Lynae Craig
- Delta Airlines – Kalena Glover
- Burien – Liz Stead
- Des Moines – Jason Woycke
- Federal Way – Matthew Blinstrub
- King County - Kaelene Nobis
- Normandy Park – Nicholas Matz
- SeaTac – Zach Shields
- Tukwila – Neil Tabor

TRC Liaisons

- FAA
  - Seattle EPS – Matt Prevo
  - Seattle ADO – Rodney Lindbeck
  - Western Service Center ATO – Joe Bert
  - SEA ATCT – Jason Poole
- Port of Seattle
  - Tom Fagerstrom
  - Ryan McMullan
  - Paris Edwards
  - Tom Hooper

Summary of TRC Meeting #1

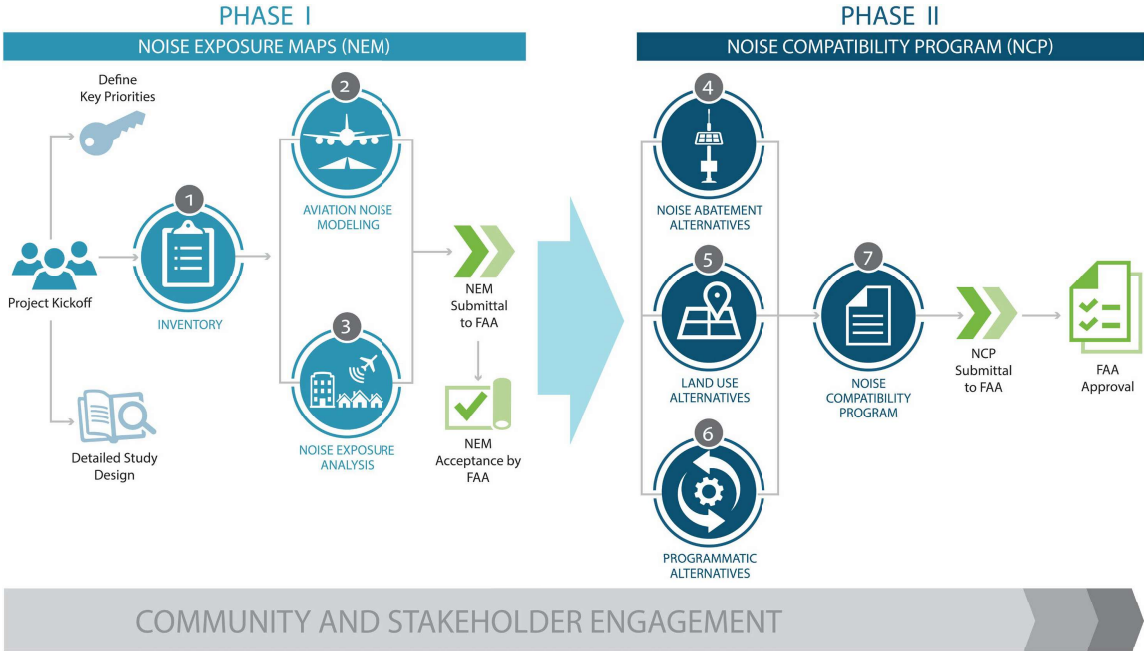
Summary of TRC Meeting #1

- Technical Review Committee (TRC)
  - Purpose Role of the TRC
  - Role of the TRC Meeting Facilitator
  - TRC Charter and Participation Agreement
- Airport Overview
- Part 150 Study Overview
- Introduction to Aircraft Noise and Modeling
- Overview of Land Use Compatibility
- Project Schedule

Purpose and Role of the TRC

- TRC members represent the interests of their organization and/or constituents
- The TRC's role is to support the SEA Part 150 Study
  - Review study assumptions
  - Provide technical feedback within the context of the Part 150 Study
  - TRC members are encouraged to express their opinions and expected to respect the range of opinions expressed by their fellow TRC members
- TRC members are expected to advise their organization and/or constituents of the TRC's discussions
- The Port will respect and consider the TRC's technical input, but retains responsibility for, and decision-making authority on, the SEA Part 150 Study

Phases of a Part 150 Study



Part 150 Study Overview

- **Noise Exposure Map Report (NEM)**
  - Develop a comprehensive database of current conditions
  - Noise contour development and impact analysis
  - Prepare and submit NEM Report
- **Noise Compatibility Program (NCP)**
  - Identify and evaluate noise abatement alternatives
  - Identify and evaluate compatible land use alternatives
  - Identify and evaluate administrative measures
  - Prepare and submit NCP Report
- **Stakeholder Outreach Program**
  - Local Jurisdictions/Agencies
  - FAA
  - Public

Community Outreach

Summary of Kickoff Public Workshops

(1) Gregory Heights Elementary School (41 Attendees)

16216 19th Avenue SW
Burien, WA 98166
6:00 P.M. – 8:00 P.M.

June 5th, 2024
Attendees shown in yellow

(2) Mount Rainier High School (61 Attendees)

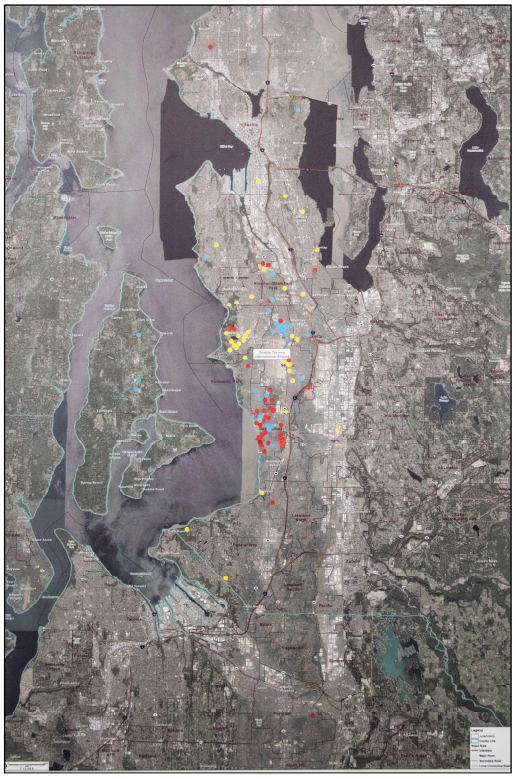
22450 19th Avenue S
Des Moines, WA 98198
6:00 P.M. – 8:00 P.M.

June 6th, 2024
Attendees shown in red

(3) Glacier Middle School (37 Attendees)

2450 S 142nd Street
SeaTac, WA 98168
10:00 A.M. – 12:00 P.M.

June 8th, 2024
Attendees shown in blue



Summary of Kickoff Public Workshops

- **Comments**
  - 60 written comments received at the public workshops
    - Nearly half of comments submitted were those living south of the Airport (Public Meeting #2)
- **Primary Concerns**
  - Nighttime Operations (10pm – 7am)
    - Included comments regarding frequency of operations on Runway 16R/34L (3rd Runway) and cargo operations
  - South Flow Operations
    - Expected higher number of comments from those living south of the Airport
  - Arrival Operations
    - Included comments on the altitude of aircraft flyovers
  - Ground Noise
    - Included comments regarding vibrations from aircraft events

Summary of Kickoff Public Workshops

- **Other Concerns**
  - Port Sound Insulation Packages
    - Suggested replacing previously installed packages
    - Suggested changing what packages include (e.g., ventilation)
    - Asked how to be included in the program
  - Boundaries of the Noise Exposure Map
    - Expressed concern over the possibility of noise boundaries shrinking while experiencing an increase in air traffic
  - Health Concerns
    - Sleep disturbance
    - Stated a single noise metric isn't sufficient in determining impacts
    - Stated air quality should be included in determining impacts

Port Attended Community Outreach

- **2024 Part 150 Outreach Events**
  - Wednesday, May 22nd – Highline Forum (Presentation)
  - Saturday, July 27th – Des Moines Waterfront Farmers Market (Tabling)
  - Wednesday, July 31st – SeaTac Summer Market (Tabling)
  - Saturday, August 10th – Burien Boulevard Park Block Party (Tabling)
  - Saturday, August 10th – Federal Way Community Festival (Tabling)
  - Wednesday, August 14th – Des Moines Waterfront Farmers Market (Tabling)
  - Saturday, September 21st – Burien B-Town Fiesta (Tabling)

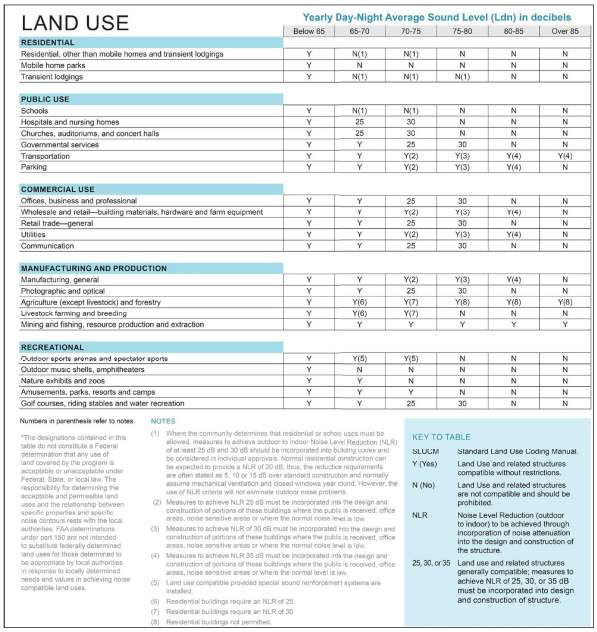
- **Upcoming Outreach Events**
  - December 7th – Normandy Park Winterfest (Tabling)
  - December 2024 – South Seattle Community Roundtable (Tabling)

Land Use Data Collection

Land Use Compatibility

- 14 CFR Part 150 Appendix A, Table 1 provides noise and land use compatibility guidelines
- Considers levels below DNL 65 dB to be compatible with all land uses
- Allows for the adoption of appropriate local land use standards for land use compatibility planning purposes

The 14 CFR Part 150 process is the Airport Sponsor's mechanism to improve the compatibility between the Airport and surrounding communities



LAND USE	Yearly Day-Night Average Sound Level (Ldn) in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
RESIDENTIAL						
Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
PUBLIC USE						
Schools	Y	N(1)	N(1)	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
COMMERCIAL USE						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
MANUFACTURING AND PRODUCTION						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

Numbers in parenthesis refer to notes.

"The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

NOTES

(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2) Measures to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(3) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(4) Measures to achieve NLR 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal level is low.

(5) Land use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30

(8) Residential buildings not permitted.

KEY TO TABLE

SLUCM	Standard Land Use Coding Manual.
Y (Yes)	Land Use and related structures compatible without restrictions.
N (No)	Land Use and related structures are not compatible and should be prohibited.
NLR	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
25, 30, or 35	Land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structure.

Sources for Land Use Data Collection

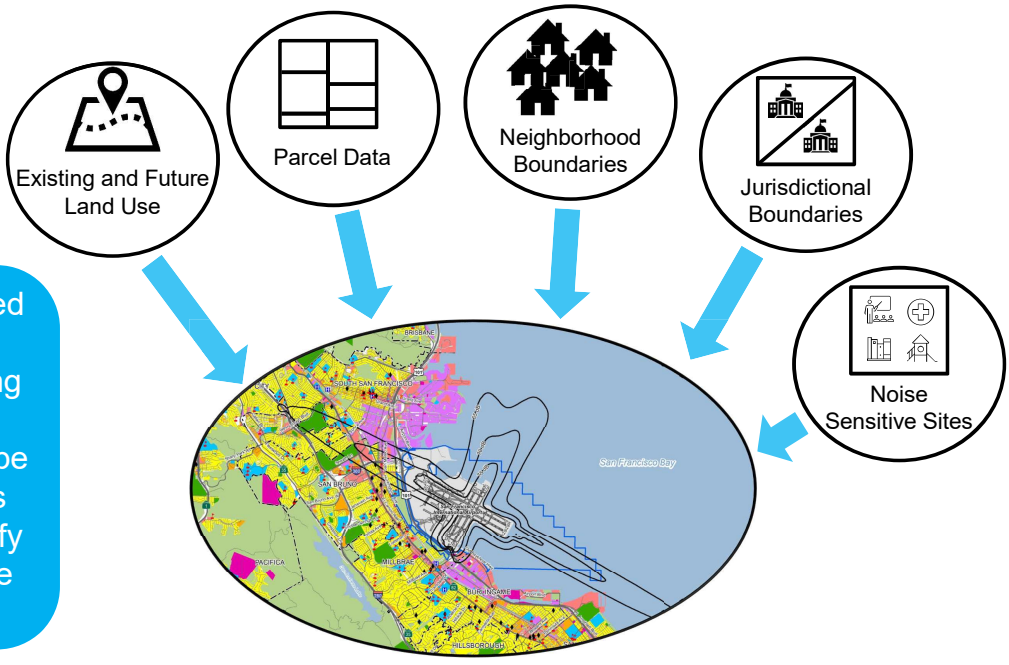
- Land Use Sources
  - State of Washington
  - King County GIS Department
  - Port of Seattle
- Population Sources
  - 2020 Census Block Group and/or
  - American Community Survey (ACS)
- Parcel categories amongst jurisdictions may be merged and consolidated into those that are compatible, noncompatible, or mixed-use.

Land Use Data Collection

Data Collection

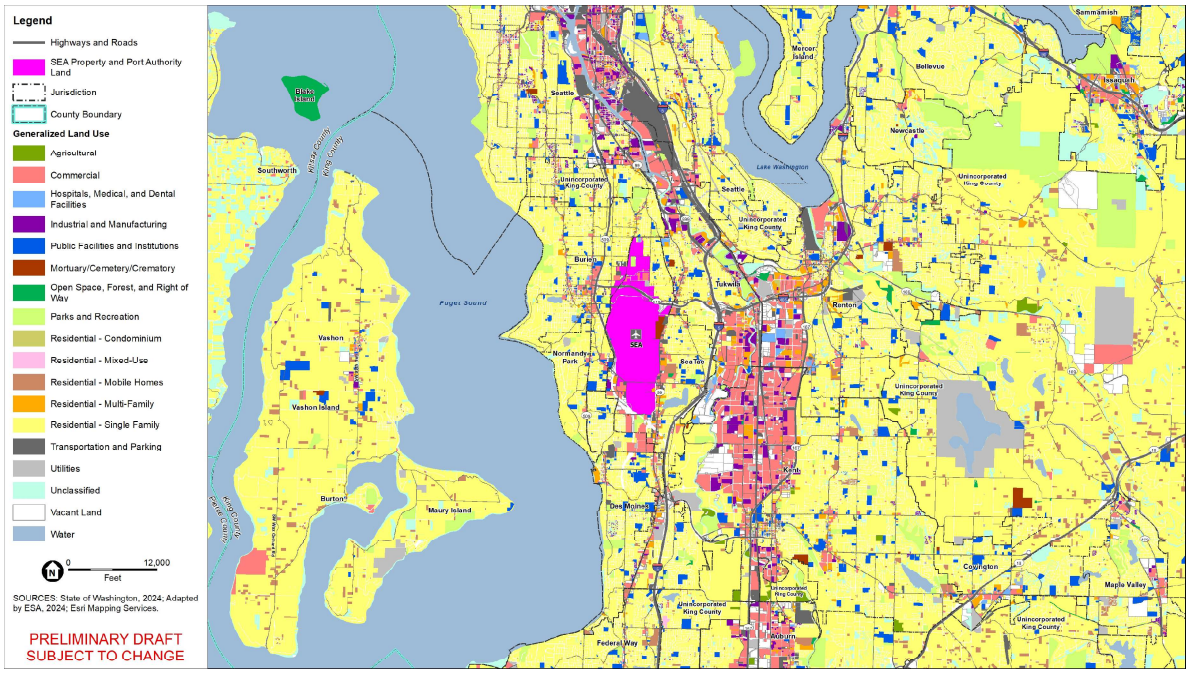
- Existing and Planned Land Use
- City/County Boundaries
- Historic Districts and Landmarks
- Park Boundaries
- Transportation (e.g., highways, major roads, arterial roads, etc.)
- Water Bodies
- Libraries
- Health Care Facilities
- Daycare and Assisted Living Facilities
- Parcel Data
- Places of Worship
- Schools and Universities

Land Use Compatibility



Land use data is being collected to generate a map of existing and future land use surrounding Seattle-Tacoma International Airport. The land use data will be combined with noise contours generated from AEDT to identify compatible and noncompatible land uses.

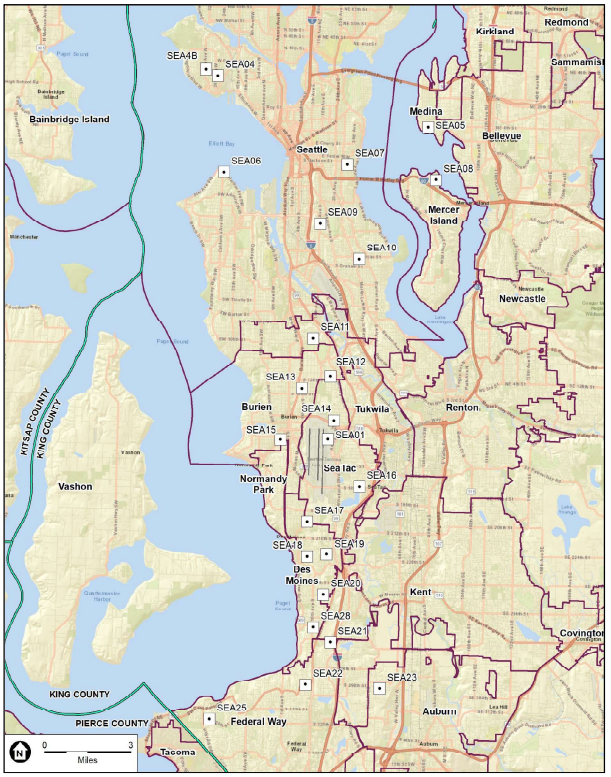
Compatible and Noncompatible Land Uses



Noise Monitoring Program

Noise Monitoring Program

- Select sites to supplement SEA's permanent noise monitoring system - collect data in areas not covered by the existing system
- Staff identified five potential residential sites for this 1st round:
  - Vashon
  - South Seattle
  - Burien
  - Normandy Park
  - Des Moines
- Collect one-second Leq data
- Attended monitoring to help identify community/aircraft noise events
- Measurement data then integrated into NOMS
- Two-week measurement period starting November 4
- Second set of noise measurements ~March 2025



Preliminary Part 150 Study Schedule and Future TRC Meetings

Preliminary Part 150 Study Schedule

Preliminary 14 CFR Part 150 Schedule

- Noise Exposure Maps
  - Data Collection — Fall 2024/Winter 2025
  - Public Outreach — Ongoing
  - Noise Modeling — Spring/Summer 2025
  - NEM Report/FAA Acceptance — Fall/Winter 2025
- Noise Compatibility Program
  - Alternatives Analysis — Fall 2025/Winter 2026
  - NCP Report — Fall/Winter 2026
  - Public Hearing — Winter 2026
  - FAA 180 Day Review/ROA — 2027

Next Steps

- Coordinate meetings with local jurisdiction
- Noise monitoring
- Prepare modeling inputs
  - Runway use
  - Model flight tracks
  - Fleet mix
  - Forecast
- Documentation

Future Meetings

Technical Review Committee

- TRC Meeting #3 (Tentative) — February 2025
- TRC Meeting #4 (Tentative) — April 2025

- Reminder notices will be sent out in advance of each meeting
- Following the meeting, TRC materials will be posted on the Project Website at www.seapart150.com

Questions?

E-4 SEA Part 150 Technical Review Committee Meeting #3
June 9, 2025

SEA Part 150 Technical Review Committee

TRC meeting summary

Working Partners: Port of Seattle, TRC Members, ESA, PRR
Date: **Monday June 9, 2025**
Location: **Zoom/Virtual**

Part 150 Study Technical Review Committee (TRC) Meeting (5:15pm – 6:00pm)
Cheryl welcomed the members of the Part 150 Study Technical Review Committee and took roll call.

TRC member	TRC Liaisons
Alaska Airlines – Lynae Craig	FAA – Seattle CEO – Valerie Thorsen for Sky Laron
Delta Airlines – Kalena Glover - absent	FAA – Western Service Center ATO – Rodney Lindbeck - absent
Burien – Liz Stead	FAA – Western Service Center ATO – Joe Bert - absent
Des Moines – Jason Woycke	FAA – SEA ATC – Jason Poole - absent
Federal Way – Matthew Blinstrub	Port of Seattle – Tom Fagerstrom
King County – TBD	Port of Seattle – Ryan McMullan
Normandy Park – Jeff Watson	Port of Seattle – Paris Edwards
SeaTac – Zack Shields	Port of Seattle – Tom Hooper
Tukwila – Adin Romano for Neil Tabor	

Summary of TRC Meeting 1 & 2 and Reminder
Autumn Ward from ESA re-introduced the study team to the TRC members and reiterated the role and purpose of the TRC in the Part 150 process. The TRC members were asked to engage respectfully and to participate by reviewing assumptions, providing technical feedback, and acting as liaisons for the communities they serve. Autumn emphasized that the Port of Seattle is the deciding authority, but that the TRC's input will be respectfully considered.

Autumn reminded TRC members that there are two major phases of the Part 150 study:

- Phase 1 - developing the Noise Exposure Maps (NEMs)
  - Determine existing and projected noise conditions at SEA
- Phase 2 - Noise Compatibility Program (NCP)
  - Evaluate noise abatement, land use, and programmatic measures to reduce noise.

The Port of Seattle has continued community engagement efforts throughout these phases.

Noise Modeling
Chris Nottoli reviewed the noise modeling process and data inputs. As mentioned by Port staff, the Sustainable Airport Master Plan (SAMP) Near-Term Projects (NTP) Environmental Assessment (EA) forecasts and noise modeling will be used for the Part 150 Study with Base Year 2022 and Future Forecast Year 2032. Noise modeling creates noise contours that allow us to identify incompatible land uses through map overlay.

- The NEM report is in process and will be submitted to FAA for acceptance.
- Chris shared maps comparing the Noise Remedy Boundary to the new noise contours and highlighted several areas where there are parcels newly added and/or outside of the current boundary.

Land Use Compatibility
Scott Tatro provided an overview of the purpose for the land use data collection effort and how it's used in a Part 150 Study.

- The Port still needs additional information from local jurisdictions as it relates to zoning regulations, residential areas, commercial developments, etc.
- The project team plans to meet with the local land use planning agencies to better understand the current and future land uses.
- This kind of consultation with local jurisdictions provides insight into community concerns and expectations related to these strategies.
- These are also opportunities to discuss how the Port can collaborate on any existing noise compatibility planning efforts to help prioritize proposed mitigation efforts and ensure local perspectives are considered.

Noise Monitoring
Scott Tatro informed the TRC that noise monitoring was completed in several locations in November 2024 and then again in March 2025, for a two-week period each time.

- Results will be presented as supplemental information in the NEM Report.

Community Outreach
Autumn Ward provided a summary of previous and upcoming engagement activities.

- The study team will repeat a round of engagement following publication of the Draft NEM Report.
- The team will host an additional round of workshops tentatively planned for early October to present project updates to the community.
- Our study website, www.seapart150.com, is a resource of information, whether you want to learn more about the Part 150 regulatory process or the SEA Part 150 Study itself.
- The project team will be addressing all of the community comments that are received from the public workshops. After we've addressed them, the NEM Report will be formally submitted this winter/early 2026 to the FAA who will review it and then issue their compliance determination.

Port is attending summer events
In addition to the workshops, the Port of Seattle staff will be out in the community presenting or tabling at events in Summer 2025, including a table at the Burien Strawberry Festival in June.

Questions and Answers

Q: What is the definition of Noise Remedy Boundary?
A: The Noise Remedy Boundary is the designated area around an airport where noise levels are considered significant enough to warrant noise mitigation efforts, such as sound insulation programs.

Q: Can we get better maps of this than in the slide out to the group?
A: Yes, of course.
Q: Were these created with the 3rd runway included in the data collection?
A: These were made in 2014 with the 3rd runway included.

Q: Would someone please elaborate on the results of noise collection? Recent results from a Port-sponsored noise study found that data collected at 30 homes determined that noise detected in the 30 homes fell below the federal threshold for support.
A: The noise monitoring discussed today only referencing exterior aircraft noise. Sound testing within homes is a different data collection process and is part of the Port's Sound Insulation Program.

Q: One of the monitors was on my property. Can that data be pulled out individually?
A: Absolutely, we can provide the data from your monitoring. The data will be pulled out individually.

Q: I'm just curious if there is any anticipation that the current administration may make changes to FAA requirements for noise and airport operations, that would substantively affect the work being done?
A: The FAA had their call to review noise metrics and confirmed DNL will remain and haven't said if there would be any additional changes. There is little action occurring right now on a revision to the national noise policy and nothing that I can see soon that is going to change this Study.

Q: The analysis is contingent upon the current assumption model, and as noted there doesn't seem to be any indication that may change. How big an effort would it take if that number were to change to redo this whole thing? Is it a monumental task if they change that number to DNL 60 from a 65? Do you have to redo the whole process?
A: With the inputs already established, the noise model could be updated to capture a lower contour interval. We'd have to update land use quantifying homes and noise compatible sites; however, for Part 150 studies we already gather land use data 30,000 feet from every runway. We'd have the data readily available, and the analysis could be relatively easily accommodated.

Q: You'd have to throw out the old noise maps and have a new set of noise maps though for the study?
A: We would use the SAMP 2032 and rerun them to get the data to create new maps. The big effort is with the aircraft operational data collection, such as the fleet forecast, which was already done so it is only updated modeling, GIS analysis, and graphics.

Schedule:
Autumn Ward shared the study schedule and reiterated that the project is currently in the Noise Exposure Maps phase completing the noise monitoring.

- Noise Exposure Maps
    - Ongoing – Public outreach
    - Spring/ Summer 2025 – Noise modeling
    - Fall/ Winter 2025 – NEM report to FAA
- Noise Compatibility Program
    - Fall 2025/ Winter 2026 – Alternatives analysis
    - Fall/ Winter 2025-2026 – NCP report
    - Winter 2026 – Public hearing
    - 2027 – FAA 180-day review

Autumn informed the TRC that the next upcoming meeting would be in Fall 2025.

Cheryl closed the meeting by thanking attendees for joining and confirmed that the team would follow up with the various maps and other materials that were requested during the meeting.

Part 150 Study Technical Review Committee

Meeting #3 | June 9, 2025

Port of Seattle

Agenda

- Welcome
- Reminder – Purpose and Role of TRC
- Summary of TRC Meetings #1 and #2
- Study Progress
- Land Use Compatibility
- Noise Monitoring
- Community Outreach
- Updated Project Schedule
- Questions

Welcome – TRC

TRC Members

- Alaska Airlines – Lynae Craig
- Delta Airlines – Kalena Glover
- King County – TBD
- Burien – Liz Stead
- Des Moines – Jason Woycke
- SeaTac – Zach Shields
- Federal Way – Matthew Blinstrub
- Normandy Park – Jeff Watson
- Tukwila – Neil Tabor

TRC Liaisons

- FAA
  - Seattle CEO – Sky Laron
  - Western Service Center ATO – Rodney Lindbeck
  - Western Service Center ATO – Joe Bert
  - SEA ATC – Jason Poole
- Port of Seattle
  - Tom Fagerstrom
  - Ryan McMullan
  - Paris Edwards
  - Tom Hooper

Purpose of the TRC

- The Port created the TRC to obtain feedback throughout the Part 150 Study
- The study will evaluate ways to reduce noncompatible land use to the greatest extent possible within 14 CFR Part 150 guidelines
- A variety of key stakeholders were asked to join the TRC to represent their community/organization and to provide technical advice related to the Study
- The Port will respect and consider the TRC's technical input, but retains responsibility for, and decision-making authority on, the SEA Part 150 Study

Role of the TRC

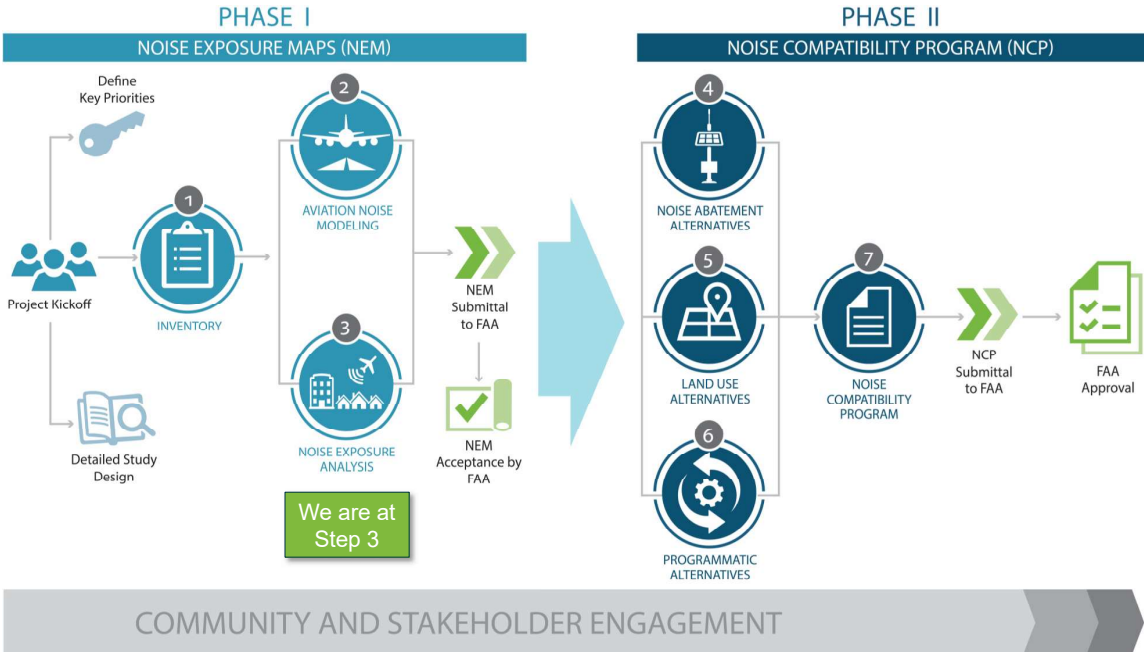
- The TRC's role is to support the SEA Part 150 Study
  - Review study assumptions
  - Provide technical feedback within the context of the Part 150 Study
  - Review and give feedback on possible noise mitigation and noise abatement measures to reduce the impacts on noise sensitive land uses within DNL 65
- TRC members should express the interests of their organization and/or constituents
  - TRC members should respect the range of opinions expressed by fellow TRC members
- TRC members are expected to advise their organization and/or constituents of the TRC's discussions

Summary of TRC Meetings #1 and #2

- TRC Role, Purpose, Charter, Participation
- Airport Overview and History of Part 150 Efforts
- Part 150 Study Overview and Regulatory Environment
- Introduction to Noise and Modeling
- Overview of Land Use Compatibility
- Overview of Community Outreach
- Land Use Data Collection
- Noise Monitoring
- Preliminary Schedule

Study Progress

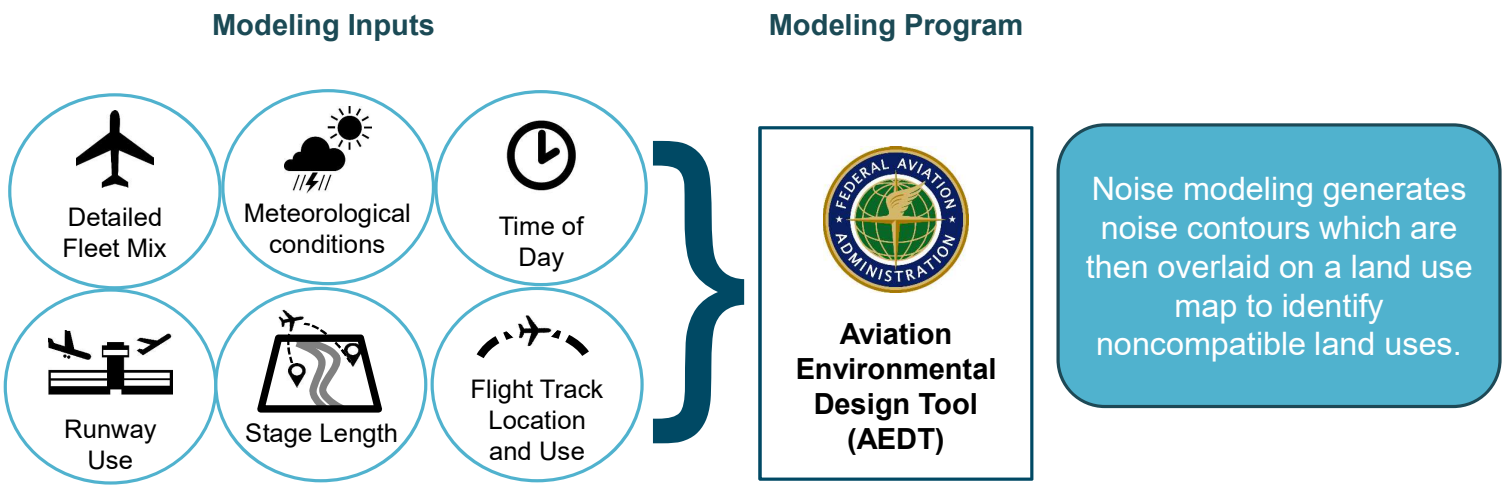
Phases of a Part 150 Study



Noise Modeling

- Aircraft noise modeling allows:
  - Calculation of noise exposure at any point
  - Depicting annual average aircraft noise exposure
  - Predicting future aircraft noise exposure
  - Assessing changes in noise impacts resulting from runway configuration changes or new runways
  - Assessing changes in fleet mix and/or number of operations
  - Evaluating operational procedures
- Aviation Environmental Design Tool (AEDT) is FAA's approved noise model
  - AEDT was released in 2015 and replaced the Integrated Noise Model (INM), which was used for SEA's prior Part 150 Studies

Noise Modeling



Noise Exposure

- The Amount of Noise Exposure is determined by:
  - Aircraft types
  - Stage length (AEDT input for takeoff weight based on distance to destination)
  - Number of average annual day operations
  - Nighttime weighting (1 nighttime operation = 10 daytime operations)
- The Noise Exposure Distribution is determined by:
  - Runway configuration and use
  - Flight track locations
  - Flight track use

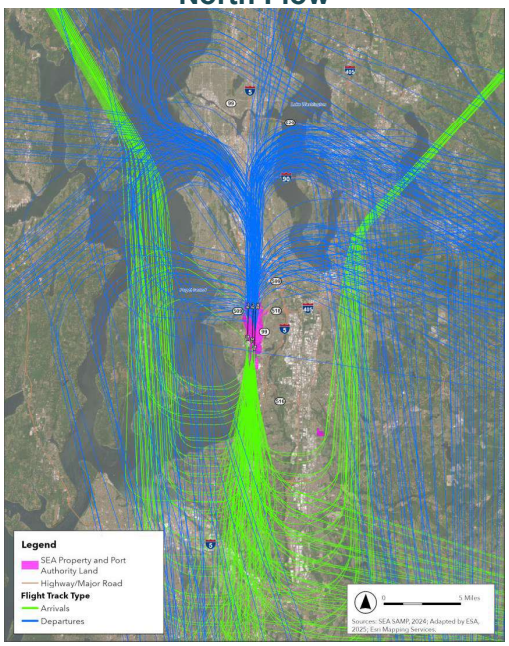
Aviation Environmental Design Tool (AEDT)

Alignment with SAMP NTP Environmental Review

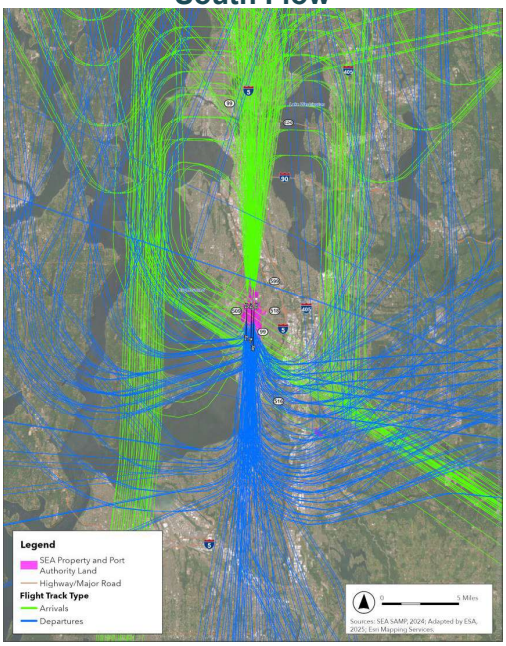
- Using SAMP forecasts and noise modeling for the Part 150 Study
  - Includes retirement of older aircraft
- NEMs will include Base Year (2022) and Future Forecast Year (2032)
  - Further in the future than a typical Part 150 (5 years) which includes the forecast for larger projected growth
  - 2032 will be the basis for evaluating potential NCP recommendations
- NEM Report is in process
- NEMs will still be submitted to FAA for acceptance as required by 14 CFR Part 150

Flight Tracks

North Flow

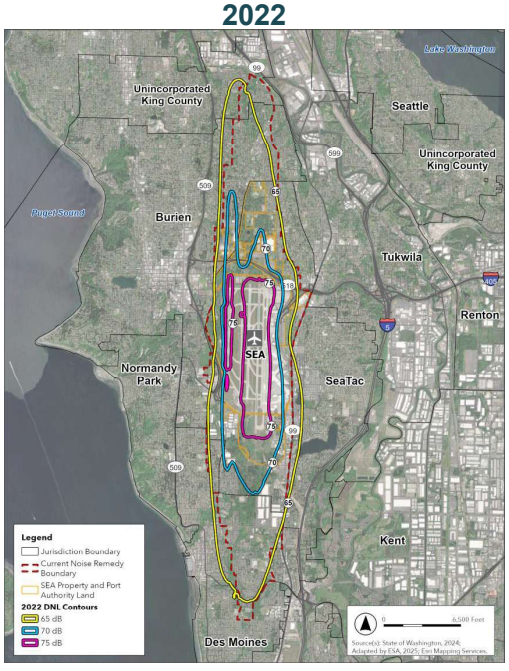


South Flow

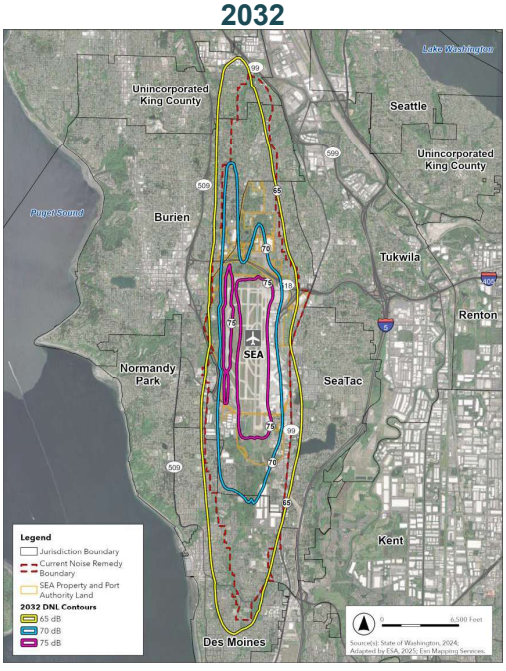


Noise Contours

2022



2032

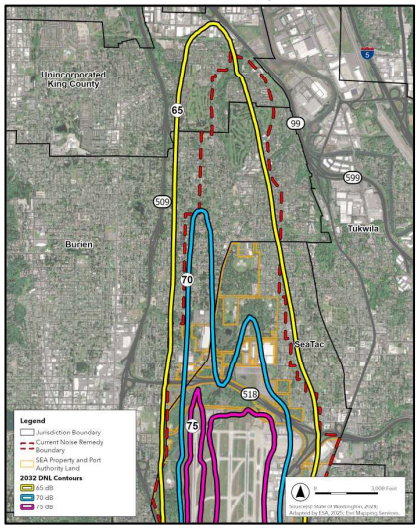


Noise Contours

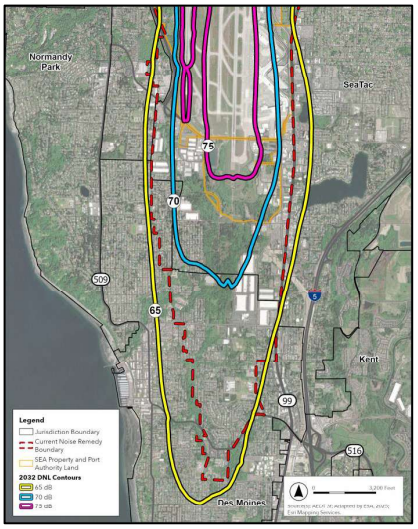
- Land use changes between 2032 and current Noise Remedy Boundary (NRB)
  - Parcels added to northwest area outside of the NRB (Burien and unincorporated King County)
  - Parcels added to south and southwest areas outside of the NRB (Des Moines)
  - Parcels added to the east outside of the NRB (SeaTac)
  - Parcels outside of 2032 DNL contour near the northeast boundary of NRB (Burien and unincorporated King County)

2032 and Noise Remedy Boundary

North Side of the Airport



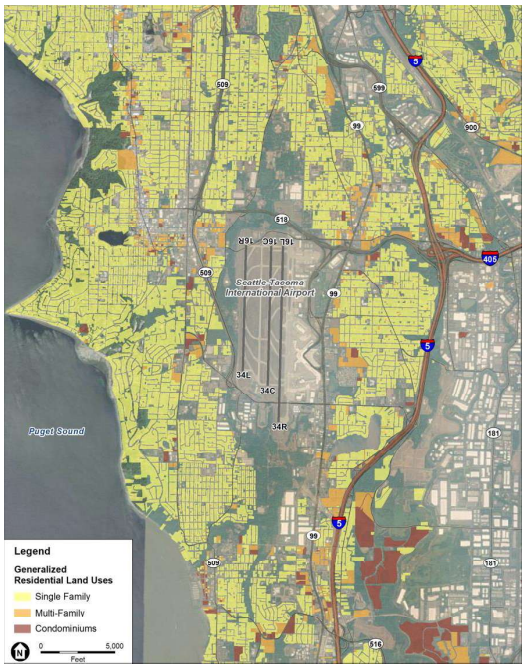
South Side of the Airport



Land Use Compatibility

Land Use Compatibility

- Land Uses
  - Existing and future land use
  - Parcel data
  - Zoning
  - Jurisdictional boundaries and neighborhoods
- Noise Sensitives Uses
  - Residential
  - Places of worship
  - Schools, colleges and universities
  - Libraries/cultural institutions
  - Hospitals and residential healthcare facilities
  - Daycare and assisted living facilities
  - Historic properties
- Data Sources
  - State of Washington Geospatial Services (statewide tax parcel data and Department of Revenue land use codes)
  - King County
  - Washington State



Land Use Discussion with Local Jurisdictions

- **What We Need from Local Jurisdictions**
  - Current & Planned Land Use Data
    - Understanding zoning regulations, residential areas, commercial developments, and future planning initiatives.
      - Any existing land use regulations related to aircraft noise including notification or disclosure areas
      - Any community redevelopment areas that could result in a change in land use types or intensities
    - Identification of schools, hospitals, historic sites, and other noise-sensitive areas.
  - Local Policies & Ordinances
    - Review of regulations that may impact aircraft operations or noise compatibility planning.
      - Any regulations incorporating sound level reduction (SLR) requirement for land uses (aviation and non-aviation)
  - Community Feedback
    - Insights into residents' concerns and expectations regarding noise impacts and potential mitigation strategies.

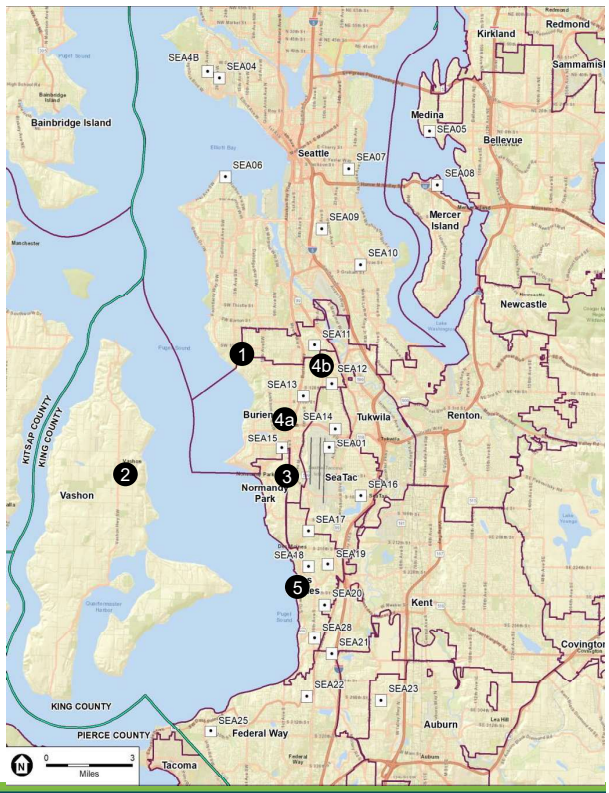
Land Use Discussion with Local Jurisdictions

- **Some of the Questions We'll be Asking**
  - How are land use planning decisions made regarding high-noise areas?
  - How can we collaborate to ensure effective noise compatibility planning?
- **Why It's Important**
  - Supports Noise Compatibility Planning
    - Helps identify areas where land use mitigation efforts can be prioritized
  - Enhances Community Engagement
    - Ensures local perspectives are considered when shaping solutions
  - Improves Long-Term Planning
    - Aligns aircraft operations with sustainable land use practices
  - Facilitates Compliance
    - Supports adherence to FAA regulations and best practices

Noise Monitoring

Noise Monitoring Program

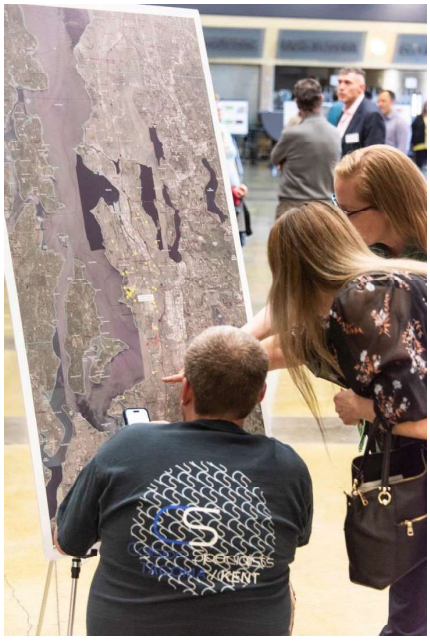
- Collected two weeks of data each at five locations in November 2024 and March 2025:
  - South Seattle
  - Vashon
  - Normandy Park
  - Burien
  - Des Moines
- Supplements SEA's permanent noise monitoring system
- Noise events being correlated to flight operations (using NOMS)
- Operations during those dates/time
  - Representative mix of North Flow and South Flow operations
  - Mix of weather conditions
- Information will be presented as supplemental information in the NEM Report



Community Outreach

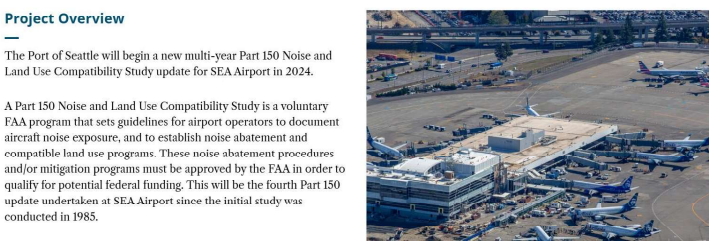
Community Outreach

- Planned Workshops
  - To follow publication of the Draft NEM Report; soliciting feedback on the NEM report as well as ideas for the NCP
  - Similar format as Kickoff Workshops (June 2024)
  - Anticipated to be held early to mid-October
- Community Events
  - The Port attended community events over the past year in support of the Part 150 Study
  - Continued outreach at community festivals and events over the summer



Communications

- Project Website: https://SEAPart150.com
  - Project Information
  - Process
  - FAQs
  - Tentative Schedule
  - Public Draft and Final NEM and NCP Reports
  - Reference Material
- Communication and Feedback:
  - Upcoming meetings including location/dates/times
  - Part 150 Study-related comment portal
  - Links to other websites/resources



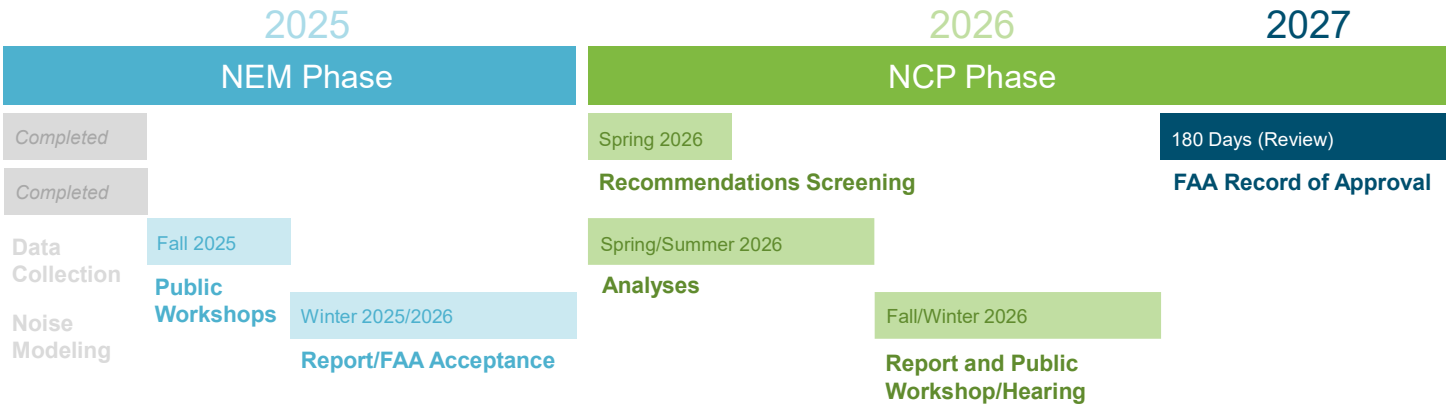
Project Overview

The Port of Seattle will begin a new multi-year Part 150 Noise and Land Use Compatibility Study update for SEA Airport in 2024.

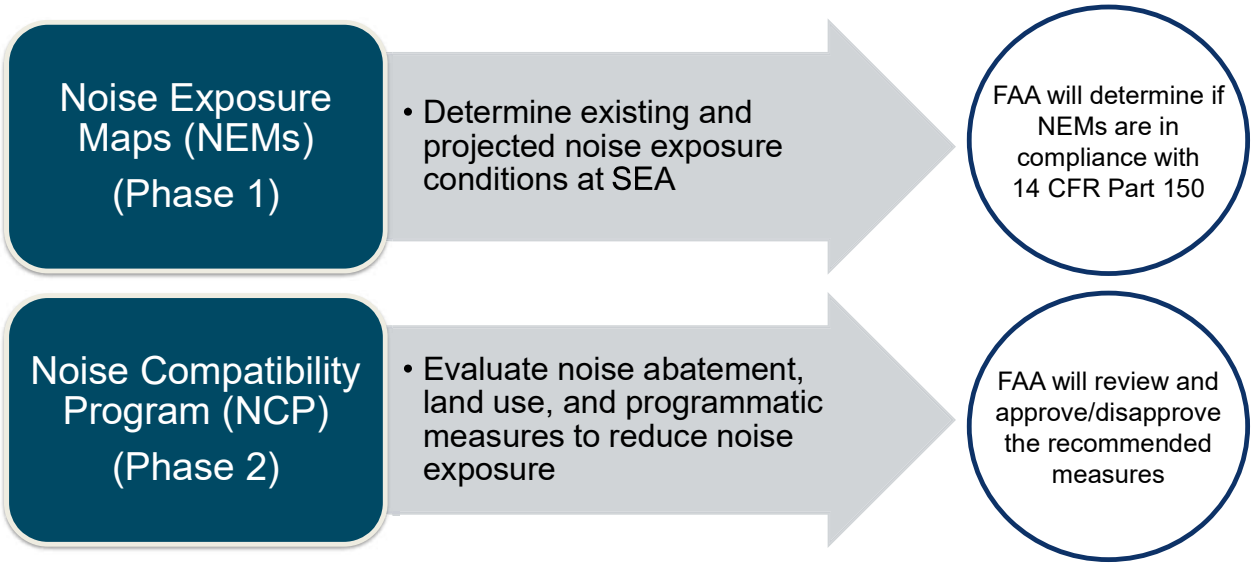
A Part 150 Noise and Land Use Compatibility Study is a voluntary FAA program that sets guidelines for airport operators to document aircraft noise exposure, and to establish noise abatement and compatible land use programs. These noise abatement procedures and/or mitigation programs must be approved by the FAA in order to qualify for potential federal funding. This will be the fourth Part 150 update undertaken at SEA Airport since the initial study was conducted in 1985.

Project Schedule

Part 150 Study Schedule



Part 150 Study Outcomes



Future TRC Meetings

Technical Review Committee

- TRC Meeting #4 (Tentative) — Early Fall 2025

- Reminder notices will be sent out in advance of each meeting
- Following the meeting, TRC materials will be posted on the Project Website at www.seapart150.com

Questions?

E-5 SEA Part 150 Technical Review Committee Meeting #4 August 11, 2025

SEA Part 150 Technical Review Committee

TRC meeting summary

Working Partners: Port of Seattle, ESA, PRR
Date: **Monday August 11, 2025**
Location: **Zoom/Virtual**
Subject: Technical Review Committee Meeting #4
Facilitator: Cheryl Swab, Uncommon Bridges

Part 150 Noise Study Technical Review Committee (5:35pm – 6:30pm)
Cheryl welcomed the members of the Part 150 Study Technical Review Committee and took roll.

TRC member	TRC Liaisons
Alaska Airlines – Lynae Craig - absent	FAA – Seattle CEO – Sky Laron
Delta Airlines – Kalena Glover	FAA – Western Service Center ATO – Rodney Lindbeck - absent
Burien – Liz Stead – absent	FAA – Western Service Center ATO – Joe Bert - absent
Des Moines – Jason Woycke - absent	FAA – SEA ATC – Jason Poole - absent
Federal Way – Matthew Blinstrub	Port of Seattle – Tom Fagerstrom
King County – Susan McLain	Port of Seattle – Ryan McMullan - absent
Normandy Park – Jeff Watson - absent	Port of Seattle – Paris Edwards
SeaTac – Zack Shields	Port of Seattle – Tom Hooper
Tukwila – Neil Tabor	

Summary of TRC Meeting 3
Autumn Ward from ESA thanked the Technical Review Committee (TRC) members for attending and gave a recap of the third TRC meeting, which took place on June 9, 2025. That meeting focused on reviewing the TRC's purpose and past meetings, technical updates such as noise modeling and flight track data, and alignment with the SAMP environmental review, and an overview of past and future community outreach.

Autumn reminded TRC members that there are two major phases of the Part 150 study:

- Phase 1 - developing the Noise Exposure Maps (NEMs)
    - Determine existing and projected noise conditions at SEA. She noted that the project team is currently at Step 3 (Noise Exposure Analysis).
- Phase 2 - Noise Compatibility Program (NCP)
    - Evaluate noise abatement, land use, and programmatic measures to reduce noise.

Land Use Compatibility
Autumn clarified that the project team is still working with local jurisdictions to get additional information related to zoning regulations, residential areas, commercial developments, etc., as well as to discuss collaborating on any noise compatibility planning efforts local jurisdictions may be considering. This can help prioritize any proposed NCP measures and ensure local perspectives are considered.

Autumn indicated she will reach out to the jurisdictions to schedule individual meetings. Neil Tabor from the City of Tukwila indicated that the City would be happy to meet with the project team.

NEM (Noise Exposure Map) Update
Autumn gave an overview of the Phase 1 – Noise Exposure Maps progress and next steps.

- Progress:
    - Land use database nearly complete
    - Meetings are being scheduled with local jurisdictions
    - The project team is overlaying NEM contours on updated land use data
- Next Steps:
    - Identify noise-sensitive areas
    - Draft NEM report
    - Conduct public workshops (this fall)
    - Submit final NEM report for FAA compliance review

Noise Compatibility Program (NCP) Kick-off and Overview
Autumn gave an overview of NCP process

- The NCP explores measures in three key areas.
- Input is actively solicited from stakeholders, including the public.
- The FAA conducts a thorough review of the entire NCP for completeness (technical accuracy, policy compliance, and effectiveness).
- FAA has 180 days to review and issue a determination approving or disapproving each recommended measure.

Autumn reminded the TRC members that the role of the TRC would be to:

- Represent community/stakeholder interests
- Provide feedback, identify NCP measures
- Advise constituents and gather input

She also went over the regulatory underpinning of the NCP process, 14 CFR Part 150, which requires consultation with FAA, local officials, planners, operators, and the public.

<u>Review of Noise Compatibility Program (NCP) Measures</u>
Autumn reviewed the elements that all evaluated NCP measures must consider:

- Reduction of existing incompatible land uses and prevention or reduction of future incompatible land uses.
- Safety and operational efficiency must be maintained.
- Consistency with FAA's powers and duties.
- Avoid unjust discrimination against airlines and/or aircraft types; or imposing undue burdens.
- Ability to balance local needs with national air transportation system requirements.

<u>Noise Abatement vs. Noise Mitigation</u>
Scott Tatro from ESA then reviewed the difference between noise abatement and noise mitigation, two categories of measures that may be included in a Noise Compatibility Program:

- **Noise Abatement:** Focuses on reducing noise exposure by modifying or moving the noise source itself (e.g., adjusting flight paths).
- **Noise Mitigation:** Addresses non-compatible land uses affected by noise.

Types of Land Use Measures

Scott introduced the concept of land use measures and discussed two categories that may be included in a Noise Compatibility Program. He said that land use measures help manage aircraft noise by:

- Reducing noise exposure for existing non-compatible land uses.
- Preventing new non-compatible land uses from being introduced.

These measures fall into two main categories, remedial and preventive.

- Remedial mitigation includes:
  - Land acquisition to remove or control noise-affected properties.
  - Sound insulation programs to reduce indoor noise levels.
- Preventative mitigation includes:
  - Land use controls to regulate development near airports.
  - Building codes designed to improve noise resistance.
  - Incorporation of noise considerations into comprehensive planning.

Types of Program Management Measures

Scott introduced the concept of Program Management Measures, defined as how the airport operator implements noise abatement, noise mitigation, and community outreach. Key measures include:

- Promotion and education to inform and engage the public.
- Use of implementation tools to support noise management.
- Continuous noise monitoring to track effectiveness and regular reporting
- Updates to the NEMs and revisions to the NCP.

Scott provided several example NCP Measures:

- **Noise abatement flight tracks:** Adjusting flight paths to avoid residential or sensitive areas.
- **Run-up enclosures:** Installing structures to dampen engine noise during maintenance/testing.
- **Airport layout modifications:** Physical changes to reduce noise exposure (e.g., relocating taxiways or runways).
- **Preferential runway use:** Prioritizing the use of runways that minimize overflight of populated areas.
- **Arrival/departure procedures:** Modifying procedures (e.g., steeper approaches) to reduce community noise.
- **Use restrictions:** May include curfews or limits on certain types of aircraft

Schedule Update:

Autumn went over the updated Part 150 schedule:

- Phase 1 - Noise Exposure Maps
  - Fall 2025 - Public Workshops
  - Fall/Winter 2025 – NEM report to FAA
- Phase 2 - Noise Compatibility Program
  - Commence this fall

Autumn then shared dates of upcoming public workshops. She indicated that the structure will be very similar to kickoff workshops held in 2024, in which attendees were encouraged to review informative materials and boards and interact with subject matter experts as they made their way through the event space. She committed to confirming the dates and locations by late August and posting updates on the Port of Seattle's calendar of events and the Part 150 Study website www.seapart150.com

Tentative Public Workshop Dates:

- September 30, 2025
- October 2, 2025
- October 4, 2025
- Mid-October – Virtual Meeting

Autumn reminded the TRC that the next upcoming meeting would tentatively be scheduled in Fall 2025.

Questions and comments

Q: Airport is expecting to grow in usage by approx. 10 million passengers. Does the airport expect to see growth in late night/overnight flights due to limited availability of gates?
A: Tom Fagerstrom indicated there will be increases, we can't tell you the rate, but it is reflective in the seasonal changes we see in the summer months, I expect this is going to be a trend we see.

Q: Do you know where you will hold these open houses?
A: We are hoping to have the meetings at various schools in the community like last time. School is currently out of session and so we need staff back first to confirm the locations.
A: Tom Fagerstrom noted that since we are updating the noise boundary, the emphasis is on wanting community engagement.

Q: Is involvement by the Technical Review Committee required by the FAA?
A: TRC involvement specifically is not required by FAA but engagement with landowners and stakeholders is, and these TRC meetings help the project team analyze measures and understand from the perspective of the communities you serve.

Q; How are we coordinating jurisdiction engagement? Is it through TRC representatives (like us) or on your own? How can we support?
A: Communication currently is through TRC and we would love for you to support in any way you can! Especially by communicating to and connecting the project team with those in your jurisdictions who should be informed and involved.

Cheryl closed the meeting by thanking attendees for joining and confirmed that the team would follow up with the various maps and other materials that were requested during the meeting.

Part 150 Study Technical Review Committee

Meeting #4 | August 11, 2025

Port of Seattle

TRC Welcome & Roll Call

TRC Members

- Alaska Airlines – Lynae Craig
- Delta Airlines – Kalena Glover
- King County – Susan McLain
- Burien – Liz Stead
- Des Moines – Jason Woycke
- SeaTac – Zach Shields
- Federal Way – Matthew Blinstrub
- Normandy Park – Jeff Watson
- Tukwila – Neil Tabor

TRC Liaisons

- FAA
  - Seattle CEO – Sky Laron
  - Western Service Center ATO – Rodney Lindbeck
  - Western Service Center ATO – Joe Bert
  - SEA ATC – Jason Poole
- Port of Seattle
  - Tom Fagerstrom
  - Ryan McMullan
  - Paris Edwards
  - Tom Hooper

Agenda

- Welcome & Roll Call
- Summary of TRC Meeting #3
- Phase 1: Noise Exposure Map (NEM) Update
- Phase 2: Noise Compatibility Program (NCP) Kickoff
- Project Schedule
- Future Meetings
- Questions

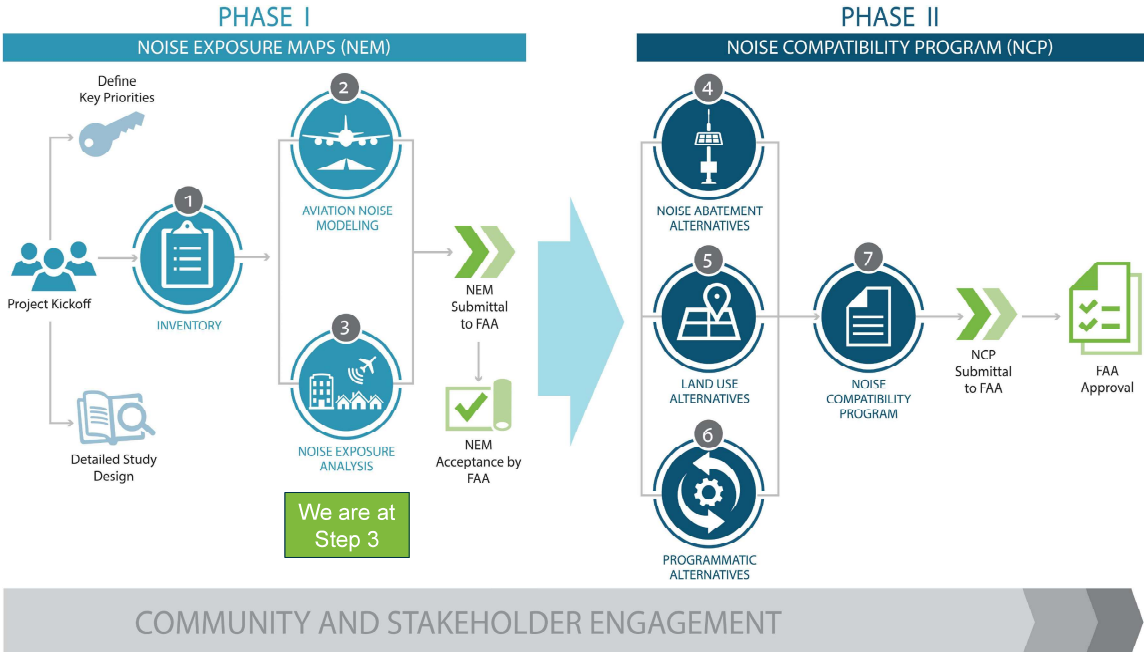
Summary of TRC Meeting #3

- Refresh on Purpose/Role of TRC
- Summary of TRC Meetings #1 and #2
- Noise Modeling and Flight Tracks
- Alignment with SAMP NTP's Environmental Review
- Shared 2022 and 2032 Noise Contours
- Land Use Data Collection
- Supplemental Noise Monitoring in Communities
- Overview of Outreach Efforts
- Update on Project Schedule

Port of Seattle | SEATTLE-TACOMA INTERNATIONAL AIRPORT

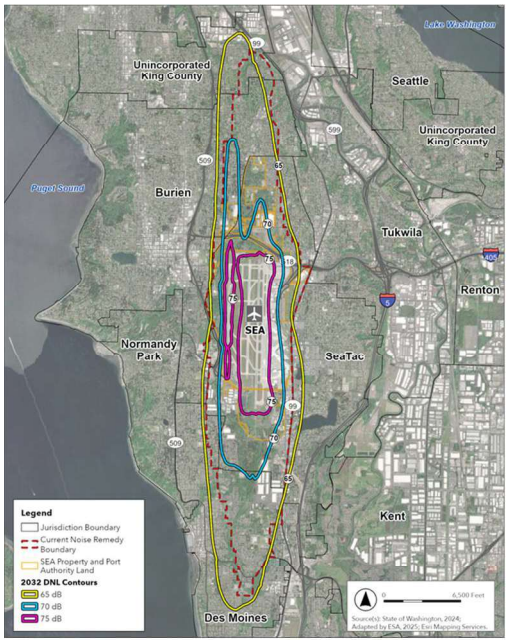
Noise Exposure Map (NEM) Update

Phases of a Part 150 Study



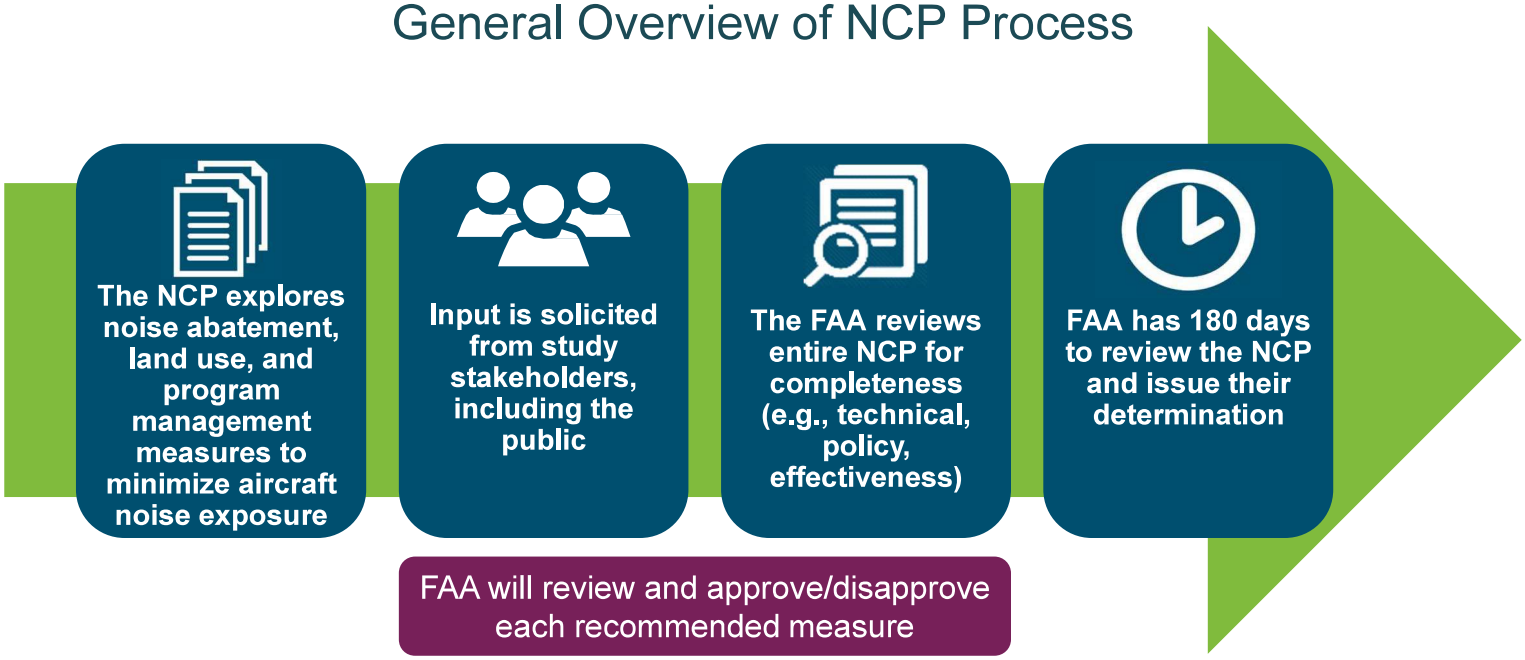
NEM Update

- Finalizing Land Use Database
- Setting up Meetings with LU Jurisdictions to:
  - Verify Current & Planned Land Use Data
  - Review Local Policies & Regulations
- Overlay NEM Contours on Updated Land Use
  https://seapart150.com/2032-noise-exposure-map/
- Identify Noise Sensitives Uses
- Status of Draft NEM Report
- Public Workshops/Public Comment Period
- Respond to Comments and Submit Final NEM Report for FAA Compliance Review/ Approval



Noise Compatibility Program (NCP) Kickoff

General Overview of NCP Process



Importance of TRC Involvement During the NCP Phase

- TRC members represent the interests of their organization and/or constituents
- TRC involvement in the NCP phase is key for a successful NCP:
  - Identify potential NCP measures
  - Provide subject matter expertise
  - Advise organization and/or constituents of NCP discussions
  - Solicit feedback from organization and/or constituents
- 14 CFR Part 150 requires consultation with the following stakeholders:
  - FAA officials and other Federal officials having local responsibility of land uses within the DNL 65
  - Officials of the state and public/planning agencies that have jurisdiction within the DNL 65
  - Aircraft operators using the Airport
  - General Public

Review of NCP Measures

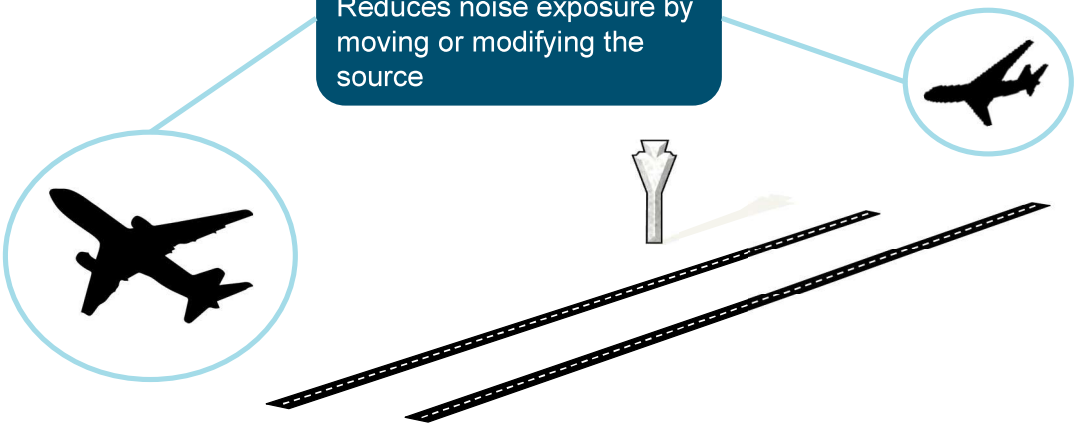
All NCP measures evaluated must consider:

- Reduction of existing incompatible land use and prevention / reduction of future incompatible land use
- The FAA will not approve NCP measures that do not reduce exposure to noise of DNL 65 and higher
- Safety and efficiency
- Consistency with the powers and duties of the FAA
- Avoidance of unjust discrimination against certain aircraft types
- Interstate commerce *(Measures cannot impose an undue burden on interstate commerce; requires balancing of interests)*
- The ability to meet both local needs and national air transportation system needs

Noise Abatement vs. Noise Mitigation

Noise Abatement

Reduces noise exposure by moving or modifying the source



Noise Mitigation

Addresses noncompatible land uses

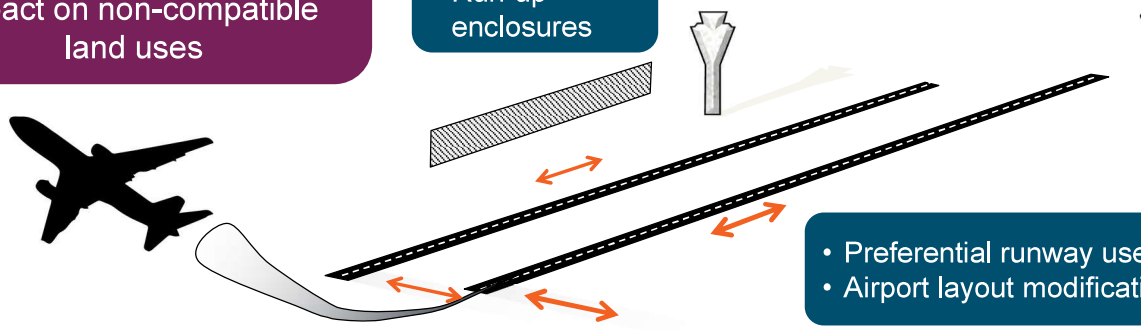
- Preventative: addresses future uses
- Remedial: addresses existing uses

Types of Noise Abatement Measures

Noise abatement refers to measures to address noise at the source to reduce the impact on non-compatible land uses

- Noise barriers
- Run-up enclosures

- Noise abatement flight tracks
- Arrival/departure procedures
- Use restrictions *(subject to the requirements of 14 CFR Part 161)*



- Preferential runway use
- Airport layout modifications

Types of Land Use Measures

Land use measures address aircraft noise exposure through mitigating existing noise exposure on non-compatible land uses and/or prohibiting the introduction of new non-compatible land uses

Remedial Mitigation

- Land acquisition
- Sound insulation
- Aviation easements

Preventative Mitigation

- Land use controls
- Zoning
- Building codes
- Comprehensive plans
- Real estate disclosures

Types of Program Management Measures

Program management refers to the way an airport operator implements its noise abatement, noise mitigation, and community outreach efforts

Example Program Management Measures

Promotion, education, and signage

Implementation Tools

Monitoring

Other actions proposed by stakeholders and/or recommended by the Federal Aviation Administration (FAA)

Reporting

Noise Exposure Map Update and NCP Revision

Example NCP Measures

Noise Abatement

- Noise abatement flight tracks
- Run-up enclosures
- Airport layout modifications
- Preferential runway use
- Arrival/departure procedures
- Use restrictions*
- Other actions proposed by stakeholders

*Subject to further notice, review, and approval requirements in 14 CFR Part 161

Land Use

- Remedial Mitigation
  - Land acquisition
  - Sound insulation
  - Aviation easements
- Preventative Mitigation
  - Land use controls
  - Zoning and/or Building codes
  - Comprehensive plans
  - Real estate disclosures
- Other actions proposed by stakeholders

Program Management

- Implementation tools
- Promotion, education, signage, etc.
- Monitoring
- Reporting
- NEM update
- NCP revision
- Other actions proposed by stakeholders

2014 Part 150 Study Recommendations*

- Noise Abatement Measures (2)
  - Construct a Ground Run-Up Enclosure (this was later determined to be infeasible)
  - Expand the Fly Quiet Program
- Land Use Mitigation Measures (4)
  - Sound insulate multi-family units based on updated Noise Remedy Boundary (NRB)
  - Offer avigation easements to mobile home residents
  - Evaluate noise levels at places of worship for inclusion in the Sound Insulation Program
- Program Management Measures (3)
  - Upgrade Noise Monitoring and Flight Tracking System
  - Periodically review and update the NEM and NCP as necessary
  - Continue to operate the Noise Office

*These are measures that were newly recommended in the 2014 Part 150 Study.

Project Schedule

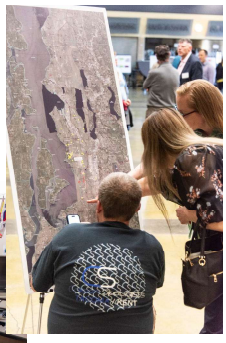
Port of Seattle | SEATTLE-TACOMA INTERNATIONAL AIRPORT

Upcoming Public Workshops

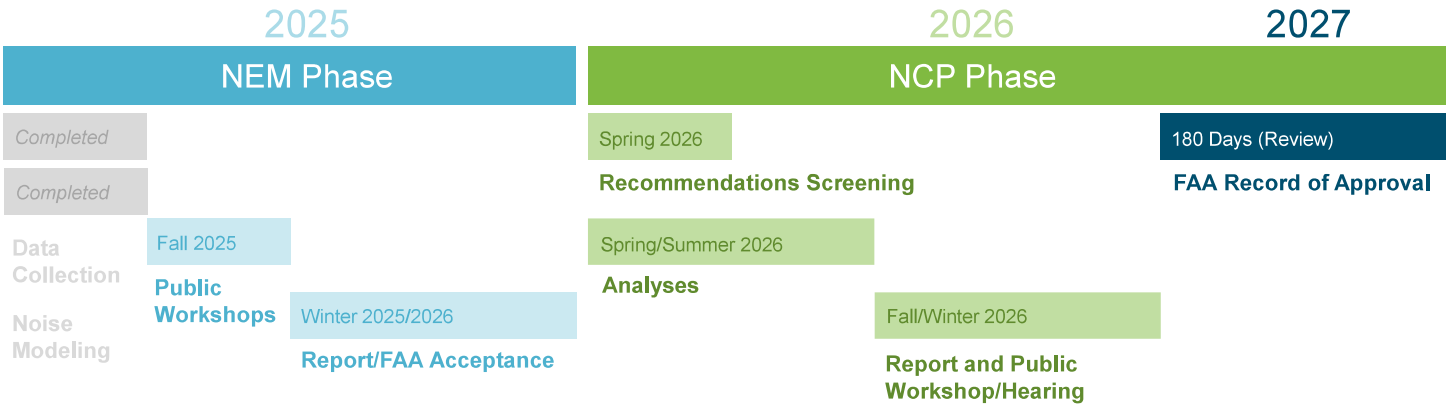
Public Workshop Dates:

- September 30, 2025
- October 2, 2025
- October 4, 2025
- Mid-October – Virtual Meeting

Locations to be confirmed by late-August and will be posted the Port's calendar of events and the Study website (www.seapart150.com)



Part 150 Study Schedule



Next TRC Meeting

Technical Review Committee

- TRC Meeting #5 (Tentative) — Fall 2025
  - Summary of Public Workshops
  - Brainstorm potential NCP measures

- Reminder notices will be sent out in advance of each meeting
- Following the meeting, TRC materials will be posted on the Project Website at www.seapart150.com

Questions?

Port of Seattle | SEATTLE-TACOMA INTERNATIONAL AIRPORT

E-6 SEA Part 150 Technical Review Committee Meeting #5 December 8, 2025

SEA Part 150 Technical Review Committee

TRC meeting summary

Working Partners: Port of Seattle, ESA, PRR
Date: **Monday, December 8, 2025**
Location: **Zoom/Virtual**
Subject: Technical Review Committee Meeting #5
Facilitator: Cheryl Swab, Uncommon Bridges

Part 150 Noise Study Technical Review Committee (5:33pm – 6:30pm)

Cheryl welcomed the members of the Part 150 Study Technical Review Committee (TRC) and took roll.

TRC member	TRC Liaisons
Alaska Airlines – Lynae Craig	FAA – Seattle CEO – Sky Laron
Delta Airlines – Kalena Glover – absent	FAA – Seattle ATO – Rodney Lindbeck - absent
Burien – Liz Stead – absent	FAA – Western Service Center ATO – Joe Bert – absent
Des Moines – Jason Woycke	FAA – SEA ATC – Jason Poole – absent
Federal Way – Josh Hoff	FAA – Jennifer Redding
King County – Susan McLain	Port of Seattle – Tom Fagerstrom
Normandy Park – Jeff Watson - absent	Port of Seattle – Ryan McMullan
SeaTac – Zack Shields	Port of Seattle – Paris Edwards
Tukwila – Neil Tabor	Port of Seattle – Tom Hooper

Summary of TRC Meeting 4
Autumn Ward from ESA provided a high-level recap of the fourth Technical Review Committee (TRC) meeting. That meeting focused on NEM update status, NCP kickoff including process and TRC involvement, review and approval of NCP measures, noise abatement vs. mitigation, types of NCP measures, example NCP measures, 2014 Part 150 Study NCP recommendations, and an update in the project schedule.

Summary of Draft NEM Workshops and Outreach
Autumn provided an overview of the two phases of the study and recent public engagement.

- Phase 1 – Noise Exposure Maps as well as some preliminary land use maps have been shared.
- Phase 2 – Noise Compatibility Program will include potential measures related to aircraft noise.

Autumn reviewed the outreach the Part 150 Study team (Study team) and Port of Seattle staff had conducted in 2025, including public workshops, meetings with local jurisdictions, tabling at nine local events, and briefings with community-based organizations

<u>Public Workshops</u>
Autumn described the public workshops they hosted in September and October.

- Parkside Elementary School (31 attendees) – September 30, 2025
- Seahurst Elementary School (19 attendees) – October 2, 2025
- Glacier Elementary School (15 attendees)- October 4, 2025
- Virtual (20 attendees) – October 15, 2025

Autumn noted that there were 85 attendees across the four workshops and that the first meeting was the busiest with 30+ written comments. She also stated that most comments received were from those living south of the Airport. The primary concerns from the meetings including increasing operations, nighttime operations (10 pm – 7 am), mitigation, and use of other airports.

Land Use Jurisdiction Meetings

Autumn updated the TRC members on five land use jurisdiction meetings held between August and November with local jurisdictions with the Port and Study Team:

- City of Tukwila – August 29, 2025
- City of Burien – September 11, 2025
- City of Des Moines – September 23, 2025
- City of SeaTac – October 6, 2025
- King County – November 5, 2025

The meetings included an overview of Part 150 Study process, a review of draft NEM contours and land use analysis, and overview of NCP strategies. Study team members used these meetings to solicit ideas for potential land use measures to consider for the NCP.

Part 150 Outreach to Community Based Organizations

AJ McClure from the Port of Seattle provided information and in-person presentations to four organizations including:

- SeaTac Airport Community Coalition for Justice (STACC4J) Fix the Harm – September 10, 2025
- Serve Ethiopians – September 25, 2025
- Para Los Ninos – October 2, 2025
- Congolese Integration Network (CIN) – October 3, 2025

Port of Seattle staff shared Part 150 information and offered an invitation for in-person presentations to several other organizations that as yet, have not responded.

Noise Compatibility Program (NCP) Overview

Chris Nottoli from ESA gave a high-level overview of the NCP process.

- The NCP explores measures in three key areas (Noise Abatement, Land Use, Program Management).
- Input is actively solicited from stakeholders, including the public.
- The FAA conducts a thorough review of the entire NCP for completeness (technical accuracy, policy compliance, and effectiveness).
- The FAA has 180 days to review and issue a determination approving or disapproving each recommended measure.

Prior Part 150 Study NCP Recommendations

Chris noted that conversations and input from the community helped the Port of Seattle identify a series of Noise Compatibility Program recommendations prior to the 2014 Part 150 Noise Study and provided several examples of noise abatement and land use measures. Chris also provided a brief summary of the NCP recommendations that came out of the 2014 Part 150 Noise Study, with noise abatement, land use, and program management measures. All measures are included in the TRC presentation slides.

Chris also described how the Port's sound insulation program continues to expand and the Fly Quiet program continues to be emphasized and improved upon following each NCP.

Goals and Objectives
Chris provided an overview of the goals and objectives of the NCP, which included goals of the Part 150 Study plus some key community concerns that the Port is attempting to address.

- Port of Seattle Part 150 Goals and Objectives – reduce noncompatible land uses, prevent future noncompatible uses, educate stakeholders.
- Community's Part 150 Goals and Objectives – reduce nighttime noise exposure, reduce use of the third runway (16R/34L) especially at night, better disperse arrival and departure noise, transparency on operations, mitigation outside the DNL 65 dB contours.

NCP Working Session

Discussion and Working Session on Potential NCP Measures
Adam Scholten from ESA facilitated a brainstorming session on potential NCP measures.

Adam noted the goal of this session is to capture ideas from the TRC. He used an online storyboarding program to capture ideas throughout the discussion. The three main categories included noise abatement, land use/mitigation, and programmatic measures.

Potential Noise Abatement Measure Discussion
Questions/Answers are identified with Q or A; Comments/Responses are identified with C or R below.

C: Lynae Craig (Alaska Airlines) stated that Seattle needs an airspace study by FAA. The procedure currently in place is from 1970s – FAA needs to look at efficiency and how airplanes are routed. She indicated that SEA is a very full airport, but they are trying to say, 'only put airplanes here, don't let them fly at night'. Lynae noted that while we cannot restrict aircraft, we can create more efficiencies in the airspace. She stressed that they want to operate airplanes when people want to fly and more restrictions have unintended consequences.
R: Adam (ESA) noted he could see the benefits from optimized profile descent, less level off, and added noise benefits.

Q: Barton Delancy (Des Moines – Community Representative, Aviation Noise Working Group) noted the prior relocation of adversely affected properties and asked if the Port is going to rezone, is there a way to help move the disproportionality affected residents, for the Port to relocate them and buy the property? He emphasized that these areas are low income and are in direct flight path.
A: Adam (ESA) noted yes, this can be considered. Autumn (ESA) also noted that zoning is at the local jurisdiction level and although it could be a recommendation, it cannot be implemented by the Port of Seattle.
Q: Stephen Smith (Ricondo and Associates) followed up to ask if they were talking about acquisition and relocation.
A: Joe Dusenbury (Des Moines – Community Representative, Aviation Noise Working Group) confirmed that was correct.

C: Tom Fagerstrom (Port of Seattle) noted that noise abatement brings up the conflict of Part 150 in terms of what benefits are within the contour and what may provide benefit outside the contour, as well as what FAA will approve/not approve. He said the Port does have the opportunity to look at broader areas. It's a constant issue – does it benefit those in the contour or those outside, and what will the FAA support?

R: Adam (ESA) reiterated that DNL 65 is the primary focus of Part 150 but there may be opportunity to look outside DNL 65. He did note that mitigation measures for areas outside of the DNL 65 contour must go through a rigorous analysis and approval process outside of Part 150.

Potential Land Use Measure Discussion

Autumn (ESA) noted the items in the Land Use and Mitigation section were from stakeholders who participated in the public comment workshops and land use jurisdiction meetings. Adam asked the TRC to provide comments/thoughts and sought additional suggestions.

Marco Milanese (Port of Seattle) noted the people on the committee are the experts on the call and asked if they had ideas to share that the Port should look into that were successful at other airports.

C: Lynae Craig (Alaska Airlines) noted the wording "incentives or punishment" to reduced nighttime operations. She stated there are nighttime noise flight procedures – and inquired whether there could be an incentive where the quietest airplanes don't have to fly extra track miles and can follow daytime procedures at night – therefore encouraging airlines to fly quieter aircraft at night. This could incentivize night operations to mostly operate quiet airplanes.
R: Adam (ESA) said nighttime procedure for all aircraft has been done in the Bay Area and that it can be further explored as part of this process.
Q: Autumn (ESA) – asked Lynae a clarifying question to confirm the intent of her comment was not one nighttime procedure for all aircraft. She inquired whether incentivizing airlines to fly their quietest aircraft by allowing them to fly any of the procedures and louder aircraft would continue to fly nighttime procedures is what Lynae was suggesting.
A: Lynae (Alaska Airlines) confirmed that is correct. Alaska Airlines is flying a very different fleet now than when the nighttime noise procedures were created.
C: Tom Hooper (Port of Seattle) said he liked the idea and that it could go hand in hand with shifting more aircraft over Elliott Bay rather than up over north Seattle, etc.

Q: Tom Hooper (Port of Seattle) asked what is typically done as part of Part 150 Study and what might fall outside of the study? He said he agrees with Lynae that her idea would need to be vetted through a study. What is outside of the NCP and what would fall into airspace study for these ideas?
A: Adam (ESA) responded that the Part 150 Study is focused on looking at the DNL 65 contour. Procedures that would have direct effect on DNL 65 would be within scope of study. It doesn't mean you can't look at things that may be outside the scope or that may inform future action.
C: Tom Hooper (Port of Seattle) noted that some of the things on the board may require airspace design to see what the impacts would be.
R: Autumn (ESA) – indicated this Part 150 Study is limited to SEA and Seattle-area airspace redesign would be at the FAA's discretion.

Autumn reminded the Committee this is the Port's fourth Part 150 Study update. She indicated the Study Team has a lot of ideas but would also like to hear what the committee wants. What is the TRC's initial feedback or concerns? She also noted that just because it doesn't benefit the DNL 65, doesn't mean the Port might not want to consider it outside of the Part 150 Study process.

Potential Programmatic/Program Management Measure Discussion

C: Lynae (Alaska Airlines) said she did not like the use of the word "punishment" for aircraft flying at night.
C: Stephen (Ricondo and Associates) asked if incentives/punishment should be moved from programmatic to noise abatement with the word punishment since only FAA can implement restrictions.

R: Autumn (ESA) stated it should stay in programmatic as there is more flexibility with a Fly Quiet program that is not implementing restrictions. She noted one example where the airport publishes the top 10 violators (voluntary nighttime curfew) to disincentivize them from flying at night; an incentive could be potentially offer other procedures, as Lynae suggested.

C: Zach Shields (City of SeaTac) said he liked additional noise monitors.

Q: Lynae (Alaska Airlines) asked about outreach and education and if there is more education that could be done. She offered that having context related to how/why aircraft operate may reduce annoyance. Lynae recognized there is a lot construction coming in next five years and recommended the Port increase its outreach efforts, including for this Part 150.
A: Adam (ESA) agreed that the ability to quickly and easily communicate to the public is a good idea. He emphasized need to keep public in the know.
A: Autumn (ESA) suggested that education with real estate community regarding noise and temporary conditions related to construction could be an additional education component.
A: Stephen (Ricondo and Associates) – added that also for non-acoustical factors and measures, continuing community outreach about airport and impact on communities is important.
A: Chris (ESA) added that another education piece could be continuing conversations with pilots and airlines to get everyone on same page and talking to each other.

<u>Ideas From Other Airports</u>
Adam from ESA shared ideas from other airports.

Noise Abatement Measure – Adam described an offset approach used at Boston Logan Airport over the Atlantic Ocean. These paths go over open space, water, etc. where you don't have residents. Some challenges with these approaches include that they are more difficult for air traffic controllers and can be a burden on flight crews as well. However, these approaches have been used extensively at night when traffic volumes are lower and offset approaches and are an option to include as part of the NCP.

C: Lynae (Alaska Airlines) noted this approach works well when there's not a lot of traffic and that Alaska Airlines has tried this many times. She said that traffic volume is a challenge, and SEA pursuing this is a good idea.
R: Adam (ESA) reiterated that with new fleets, newer aircraft have more capability to use these approaches.

Additional potential ideas shared by Adam included:

- Optimized Profile Decent (OPD) procedures - These procedures minimize aircraft level offs by making airspace more efficient because there is no stepped down descent. They increase utilization of procedures that already are OPDs or where they are not currently.
- Steeper approach angles/glidepaths - This is an opportunity to steepen the approach angle by a little (3.5 degrees) which means aircraft are coming in higher all the way down the approach path and can start approach at higher altitude. Flight crews have to be very skilled.

C: Tom Fagerstrom (Port of Seattle) reiterated that this is a noise study, and they wouldn't be putting forward a measure that would move noise from one community to another. He explained that if any of the ideas move noise to another neighborhood, they would be contrary to the goal of Part 150 and would not be approved by FAA. He emphasized that in general, Part 150 is not an air space efficiency study – it is a noise study and OPDs are certainly worth looking into.

R: Adam (ESA) responded that with OPD, there are cases where you don't have to move traffic, it's focused on vertical guidance.

Adam (ESA) mentioned two other programmatic measures to consider as part of NCP including:

- Expand data sharing with the community. This could be an intuitive dashboard to leverage AI to help community members have more insight as to what is going on at the Airport. Other airports have rolled out similar dashboards for working with communities.
- Continue to expand the Fly Quiet program. This could look like offering different types of awards for different standards or metrics. Other airports have pursued NCP programs with additional metrics.

Adam concluded the working session with his appreciation for the TRC members providing their input.

Autumn reminded the TRC members that they can email Tom and Autumn with ideas, suggestions, or comments after the meeting or any time.

<u>Part 150 Study Schedule</u>
Autumn reviewed the updated Part 150 schedule:

- Phase 1 - Noise Exposure Maps
    - Early 2026 – NEM report to FAA
- Phase 2 - Noise Compatibility Program
    - Fall 2025 – NCP Phase Commenced
    - Winter/Spring 2026 – Screening of Recommendations

Autumn noted the next meeting will be in February or April 2026, depending on the NCP screening progress. Autumn closed the meeting by thanking attendees for joining and noting that TRC members are welcome to reach out and follow up with the team at any point.

Part 150 Study Technical Review Committee

Meeting #5 | December 8, 2025

Port of Seattle

TRC Welcome & Roll Call

TRC Members

- Alaska Airlines – Lynae Craig
- Delta Airlines – Kalena Glover
- King County – Susan McLain
- Burien – Liz Stead
- Des Moines – Jason Woycke
- SeaTac – Zach Shields
- Federal Way – Josh Hoff
- Normandy Park – Jeff Watson
- Tukwila – Neil Tabor

TRC Liaisons

- FAA
  - Seattle CEO – Sky Laron
  - Western Service Center ATO – Rodney Lindbeck
  - Western Service Center ATO – Joe Bert
  - SEA ATC – Jason Poole
- Port of Seattle
  - Tom Fagerstrom
  - Ryan McMullan
  - Paris Edwards
  - Tom Hooper

Agenda

- Welcome & Roll Call
- Summary of TRC Meeting #4
- Summary of Draft NEM Workshops and Outreach
- NCP Overview
- NCP Working Session
- Project Schedule
- Future Meetings
- Questions

Summary of TRC Meeting #4

- NEM Update Status
- NCP Kickoff
  - Process and TRC involvement
  - Review and approval of NCP measures
  - Noise abatement vs. mitigation
  - Types of NCP measures
  - Example NCP measures
  - 2014 Part 150 Study NCP recommendations
- Update on Project Schedule

Summary of Draft NEM Workshops and Stakeholder Outreach

Summary of Draft NEM Public Workshops

(1) Parkside Elementary School (31 Attendees)

2104 S 247th Street
Des Moines, WA 98198
6:00 P.M. – 8:00 P.M.

Attendees shown in **red**

September 30th, 2025

(2) Seahurst Elementary School (19 Attendees)

14603 14th Ave. SW
Burien, WA 98166
6:00 P.M. – 8:00 P.M.

Attendees shown in **blue**

October 2nd, 2025

(3) Glacier Middle School (15 Attendees)

2450 S 142nd Street
SeaTac, WA 98168
10:00 A.M. – 12:00 P.M.

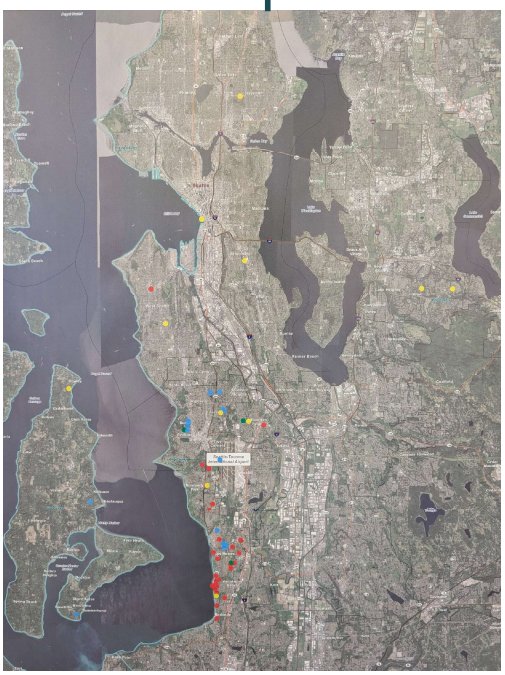
Attendees shown in **yellow**

October 4th, 2025

(4) Virtual (20 Attendees)

Zoom
6:00 P.M. – 7:00 P.M.

October 15th, 2025

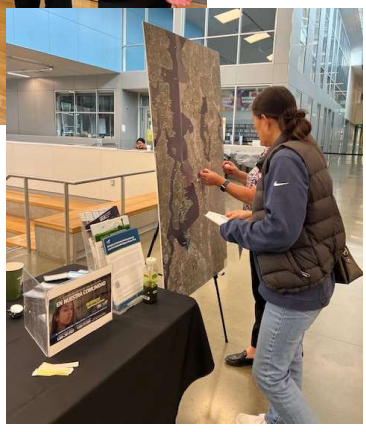


Summary of Draft NEM Public Workshops

- **Comments**
  - 30+ written comments received
  - Most comments submitted were those living south of the Airport (Public Workshop #1)
- **Primary Concerns**
  - Increasing operations
    - Included comments that operations continue to increase relative to historical levels and so have noise levels
  - Nighttime operations (10pm – 7am)
    - Included comments regarding frequency of operations and requests for penalties or incentives to reduce nighttime flights
  - Mitigation
    - Several commenters live just outside of DNL 65 dB contours and feel they should be mitigated
    - Included requests for Port replacement of previously installed RSIP windows
  - Use of other airports
    - Multiple requests to shift operations to other local airports

Summary of Draft NEM Public Workshops

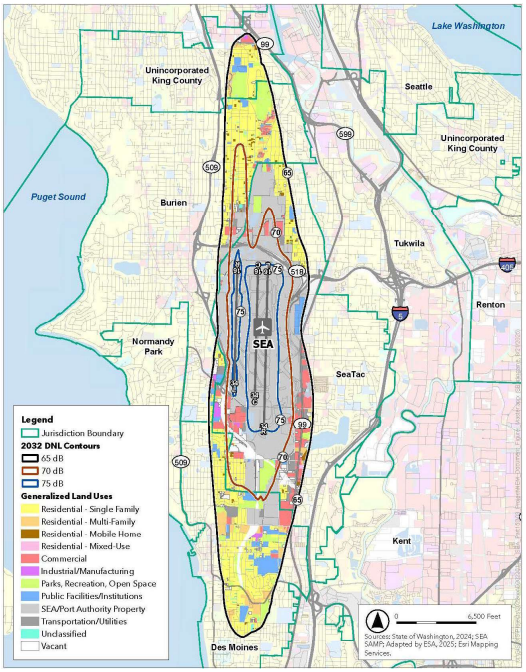
- **Other Concerns**
  - Use of third runway
    - Indicate that the third runway usage was more than initially stated/evaluated
  - Health concerns
    - Sleep disturbance
    - Potential impacts on children's learning and schools
    - Requests to include air quality analyses
  - DNL metric
    - Suggest DNL metric is not representative of impacts
  - Other transportation noise
    - Concerns proposed highway barriers may reflect noise back on to residents which will exacerbate aviation noise exposure
  - Wi-Fi disruption
    - Suggest Wi-Fi is being disrupted due to low flying arrival aircraft



Summary of Land Use Jurisdiction Meetings

- **Completed Jurisdiction Meetings**
  - Friday, August 29th – City of Tukwila
  - Thursday, September 11th – City of Burien
  - September 23rd – City of Des Moines
  - Monday, October 6th – City of SeaTac
  - Wednesday, November 5th – King County

- **Meeting Overview**
  - Overview of the Part 150 Study process
  - Review draft NEM contours and land use analysis
  - Provided overview of NCP strategies
  - Solicited ideas for NCP land use measures



Port Attended Part 150 Community Outreach

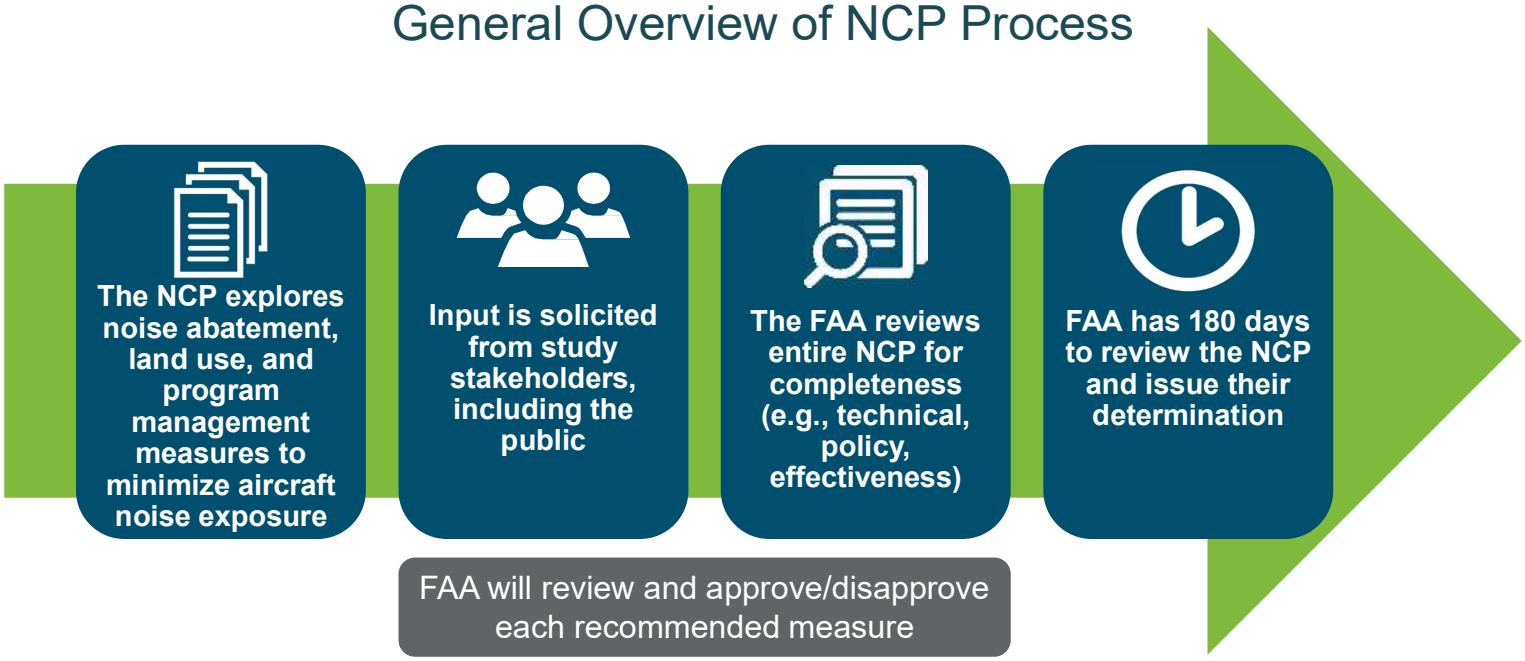
- **2025 Part Outreach Events (Tabling)**
  - Saturday, June 14th – City of Burien Strawberry Festival
  - Wednesday, July 9th – City of SeaTac Night Market
  - Saturday, July 12th – City of Des Moines Waterfront Farmers Market
  - Saturday, August 9th – City of Federal Way Community Festival
  - Friday, August 15th – KEXP Summer BBQ (Seattle)
  - Sunday, August 17th – City of Tukwila Farmers Market
  - Saturday, September 13th – City of Burien Welcoming Event
  - Saturday, September 20th – City of SeaTac Welcoming Event
  - Saturday, December 6th – Normandy Park Winterfest

Port Part 150 Outreach to Community Based Organizations

- **Study Information and In-Person Presentation**
  - Wednesday, September 10th – SeaTac Airport Community Coalition for Justice (STACC4J)/Fix the Harm
  - Thursday, September 25th – Serve Ethiopians
  - Thursday, October 2nd – Para Los Ninos
  - Friday, October 3rd – Congolese Integration Network (CIN)
- **Study Information and Invitation for In-Person Presentation**
  - Somali Health Board
  - Partner in Employment
  - SHAG Tukwila
  - Somali Parent Education Board
  - International Rescue Committee

NCP Overview

General Overview of NCP Process



Types of NCP Measures

Noise Abatement	Land Use	Program Management
Noise abatement refers to measures to address noise at the source to reduce the impact on non-compatible land uses	Land use measures address aircraft noise exposure through mitigating existing noise exposure on non-compatible land uses and/or prohibiting the introduction of new non-compatible land uses	Program management refers to the way an airport operator implements its noise abatement, noise mitigation, and community outreach efforts

Port of Seattle | SEATTLE-TACOMA INTERNATIONAL AIRPORT

Pre-2014 Part 150 Study NCP Recommendations

Noise Abatement Measures		Land Use Measures	
Explore limited rescheduling of nighttime flights	Establish noise barriers/run-up enclosure*	Standard insulation	Transaction assistance*
Use VHF Omni-directional Range (VOR) radials to curb aircraft drifting from noise abatement track	Evaluate increased use of the Duwamish/Elliott Bay corridor with Flight Management System (FMS)*	Insulation of schools	Easement acquisition*
Maintenance runup regulations	Nighttime use of Commencement Bay departure corridor*	Property advisory service	
Preferential runway use	Restrict taxiing of aircraft to/from maintenance areas during nighttime hours*	Operations review and NEM updates	
Development/implementation of a Fly Quiet program	Raise altitude where aircraft Intercept glide slope*	Prepare cooperative development agreements	
Use of FMS procedures		Funding for land use/noise compatibility planning	
Use of ground equipment		Approach Transition Zone (ATZ) acquisition	

*Measure not carried forward in 2014 Part 150 Study NCP or superseded by new measures in 2014 Part 150 NCP

2014 Part 150 Study New NCP Recommendations

Noise Abatement Measures	Land Use Measures	Program Management Measures
Construct a Ground Run-Up Enclosure (GRE)*	Sound insulate eligible multifamily units (condominiums)	Upgrade noise monitoring and flight tracking system
Expand the Fly Quiet program	Sound insulate eligible multifamily units (apartments)	Periodically review and, if necessary, update the NEMs and the NCP
	Offer avigation easements to eligible owners of mobile homes	Continue to operate the noise office
	Initiate a study to evaluate the noise levels at places of worship for sound insulation eligibility	

*Measure later deemed infeasible

Goals and Objectives

- Port of Seattle's Part 150 Goals and Objectives
  - Reduce noncompatible land uses
  - Prevent future noncompatible uses
  - Educate stakeholders
- Community's Part 150 Goals and Objectives:
  - Reduce nighttime noise exposure
  - Reduce use of third runway (16R/34L), especially at night
  - Better disperse arrival and departure noise
  - Transparency on operations
  - Mitigation outside the DNL 65 dB contours

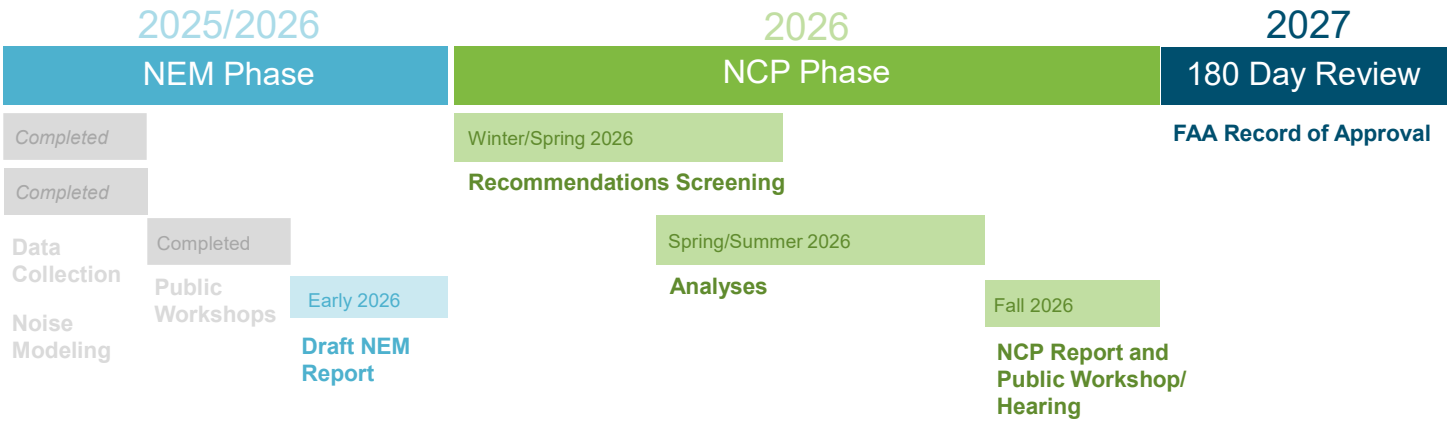
These are the goals of the Part 150 Study plus some of the key community concerns we are attempting to address

NCP Working Session

(Mural Workspace)

Project Schedule

Part 150 Study Schedule



Next TRC Meeting

Technical Review Committee

- TRC Meeting #6 (Tentative) — February/April 2026
  - Discuss potential NCP measures
  - NCP recommendations screening

- Reminder notices will be sent out in advance of each meeting
- Following the meeting, TRC materials will be posted on the Project Website at www.seapart150.com

Questions?

E-7 SEA Stakeholder Advisory Roundtable (StART) Briefing
December 13, 2023

Seattle-Tacoma International Airport **Part 150 Study**

StART Meeting
December 13, 2023

SEA Seattle-Tacoma International Airport

ESA

Port of Seattle

ESA Project Management Team

Mike Arnold
Senior Project Manager

Autumn Ward
Project Manager

Justin Cook
Deputy Project Manager

SEA Seattle-Tacoma International Airport

ESA

ESA - An Environmental Aviation Consultancy

- More than 180 airports nationwide
- On-call to more than 80 airports
- Staff experience at all 30 large hub airports and 133 GA airports
- Management team has conducted more than 25 Part 150 Studies
- 500+ sets of contours for various noise-related projects over the past decade

SAN ANTONIO INTERNATIONAL AIRPORT · Tampa International Airport · Naples AIRPORT AUTHORITY · BROWARD COUNTY FLORIDA

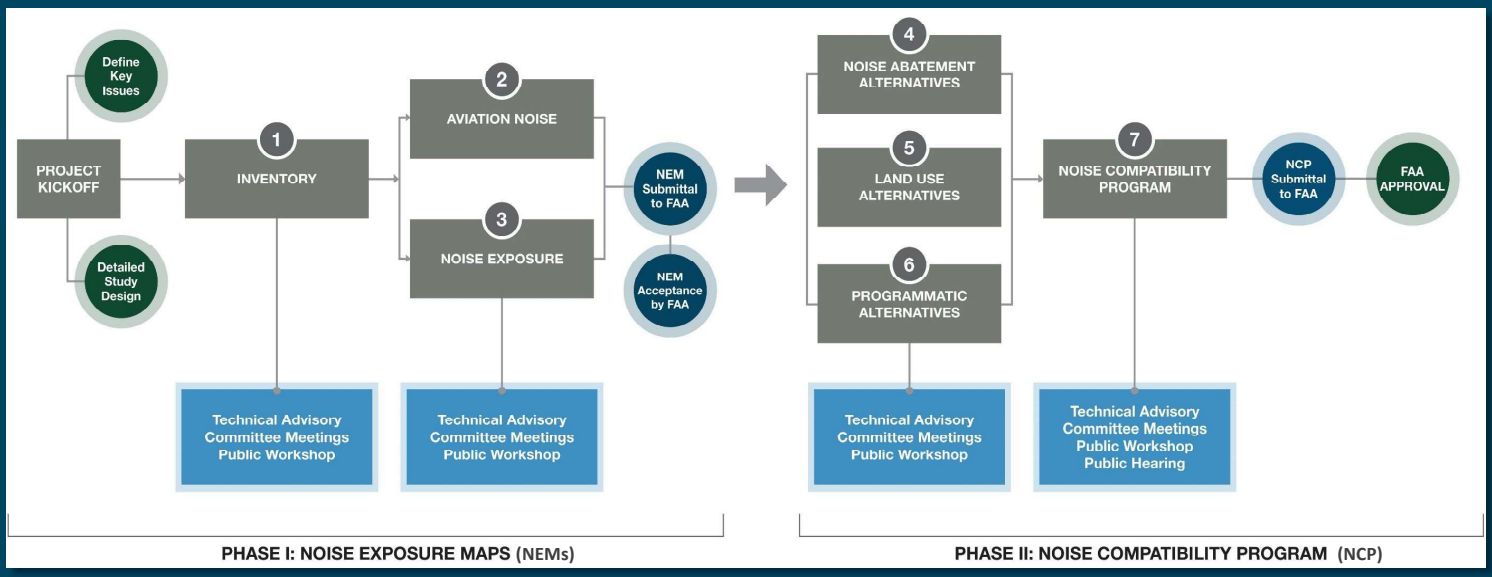
SEA Seattle-Tacoma International Airport · LGA LAGUARDIA AIRPORT · COUNTY OF MARTIN STATE OF FLORIDA · JFK JOHN F. KENNEDY INTERNATIONAL AIRPORT · ESA

Port of Seattle

What is a Part 150 Study?

- Assesses aircraft noise exposure on the area surrounding the airport
- Identifies measures to reduce aircraft noise (noise abatement) and limit exposure (noise mitigation)
- Outlines a program for implementation of noise abatement and mitigation measures
- Allows FAA approved measures to be eligible for federal funding
- Part 150 studies must adhere to 14 CFR Part 150 guidelines to be considered and accepted and approved by FAA

Overview



Purpose and Role of the Technical Review Committee (TRC)

- The TRC's role is to support the SEA Part 150 Study:
  - City Responsibilities
    - Appoint a TRC representative/member to participate in TRC meetings; typically, a land use planner
    - Share data including land use, building codes, etc.
    - Review study assumptions and data/graphics
    - Provide and/or discuss land use recommendations in the NCP phase
- TRC members represent the interests of their organization and/or constituents and are expected to advise their organization/constituents of the TRC's discussions and Study information (e.g., distribute information for public workshops)
- The Port will respect and consider the TRC's technical input, but retains responsibility for, and decision-making authority on, the SEA Part 150 Study

Upcoming Community Engagement

- Develop a Part 150 Study website
- Series of Kick-off Public Workshops in Spring 2024
  - Open House format to encourage interactive dialogue
  - Meeting locations in communities around the Airport
  - Considering day and evening meeting times to encourage participation
- Create a project mailing list for future communications
- Targeted community outreach

E-8 SEA Local Jurisdiction Briefings

14 CFR PART 150 NOISE AND LAND USE COMPATIBILITY STUDY

Local Jurisdictions Briefing | Summer 2025

Port of Seattle

Agenda

- Introductions
- Overview of the Part 150 Study Process
- Land Use Consultation
- Noise Compatibility Planning Strategies
- Q&A/Open Discussion

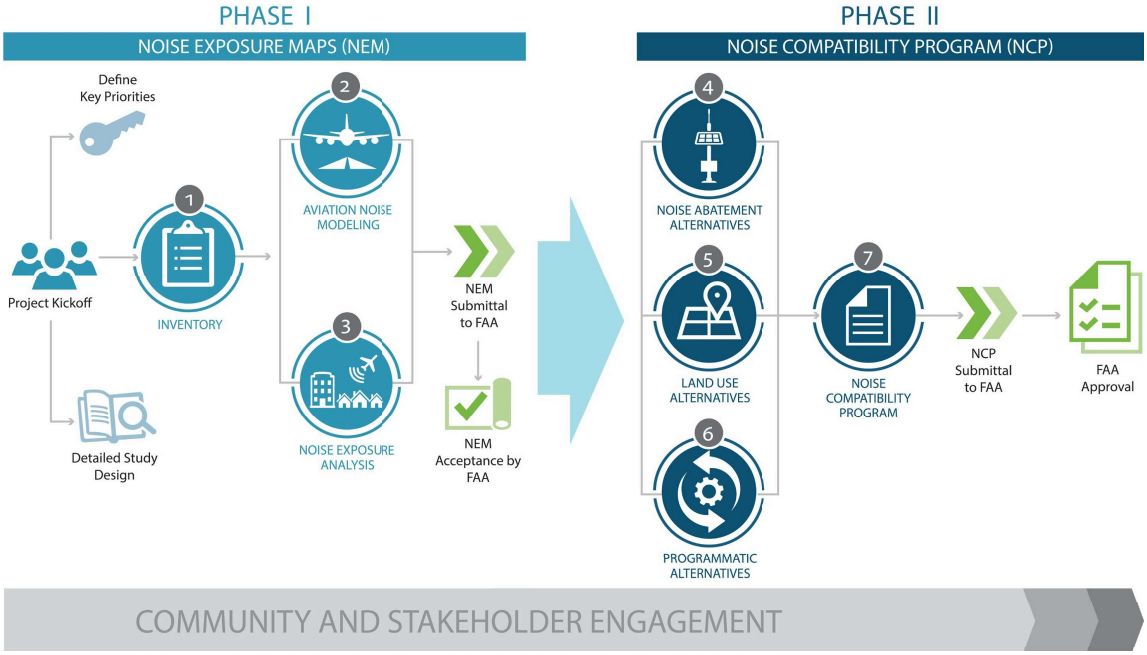
Overview of Part 150 Process

What is a Part 150 Study?

- Assesses the impacts of aircraft noise on the area surrounding the airport
- Identities measures to reduce aircraft noise (noise abatement) and limit its impacts (noise mitigation)
- Outlines a program for implementation of noise abatement and mitigation measures
- Allows FAA approved measures to be eligible for federal funding

The 14 CFR Part 150 process is the Airport's mechanism to improve the compatibility between airport operations and surrounding communities.

Phases of a Part 150 Study



Part 150 Study Schedule/Timing

- NEM Phase:
  - Data Collection — Completed
  - Noise Modeling — Completed
  - Public Workshops — Fall 2025
  - NEM Report/FAA Acceptance — Fall/Winter 2025
- NCP Phase:
  - Recommendations Screening — Spring 2026
  - Analyses — Spring/Summer 2026
  - Report and Public Workshop/Hearing — Fall/Winter 2026
  - FAA Record of Approval (180 Day Review) — 2027

Project Goals and Objectives

- Initial Part 150 Study completed in 1985; updates completed in 1992, 2002, and 2014
- Educate communities on federal requirements
  - What is included in the Study (limited to aircraft noise)
  - What can and cannot be done to address aircraft noise
- Clearly detail the Study process
  - Determine existing/future noise in the vicinity of airport
  - Identify all noncompatible land uses
  - Identify measures to improve compatibility

Extensive Outreach Program

- Public Meetings
  - NEM Workshops will be held on Sept. 30th, Oct 2nd, Oct 4th, and virtually on October 15th
- Technical Review Committee
- StART Committee Engagement
- Targeted Community Outreach
  - Community-Based Organizations
  - Community Leaders
  - Community events (festivals, farmers markets, etc.)
  - Public notices (posted locally)
- Website/Newsletters, Mailing Lists, etc.

Land Use Consultation

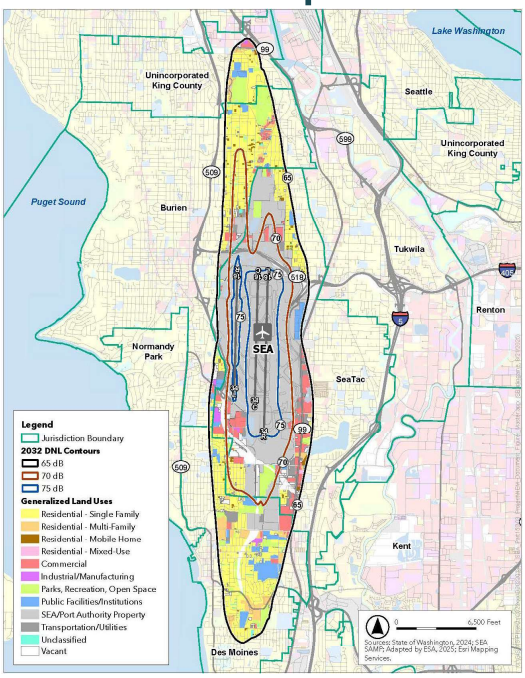
Land Use Consultation

- 14 CFR Part 150 requires consultation with land use jurisdictions who have noncompatible land uses within 65 DNL contour
  - Residential, schools, places of worship, hospitals, nursing homes, daycare facilities, etc.
  - Validation of information presented in NEMs
  - Identify any potential changes to land uses within forecast timeline (2032)
  - Discuss potential NCP land use measures
- Meeting with other area jurisdictions as well
  - Validate land use information presented in report graphics
  - Discuss potential NCP land use measures

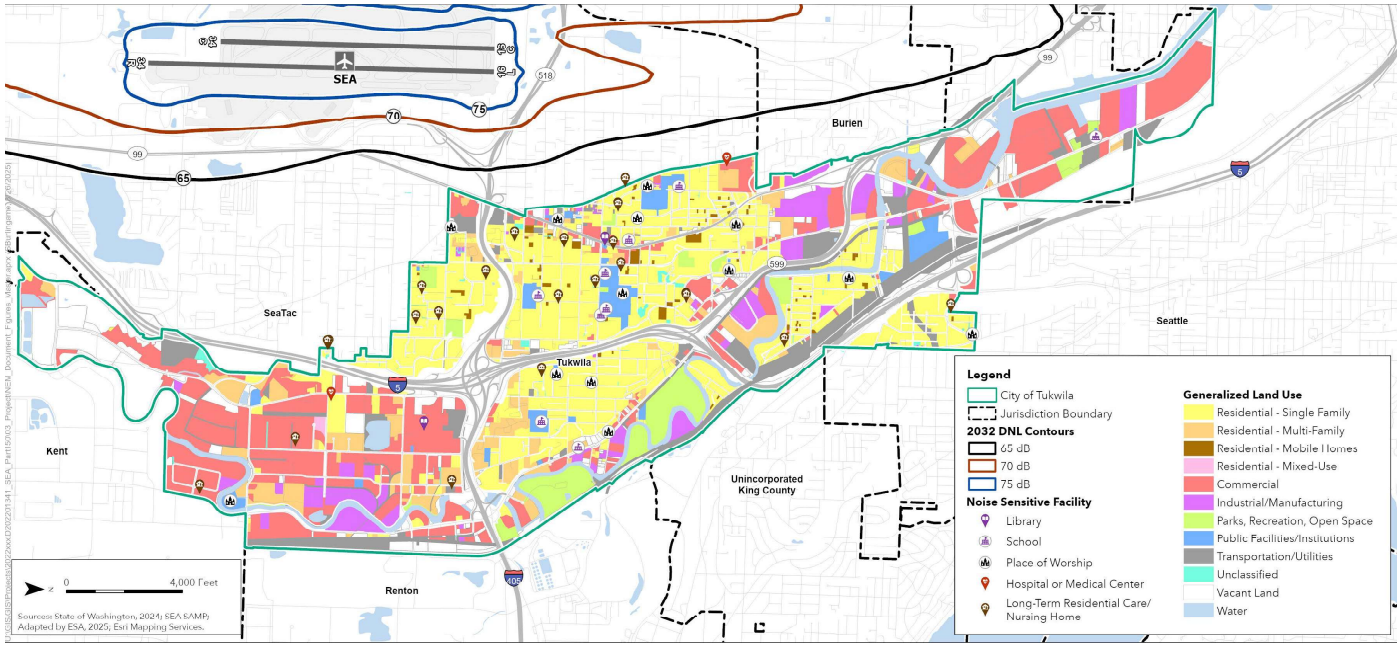
Noise Exposure Background

- FAA requires the use of Day-Night Average Sound Level (DNL) for airport noise assessments
  - 24-hour time weighted energy average noise level based on A-weighted decibels (dBA)
  - Noise occurring between 10 p.m. to 7 a.m. is penalized by 10 dB to account for the higher sensitivity to noise during the nighttime
  - Average Annual Day aircraft noise exposure is calculated over a broad area and then depicted using contour lines of equal noise levels
  - Years of analysis: 2022 and 2032; 2032 is used for the NCP

2032 Noise Exposure Map



Tukwila - Land Use Map



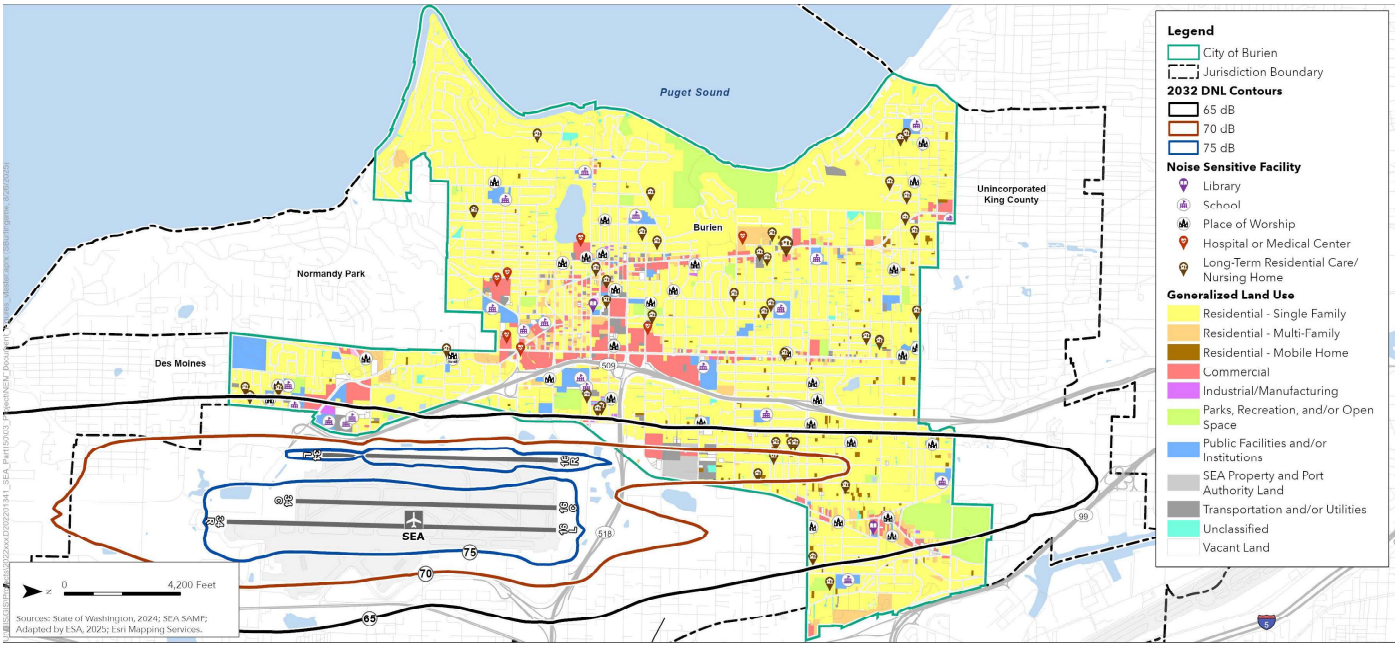
City of Tukwila Comprehensive Plan

The City establishes policies to “Work with the Port of Seattle, King County Airport, and the Federal Aviation Administration to decrease adverse effects of airport operations on Tukwila and its residents.”

The City also outlines a plan to “Ensure that zoning designations discourage the siting of incompatible uses adjacent to general aviation airports, and that proposed development adheres to Environmental Protection Agency and Federal Aviation Administration standards.”

City of Tukwila, *2024-2044 Comprehensive Plan*, Policies LU 8.5 and 8.6, December 2024.

Burien - Land Use Map



Burien - Land Uses Within 2032 NEM

Land Use	2032 DNL 65+ Acreage	Jurisdiction Total
Residential - Single Family	534.8	3,820.9
Parks, Recreation, and/or Open Space	97.0	347.5
Commercial	45.4	287.0
Public Facilities and/or Institutions	34.9	262.4
Transportation and/or Utilities	34.9	87.7
Vacant Land	32.7	61.2
Residential - Multi-Family	28.8	174.6
SEA Property and Port Authority Land	25.3	25.3
Residential - Mobile Home	16.5	40.2
Unclassified	5.1	197.5
Industrial/Manufacturing	4.2	9.1
Residential - Mixed-Use	0.0	2.7
TOTAL	**859.7**	**5,316.1**

Noise Sensitive Sites	65-70 DNL	70-75 DNL	75+ DNL	Total
Residences				
Residential - Single Family	1,525	326	0	**1,851**
Residential - Multi-Family	725	6	0	**731**
Residential - Mobile Home	39	13	0	**52**
Total Dwelling Units	**2,289**	**345**	**0**	**2,634**
Other Noise Sensitive Sites				
Place of Worship	7	0	0	**7**
Schools	3	0	0	**3**
Hospitals	0	0	0	**0**
Historic Resources	0	0	0	**0**
Libraries	1	0	0	**1**
Nursing Homes	9	2	0	**11**

City of Burien Comprehensive Plan

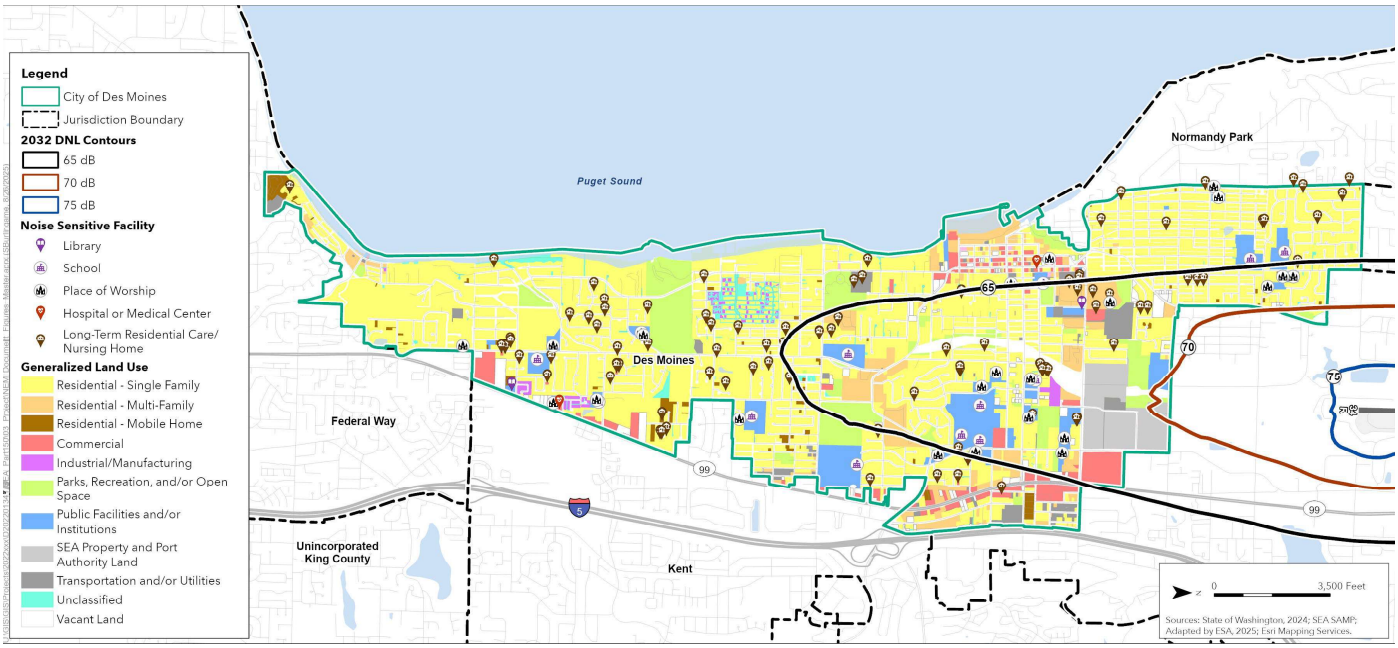
The City of Burien proposes to address noise and other emissions emanating from the Airport through a policy of making "best use of air and noise impacted land that is unhealthy for humans, especially in the Sea-Tac Airport flight path and near highways, by allowing employment uses where people can work in controlled environments or land uses that are not harmed by air and noise pollution."

City of Burien, *Burien 2044: Our Comprehensive Plan*, Policy 2.8-5, October 2024.

"The Northeast Redevelopment Area (NERA) hosts industrial and commercial uses on lands impacted by air and noise from SEA-TAC Airport. The Federal Aviation Administration (FAA" restricts land uses in approximately half of the NERA."

City of Burien, *Burien 2044: Our Comprehensive Plan*, Burien Places, October 2024.

Des Moines - Land Use Map



Des Moines - Land Uses Within 2032 NEM

Land Use	2032 DNL 65+ Acreage	Jurisdiction Total
Residential - Single Family	531.9	2,046.5
Public Facilities and/or Institutions	134.6	259.3
Residential - Multi-Family	128.9	249.8
Parks, Recreation, and/or Open Space	106.9	269.8
SEA Property and Port Authority Land	105.1	105.1
Commercial	46.1	134.0
Transportation and/or Utilities	31.4	84.0
Vacant Land	30.3	74.9
Industrial/Manufacturing	6.7	23.3
Unclassified	6.3	59.9
Residential - Mobile Home	3.6	40.9
Residential - Mixed-Use	0.0	1.6
TOTAL	**1,131.7**	**3,349.1**

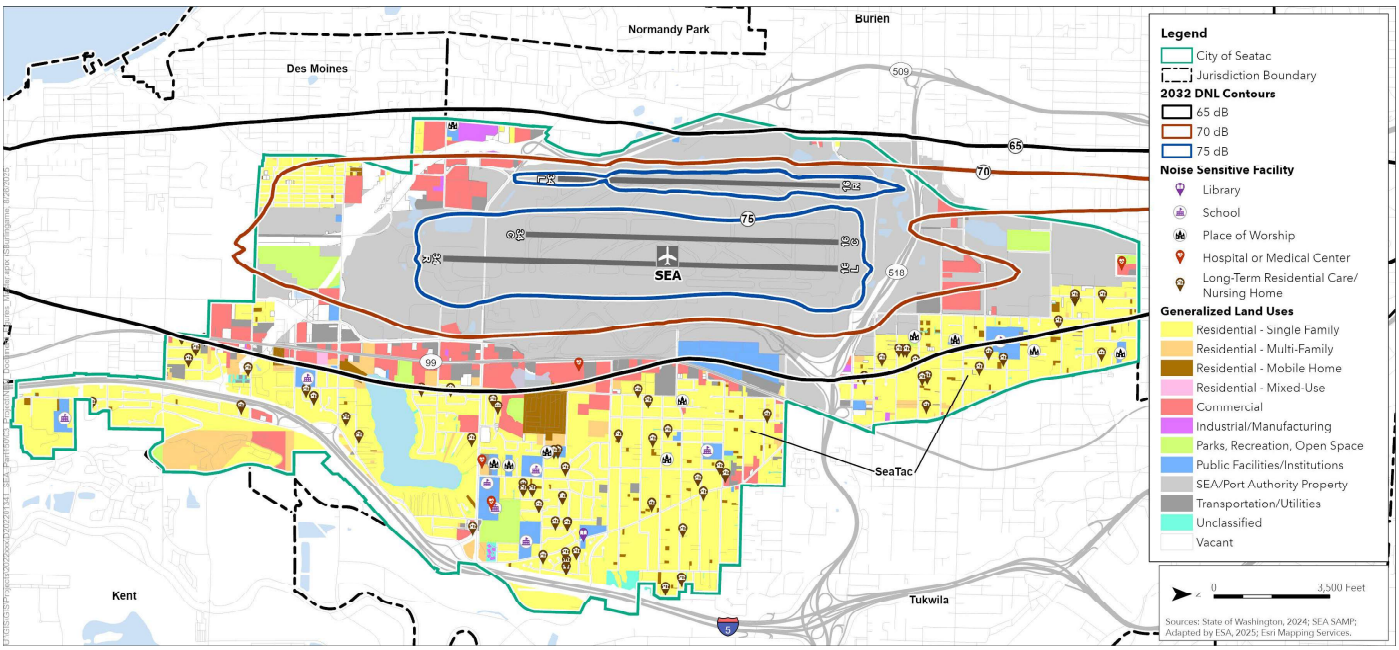
Noise Sensitive Sites	65-70 DNL	70-75 DNL	75+ DNL	Total
Residences				
Residential - Multi-Family	2,242	0	0	**2,242**
Residential - Single Family	2,050	31	0	**2,081**
Residential - Mobile Home	18	0	0	**18**
Total Dwelling Units	**4,310**	**31**	**0**	**4,341**
Other Noise Sensitive Sites				
Religious	12	0	0	**12**
Schools	7	0	0	**7**
Hospitals	0	0	0	**0**
Historic Resources	0	0	0	**0**
Libraries	1	0	0	**1**
Nursing Homes	25	0	0	**25**

Des Moines Comprehensive Plan

The City establishes policies to increase density and residential development, however there are specific policies addressing the need for compatibility with the Airport. Examples include a policy to avoid "siting future housing in close proximity to Sea-Tac Airport" and a policy to regulate "the siting of incompatible uses adjacent to the Sea-Tac Airport".

City of Des Moines, *2015 Des Moines Comprehensive Plan, Des Moines 2035: Charting our Course for a Sustainable Future*, Policies HOU 3.1.3 and LU 1.5.4, June 25, 2015.

SeaTac - Land Use Map



SeaTac - Land Uses Within 2032 NEM

Land Use	2032 DNL 65+ Acreage	Jurisdiction Total
SEA Property and Port Authority Land	2,494.5	2,527.3
Commercial	288.4	373.2
Residential - Single Family	236.6	1,701.7
Transportation and/or Utilities	92.0	144.6
Vacant Land	86.3	97.6
Parks, Recreation, and/or Open Space	79.3	123.3
Public Facilities and/or Institutions	66.3	188.1
Residential - Mobile Home	23.6	86.9
Residential - Multi-Family	21.6	146.3
Industrial/Manufacturing	19.9	23.3
Unclassified	4.5	20.2
Residential - Mixed-Use	2.9	2.9
TOTAL	**3,415.9**	**5,435.5**

Noise Sensitive Sites	65-70 DNL	70-75 DNL	75+ DNL	Total
Residences				
Residential - Multi-Family	1,052	11	0	**1,063**
Residential - Single Family	779	231	0	**1,010**
Residential - Mobile Home	100	8	0	**108**
Residential - Mixed-Use	1	0	0	**1**
Total Dwelling Units	**1,932**	**250**	**0**	**2,182**
Other Noise Sensitive Sites				
Religious	3	0	0	**3**
Schools	1	0	0	**1**
Hospitals	2	0	0	**2**
Historic Resources	0	0	0	**0**
Libraries	0	0	0	**0**
Nursing Homes	9	0	0	**9**

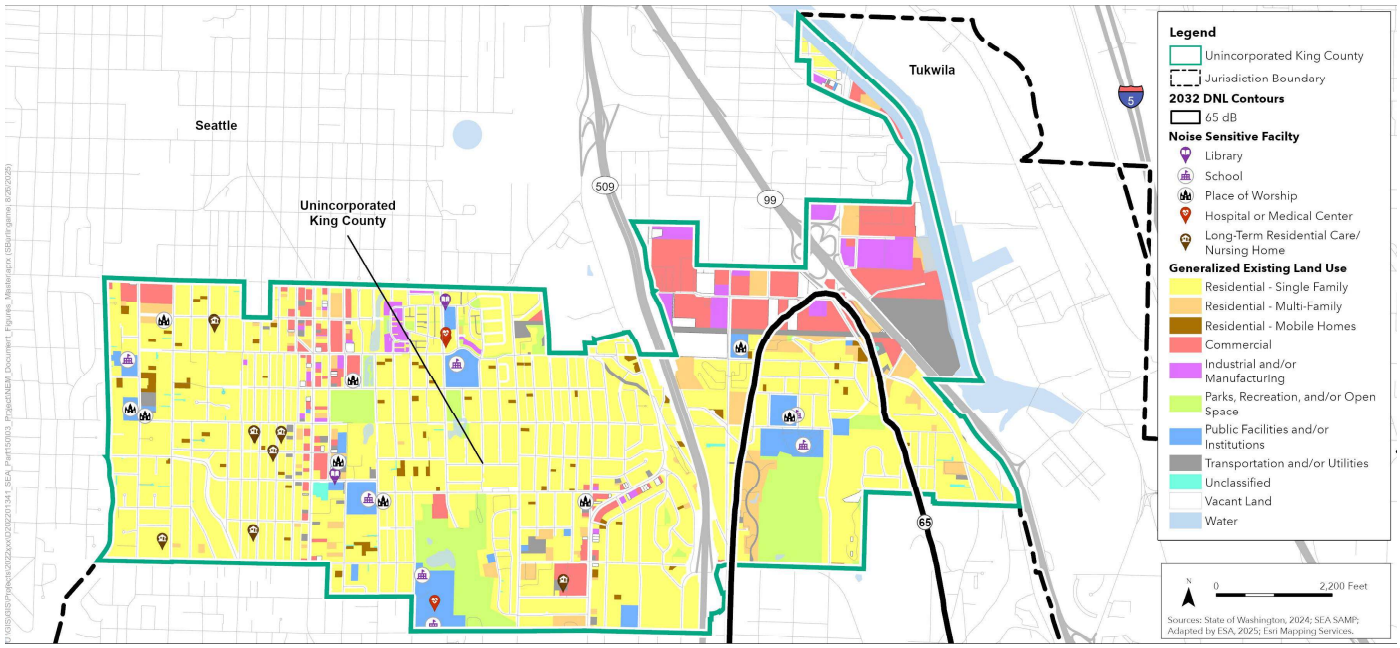
City of SeaTac Comprehensive Plan

The City envisions the formation of three distinct urban villages within the City, and the clustering of industrial land use near the Airport. The comprehensive plan addresses compatibility with SEA and includes a policy to "[p]rovide for the Airport and high intensity Airport-related facilities and activities."

Other Airport-related policies include a policy directed at encouraging "open space and passive park land, parking, transportation-related activities, and some manufacturing or business park uses" near the Airport and coordinating with the Port of Seattle on airport master planning efforts.

City of SeaTac, *Envision SeaTac 2044,* Policies 2.5C, 2.5D, and 2.5E, December 2024.

King County - Land Use Map



King County - Land Uses Within 2032 NEM

(Boulevard Park/White Center)

Land Use	2032 DNL 65+ Acreage	Jurisdiction Total
Residential - Single Family	114.9	1,069.7
Parks, Recreation, and/or Open Space	62.1	242.7
Residential - Multi-Family	26.4	85.7
Public Facilities and/or Institutions	22.9	89.6
Commercial	11.3	159.4
Transportation and/or Utilities	6.4	88.6
Vacant Land	3.5	50.0
Residential - Mobile Home	2.5	20.8
Industrial/Manufacturing	2.3	84.9
Unclassified	0.1	144.5
TOTAL	**252.3**	**2,035.8**

Noise Sensitive Sites	65-70 DNL	70-75 DNL	75+ DNL	Total
Residences				
Residential - Multi-Family	391	0	0	**391**
Residential - Single Family	385	0	0	**385**
Residential - Mobile Home	8	0	0	**8**
Total Dwelling Units	**784**	**0**	**0**	**784**
Other Noise Sensitive Sites				
Religious	1	0	0	**1**
Schools	2	0	0	**2**
Hospitals	0	0	0	**0**
Historic Resources	0	0	0	**0**
Libraries	0	0	0	**0**
Nursing Homes	0	0	0	**0**

King County Comprehensive Plan

The County identifies the unincorporated areas of the County proximate to SEA as Potential Annexation Areas to be annexed by adjacent cities. The undeveloped unincorporated areas proximate to the Airport are primarily designated for low- and medium-density residential development with some commercial use planned along major transportation corridors.

King County, *2024 King County Comprehensive Plan, p.2-20*, December 10, 2024.

Land Use Compatibility Strategies

Example NCP Measures

Noise Abatement

- Noise abatement flight tracks
- Run-up enclosures
- Airport layout modifications
- Preferential runway use
- Arrival/departure procedures
- Use restrictions*
- Other actions proposed by stakeholders

***Subject to further notice, review, and approval requirements in 14 CFR Part 161**

Land Use

- Remedial Mitigation
  - Land acquisition
  - Sound insulation
  - Aviation easements
- Preventative Mitigation
  - Land use controls
  - Zoning and overlay zoning
  - Building codes
  - Comprehensive plans
  - Real estate disclosures
- Other actions proposed by stakeholders

Program Management

- Implementation tools
- Promotion, education, signage, etc.
- Monitoring
- Reporting
- NEM update
- NCP revision
- Other actions proposed by stakeholders

2014 Part 150 Study Recommendations*

- Noise Abatement Measures (2)
  - Construct a Ground Run-Up Enclosure (this was later determined to be infeasible)
  - Expand the Fly Quiet Program
- Land Use Mitigation Measures (3)
  - Sound insulate multi-family units based on updated Noise Remedy Boundary (NRB)
  - Offer avigation easements to mobile home residents
  - Evaluate noise levels at places of worship for inclusion in the Sound Insulation Program
- Program Management Measures (3)
  - Upgrade Noise Monitoring and Flight Tracking System
  - Periodically review and update the NEM and NCP as necessary
  - Continue to operate the Noise Office

*These are measures that were newly recommended in the 2014 Part 150 Study.

FAA Evaluation Criteria for NCP Measures

- All Land Use Measures Must:
  - Reduce incompatible land use and/or prevent or reduce future incompatible land use
  - Ensure safety and efficiency
  - Be consistent with the powers and duties of the FAA
  - Be subject to revision if necessary
- Noise Abatement Measures Must:
  - Not unjustly discriminate
  - Not impose an undue burden on interstate commerce (requires balancing of interests)
  - Meet both local needs and national air transportation system needs

Options for Consideration by Municipalities

Noise Overlay Zoning

- Augments/enhances traditional zoning controls by focusing on noise-related requirements for a specific area
- Implemented by local jurisdictions consistent with state enabling legislation
- Can be used based on noise contours and/or overflight activity (can exist beyond DNL 65 contour if desired)
- Typically includes provisions establishing:
  - Specific requirements tied to noise contours
  - Modifications to permitted land uses in underlying zones
  - Avigation easement/disclosure requirements for new or redeveloped noise sensitive uses
  - Required exterior-to-interior noise level reductions to provide a maximum interior noise level of 45 dBA
  - Procedures for variances

Options for Consideration by Municipalities

Noise Overlay Zoning: Benefits

- Establishes **definitive requirements** within overlay zone for:
  - Permitted uses based on 14 CFR Part 150 criteria
  - Conditionally permitted uses based on sound level reduction construction/retrofitting
  - Criteria for new development vs. infill and improvements
- **Enhances compatibility** of new or redeveloped land uses within noise contours through **sound level reduction requirements**
- Focused on **mitigating key noise related issues** (e.g., nighttime awakening, communication interruption)
- Can be used to implement actions **beyond the DNL 65 contour** (e.g., disclosure)
- Consistent with **protecting public, health, safety, and general welfare**
- Noise compatibility requirements are contained within a **single zoning section** in an ordinance rather than multiple sections

Options for Consideration by Municipalities

Noise Overlay Zoning: Challenges

- Most-suited areas experiencing new or large-scale redevelopment
- Increased regulations can be locally controversial
- Can create new non-conforming uses inside the noise zones
- Adds additional requirements to existing codes and administrative requirements
- More-stringent new construction/renovation requirements inside noise overlay zone can be politically sensitive
- Places additional workload on municipal land use planners

Options for Consideration by Municipalities

Building Code Revisions for Noise Level Reduction

- Provides guidance to **planners, building officials, and contractors** not well-versed in noise compatibility
- Can work independently or in conjunction with **noise overlay zoning**
- Effective tool for **ensuring noise attenuation** in new development or significant reconstruction
- Improves interior **quality of life** for dwelling residents
- Provides **quieter internal living spaces**, mitigating impacts associated with:
    - Sleep awakening and interruption
    - Impacts to audio/TV entertainment
    - Disruption of normal conversation

Options for Consideration by Municipalities

Building Code Revisions for Noise Level Reduction

- Applied to **new structures** considered to be noise sensitive (i.e., within the DNL 65 and higher contours)
- FAA criteria define an interior noise level of **not greater than 45 dBA***
- Extent of Noise Level Reduction (NLR) to meet a 45 dBA interior sound level varies by noise contour; minimum NLR is typically:
  - 25 dB reduction in the DNL 65-70 contour area
  - 30 dB reduction in the DNL 70-75 contour area
  - 35 dB reduction in the DNL 75+ contour area (noise sensitive uses should be precluded)
  - Typical newer construction achieves approximately 20 dB reduction

* Airport Improvement Program Handbook. FAA Order 5100.38D. Federal Aviation Administration. September 30, 2014.

Options for Consideration by Municipalities

Building Code Revisions for Noise Level Reduction

- Applied to **existing structures** undergoing renovation, conversion, or expansion
  - Additions, alterations, and repairs to existing structures (typically applies only to the improvements being made)
  - Change of a non-noise sensitive building to a human occupancy use within a noise zone
- If soundproofing is undertaken, **specific construction requirements** will be required to guide material selection and construction

Options for Consideration by Municipalities

Real Estate Fair Disclosure

- Requires potential buyers be informed of proximity to airport, potential for aircraft noise, and information about the noise prior to purchase
- The signed disclosure document is legally filed with the deed at time of purchase
- Disclosure **can be limited to impacted areas, or be more broadly employed at jurisdiction's discretion** to include areas of concentrated flight operations
- Current state law could **exempt sellers** from a requirement to disclose noise-related impact
- Disclosure would require local legislative action to include **aircraft related noise**
- General view is that disclosure requirements are not sufficient to trigger a regulatory taking

Options for Consideration by Municipalities

Real Estate Fair Disclosure: Benefits

- Potential buyers can make informed decisions about noise; mitigates "not knowing" about airport activity
- Recordation of disclosure provides a level of protection for the airport, municipality, and seller
- Informs real estate community of noise levels in the vicinity of the airport
- Reduces seller's liability for post-sale claims since buyers sign disclosure up-front

Real Estate Fair Disclosure: Challenges

- Disclosures do not reduce noise
- Adverse reaction from:
  - Real estate community
  - Property owners concerned with buyers walking away
- Amendments to legislative acts would need to occur on the local level
- To be successful, enforcement of policies is necessary

Q&A/Open Discussion