Open House #3

November 18, 2026

ANC PART 150 Noise Compatibility Study

Purpose of Study

- **The Study identifies and evaluates two components:**
  - Aircraft noise
  - Land use
- **The Study consists of two distinct, but complementary portions:**
  - Noise Exposure Map (existing and forecast conditions)
  - Noise Compatibility Program
- **The Study generally has a five-year planning horizon**

Noise Exposure Map (NEM) **is accepted by the Federal Aviation Administration.**

Noise Compatibility Program (NCP): **Measures are either approved or disapproved by the FAA. Approved measures contained in the Noise Compatibility Program are potentially eligible for federal funding.**

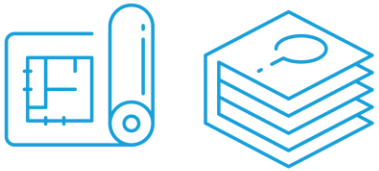
SPRING 2025

SPRING 2027

Study Process

FAA Process

1. Inventory of Existing Conditions
2. Noise Monitoring
3. Generate Existing & Future Base Case Noise Contours



4. Noise/Land Use Effects - Develop Feasible Alternatives
5. Evaluate Feasible Alternatives
6. Combine & Refine Feasible Alternatives

7. Recommended Alternatives for Implementation
8. Prioritize Recommendations



9. Develop Noise Contours
10. Develop Noise Compatibility Program
11. Public Hearing & Adoption

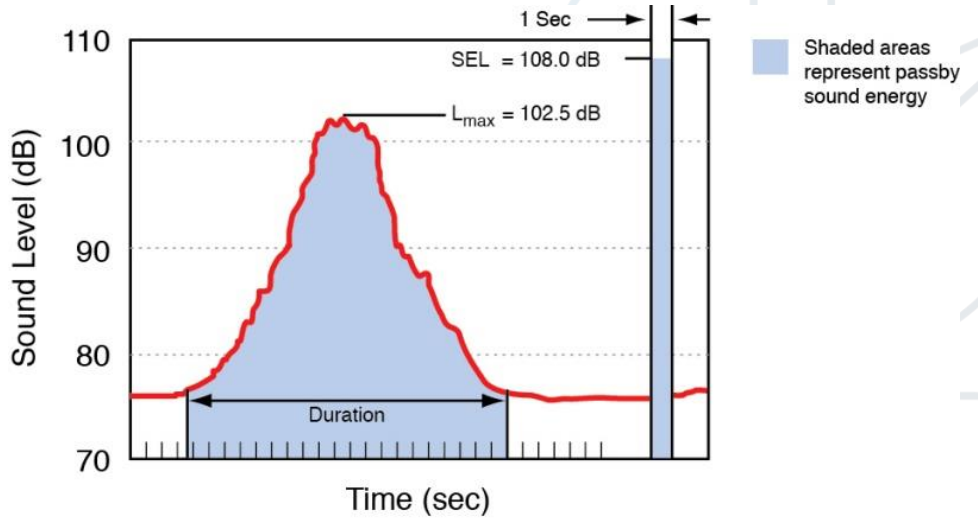


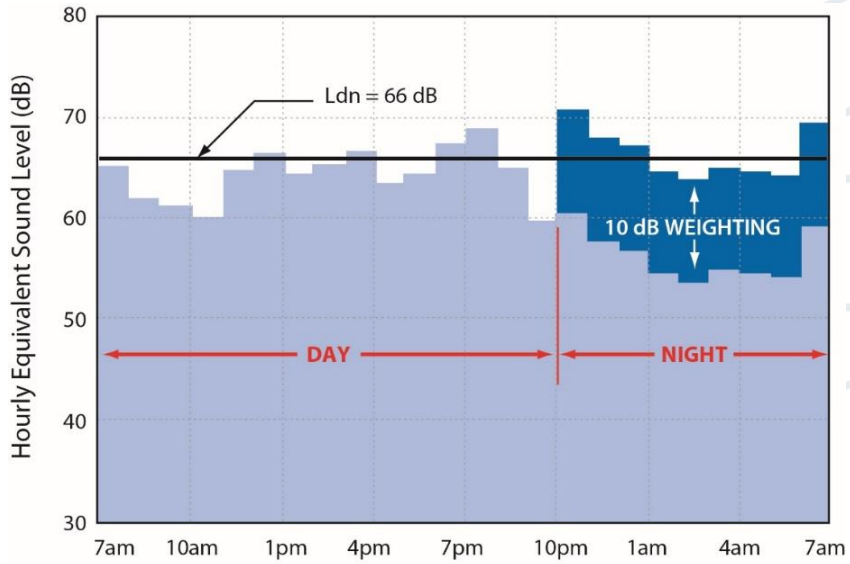
12. Submit Programs to FAA
13. FAA Accepts Noise Exposure Map
14. FAA Approves or Disapproves Noise Compatibility Program Measures

Study Process

Noise Terminology Refresh

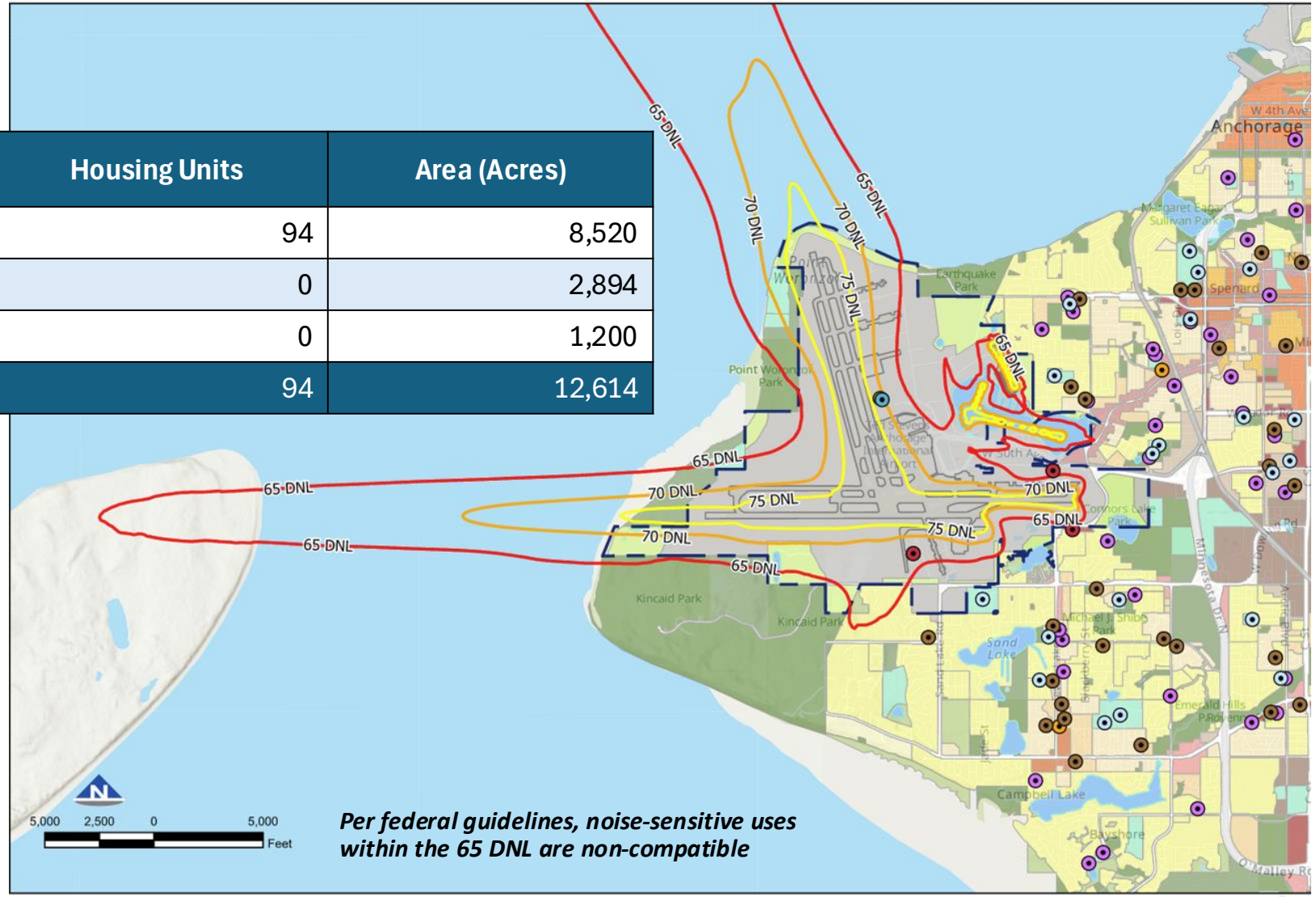
- **Maximum sound level (L_{max})** is the loudest noise level during an event (e.g., aircraft flyover)
- **Sound Exposure Level (SEL)** is the total noise energy (level and duration) of the event
- **Day Night Average Sound Level (DNL)**
  - Describes the noise dose for a 24-hour period
  - Accounts for event "noisiness" (SEL)
  - Accounts for number of noise events
  - Provides an additional weighting for nighttime operations:
    - Daytime is defined as 7:00 am to 10:00 pm
    - Nighttime is defined as 10:00 pm to 7:00 am





2026 Draft Noise Contours

2026 Contours	Population	Housing Units	Area (Acres)
> 65 DNL	248	94	8,520
> 70 DNL	0	0	2,894
> 75 DNL	0	0	1,200
Total	248	94	12,614



Per federal guidelines, noise-sensitive uses within the 65 DNL are non-compatible

Legend

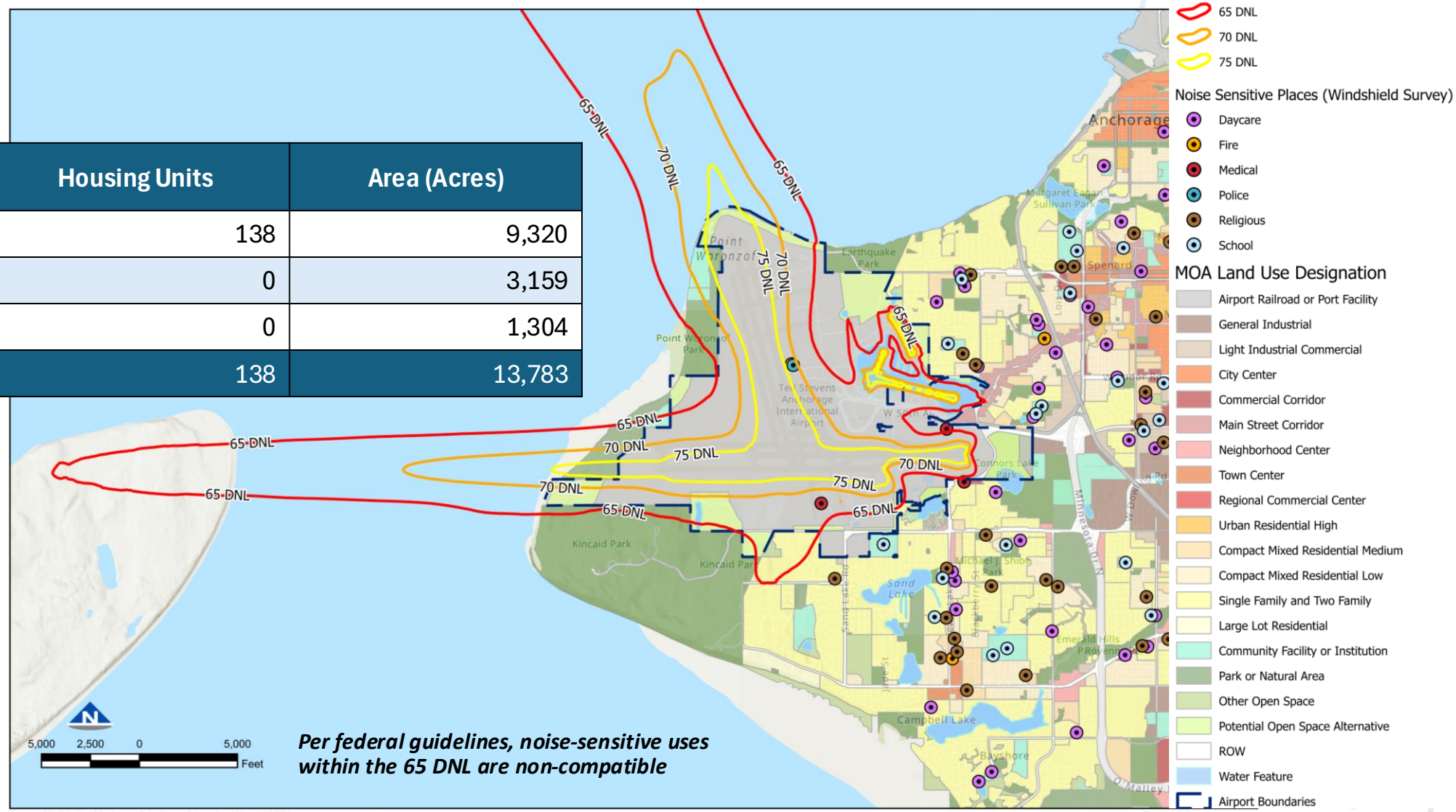
2026 Noise Contours
- 65 DNL
- 70 DNL
- 75 DNL

Noise Sensitive Places (Windshield Survey)
- Daycare
- Fire
- Medical
- Police
- Religious
- School

MOA Land Use Designation
- Airport Railroad or Port Facility
- General Industrial
- Light Industrial Commercial
- City Center
- Commercial Corridor
- Main Street Corridor
- Neighborhood Center
- Town Center
- Regional Commercial Center
- Urban Residential High
- Compact Mixed Residential Medium
- Compact Mixed Residential Low
- Single Family and Two Family
- Large Lot Residential
- Community Facility or Institution
- Park or Natural Area
- Other Open Space
- Potential Open Space Alternative
- ROW
- Water Feature
- Airport Boundaries

2031 Draft Noise Contours

2031 Contours	Population	Housing Units	Area (Acres)
> 65 DNL	365	138	9,320
> 70 DNL	0	0	3,159
> 75 DNL	0	0	1,304
Total	365	138	13,783



ANG PART 150 Noise Compatibility Study

Alternatives

Part 150 requires evaluation of alternatives that:

- Reduce existing noncompatible uses
- Prevent or reduce the probability of the establishment of additional noncompatible uses
- Do not impose undue burden on interstate and foreign commerce
- Provide for revision in accordance with §150.23
- Are not unjustly discriminatory
- Do not derogate safety or adversely affect the safe and efficient use of airspace

Generalized Categories of Alternatives



Goals of Alternatives

- **Part 150 specifies use of the 65 DNL noise contour as the threshold contour for land use compatibility**
- **Residential land uses within the 65 DNL or greater noise contour are not compatible unless the residence has sound attenuation**
- **Part 150 requires evaluation of alternatives that:**
  - To the extent practicable, meet both local needs and needs of the national air transportation system, considering tradeoffs between economic benefits derived from the airport and the noise intrusion
  - Can be implemented in a manner consistent with all the powers and duties of the FAA Administrator

Considerations for Alternatives

- Does the action shift noise without meaningful overall noise reduction?
- Does the action affect safety?
- Does the action reduce airport capacity?
- Can the FAA approve and be able to implement the procedure?
- Does the procedure violate any existing statutes, rules or regulations, or grant assurances?
- How effectively does the action reduce noise?
- Does the action result in newly affected populations?
- Do either the FAA, the Airport, or local jurisdictions control the ability to implement the potential measures?

Required Part 150 Operational & Facility Alternatives for Consideration

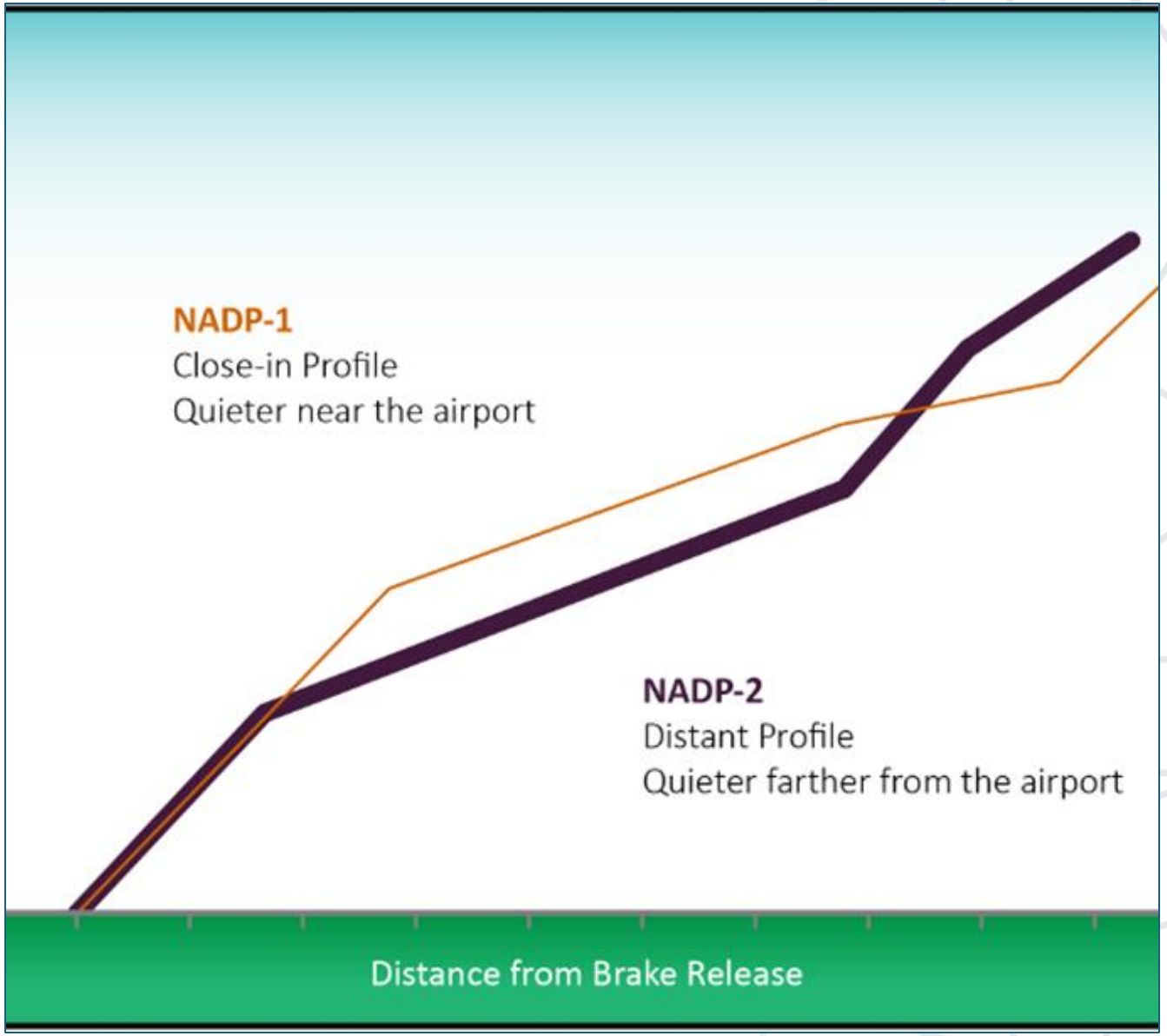
- **Aircraft Operations**
  - Departure Thrust Cutback (Departure Climb Profile)
  - Potential Modifications to Flight Procedures
- **Airport and Airspace Use**
  - Preferential Runway Use System
  - Power and Flap Settings
  - Limited by Part 161
    - *Capacity Limits Based on Defined Noise Limits*
    - *Landing Fees Based on Noise*
    - *Complete or Partial Curfews*
    - *Ban All Jet Aircraft*
    - *Touch-and-Go Restrictions*
    - *Denial of Use of Airport for Aircraft Not Meeting Federal Noise Standards*
- **Airport Facilities**
  - New Runway in Different Orientation
  - Runway Extension
  - High-Speed Exit Taxiways
  - Ground Run-Up Enclosure
  - Noise Barriers
  - ***Note: These are alternatives required for review under Part 150. Some alternatives, particularly airfield alternatives are likely not feasible.***

Part 161: Restricts airport's ability to regulate airport access based on noise

Departure Profiles

- **Standard: Typical Departure Procedure in AEDT**
- **NADP-1 (ICAO A): Close-in Profile**
  - 1,500 ft AFE thrust reduction
  - Climb to 3,000 ft AFE
- **NADP-2 (ICAO B): Distant Profile**
  - 1,000 ft AFE thrust reduction
  - Climb to 3,000 ft AFE

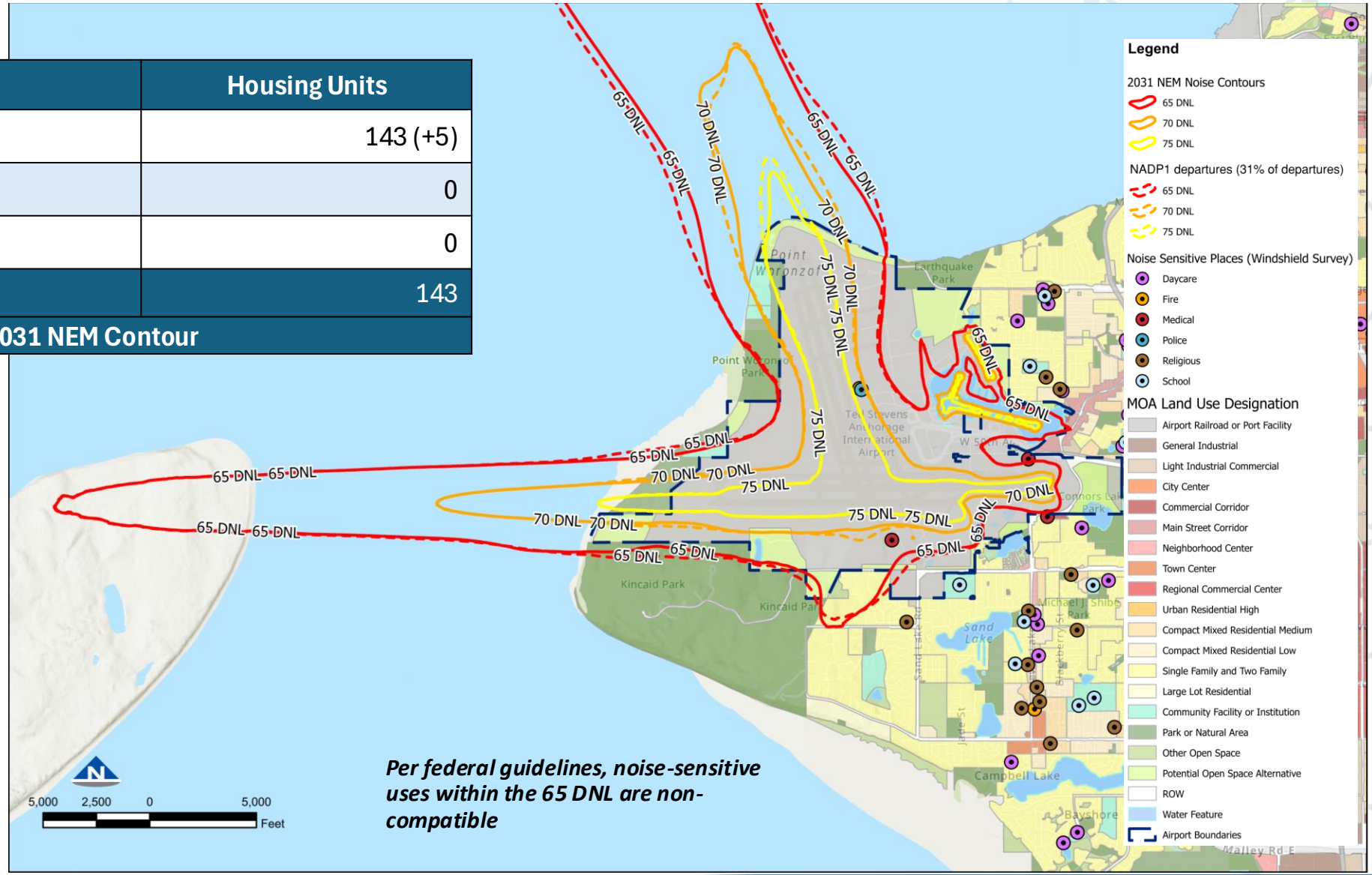
AFE – Above Field Elevation



Noise Abatement Departure Procedure 1 (31% of departures)

2031 Contours	Population	Housing Units
> 65 DNL	379 (+14)	143 (+5)
>70 DNL	0	0
>75 DNL	0	0
Total	379	143
(+/- #) Change from 2031 NEM Contour		

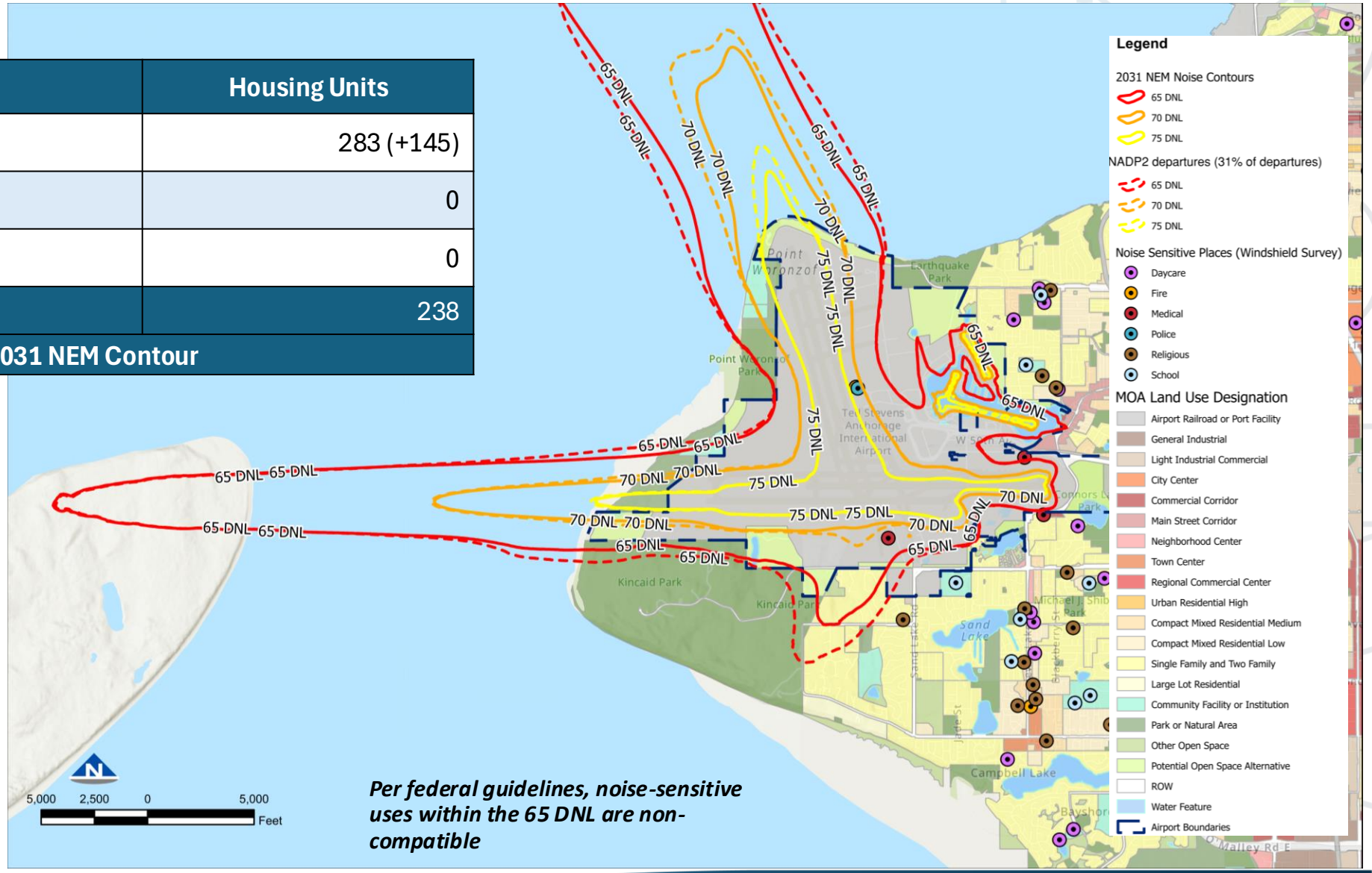
Airports can use Noise Abatement Departure Procedures to reduce noise based on how planes depart. These are most relevant to older aircraft that are typically louder than modern planes. Noise Abatement Department Procedure 1 reduces noise levels close to airports. When applied to the ANC noise contours, this results in minimal changes to the number of households inside the noise contours.



Noise Abatement Departure Procedure 2 (31% of departures)

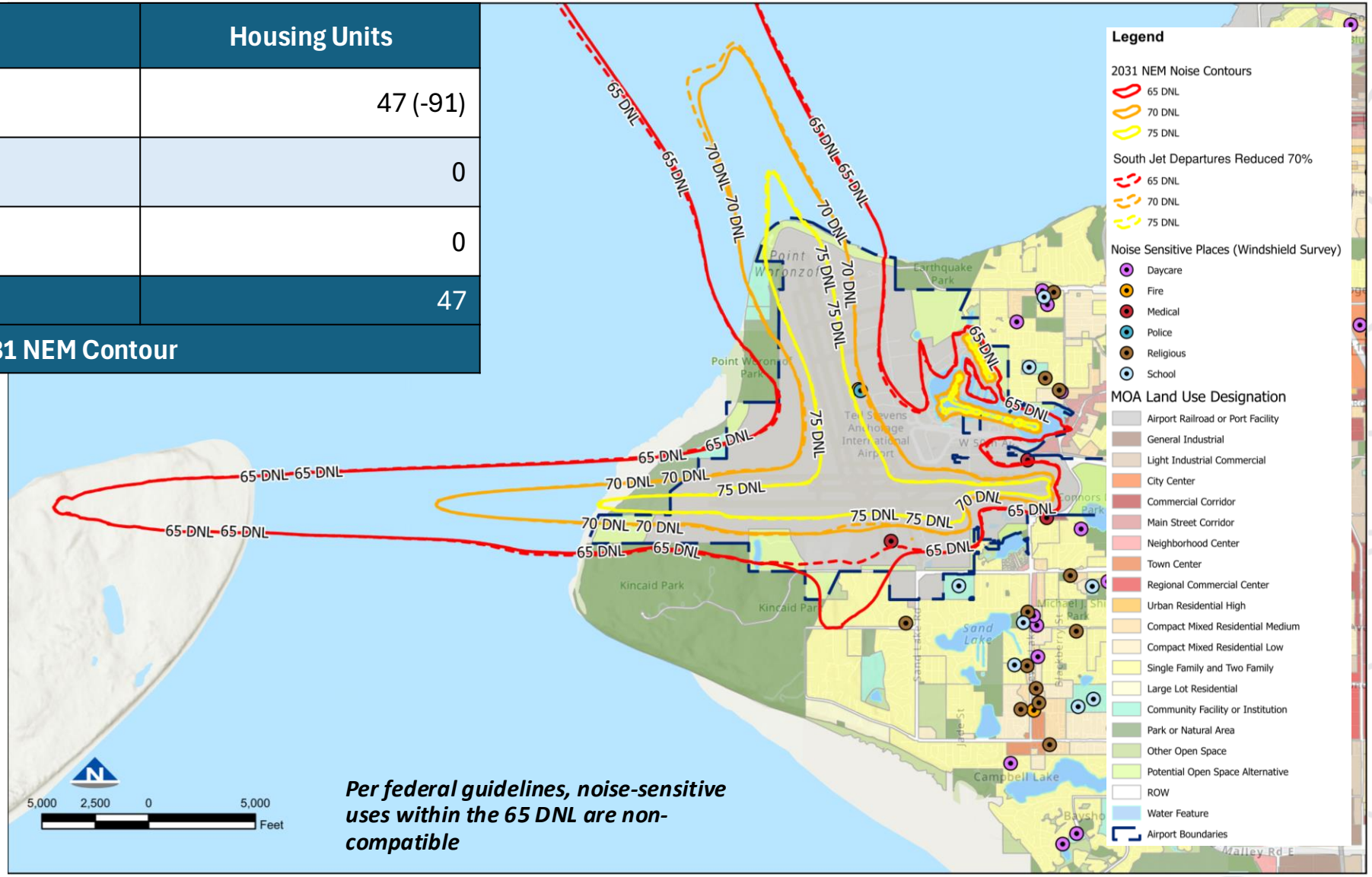
2031 Contours	Population	Housing Units
> 65 DNL	773 (+408)	283 (+145)
> 70 DNL	0	0
> 75 DNL	0	0
Total	773	238
(+/- #) Change from 2031 NEM Contour		

Airports can use Noise Abatement Departure Procedures to reduce noise based on how planes depart. These are most relevant to older aircraft that are typically louder than modern planes. Noise Abatement Department Procedure 2 reduces noise levels farther from airports. When applied to the ANC noise contours, this increases the number of households inside the noise contours.



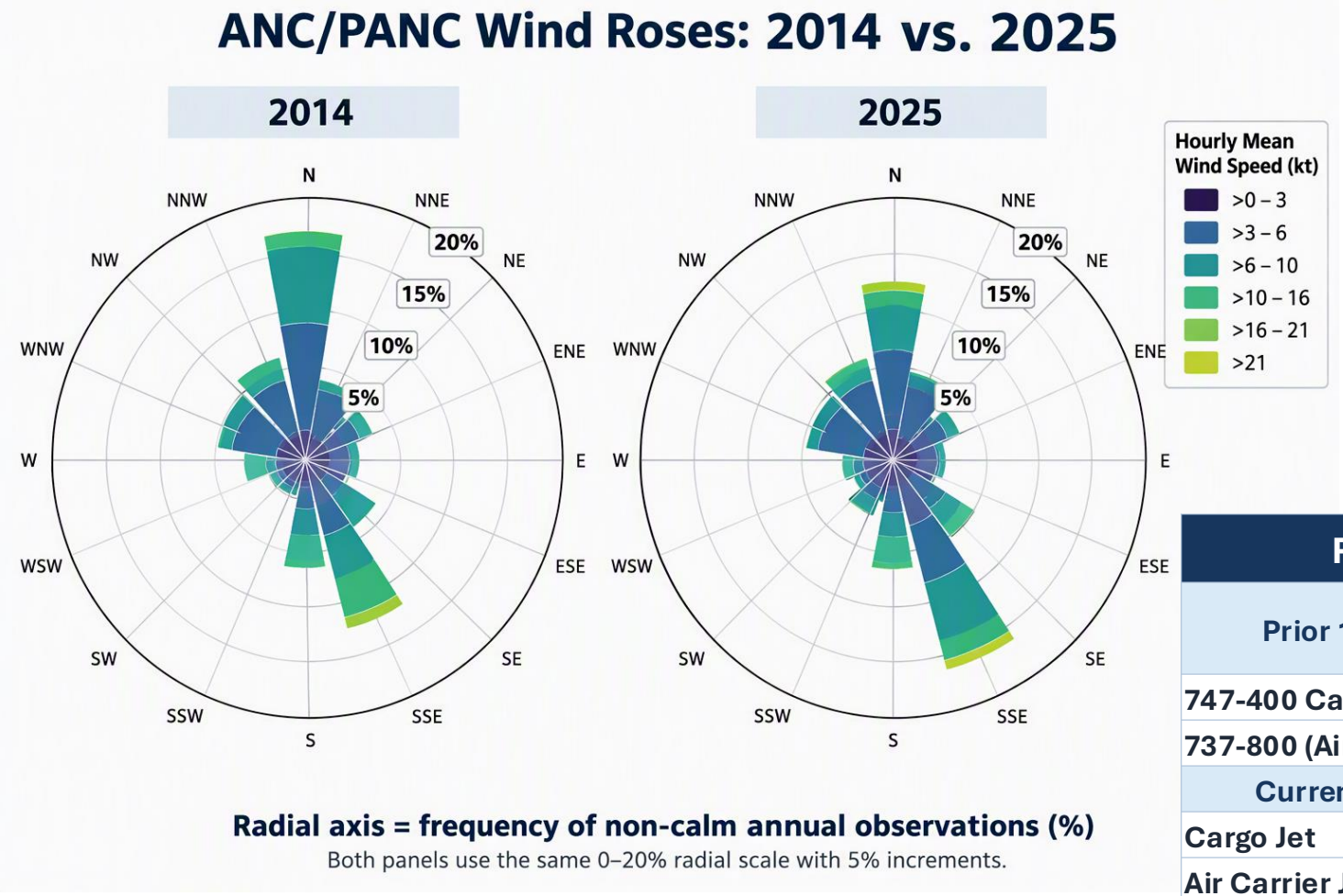
Nighttime Cargo Jet Departures South Reduced 70%

2031 Contours	Population	Housing Units
> 65 DNL	107 (-258)	47 (-91)
> 75 DNL	0	0
> 75 DNL	0	0
Total	107	47
(#) Change from 2031 NEM Contour		



Note: This analysis assumes a 70% reduction in southbound cargo departures. Achieving this reduction is highly dependent on wind direction, air traffic control procedures, and safety considerations. Given operational requirements, the feasibility of a 70% reduction in southern departures is unlikely.

Follow Up on Runway Use Changes



...has led to changed operational patterns

Representative Shift in Runway 15 Operations				
Prior 150 Study	**Arrivals Day**	**Arrivals Night**	**Departures Day**	**Departures Night**
747-400 Cargo (Cargo Jet)	12.5%	16.5%	5.5%	5.8%
737-800 (Air Carrier Jet)	15.1%	16.4%	2.9%	6.1%
Current Study				
Cargo Jet	33.1%	35.0%	12.7%	17.1%
Air Carrier Jet	38.8%	40.5%	3.3%	6.2%

Changes in wind conditions...

Potential Land Use & Administrative Alternatives

- **Land Use Measures – Mitigation**
  - Acquisition of Land or Interest Therein
  - Sound Insulation
- **Land Use Measures – Preventive**
  - Zoning
  - Easements
  - Transfer of Development Rights
  - Building Code Modifications
  - Capital Improvements Program
  - Subdivision Regulations
  - Comprehensive Planning
- **Noise Program Management**
  - Noise Monitoring Program
  - Voluntary Fly Quiet Program

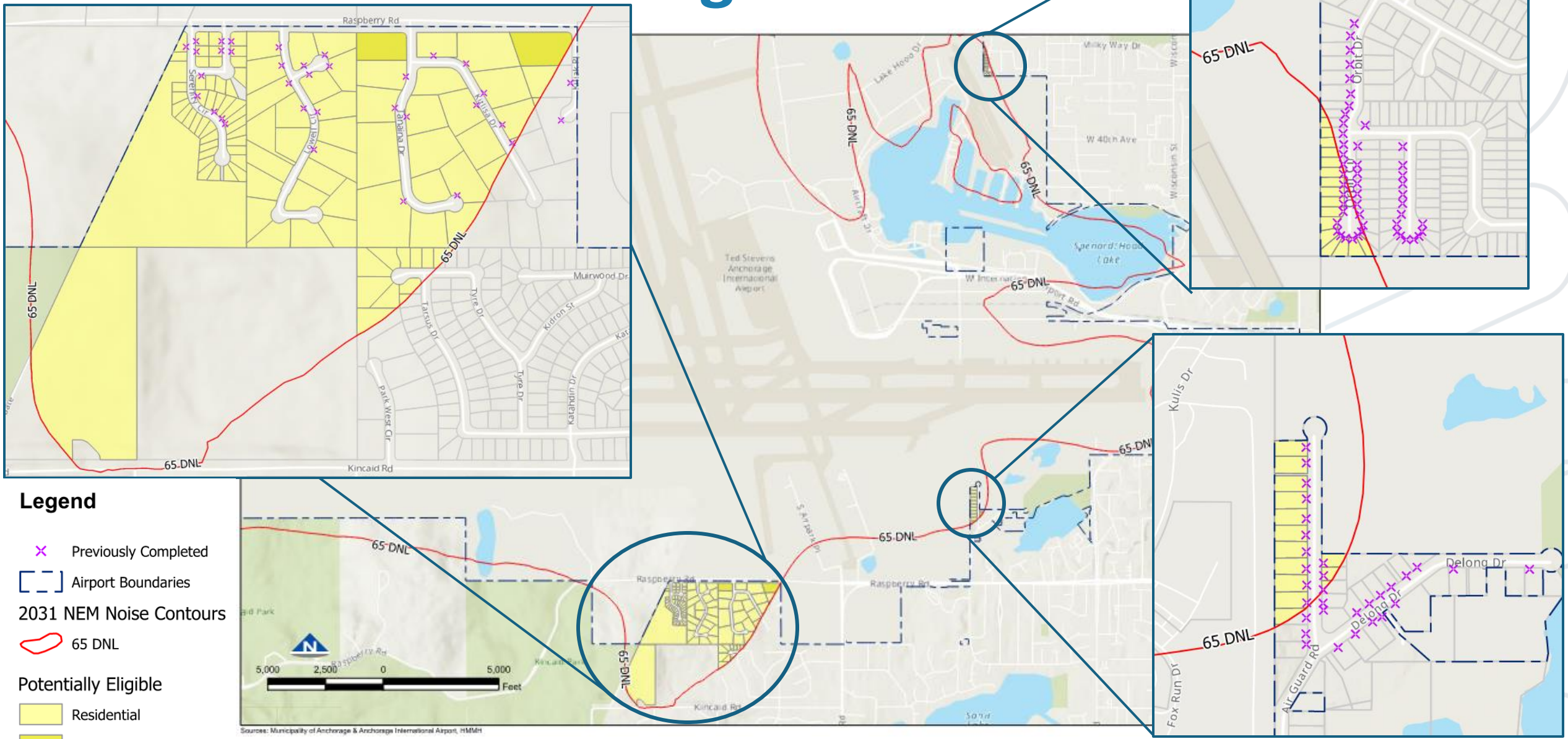
Land Use Measures Comparison

Land Use Measure	Comparison to Previous Study	Summary of Changes
Previous 150 - Voluntary Sound Insulation of Noise Sensitive Structures Within the 65 DNL Noise	Revised	• Updated to new 65 DNL
Previous 150 - Disclosure Statements/ Buyer Notification Previous 150 - Zoning Code Changes/ Noise Overlay Zone	Revised and Combined	• Updated/combined these two measures • AIA Overlay would encompass this measure and incorporate Disclosure Statements/Buyer Notification
Previous 150 - Building Code Requirements	Revised	• Recommend Outdoor-Indoor Transmission Class (OITC) ratings of 30-32 inside the 65 DNL and 25-27 outside the 65 DNL
Previous 150 - Comprehensive Plan Amendments	Continued	• Anchorage 2040 Land Use Plan and West Anchorage District Plan discuss Airport Overlay to minimize non-compatible land use around the airport • Typical Comprehensive Plan updates every 5-10 years
Recommended - Quarterly Planners Forum	New	• Airport and Municipality of Anchorage - discuss proposed developments, planning policies, land use compatibility issues, and emerging growth trends within the ANC environs

Sound Insulation Program

- **Continuation of 2015 Voluntary Sound Insulation of Noise Sensitive Structures Within the 65 DNL Noise**
- **Set up a sound insulation program to provide treatment to noise-sensitive structures within the 65 DNL or greater noise levels**
- **Under the 2031 forecast condition, the land use compatibility analysis identifies:**
  - Approximately 138 residential units potentially noncompatible
  - 3 noise-sensitive sites (1 each fire, medical, police) potentially noncompatible – airport police and fire and LifeMed air ambulance
  - Eligibility
    - Additional units may be excluded due to local code restrictions or other eligibility limitations
    - Built prior to October 1, 1998
    - Noise testing finds the interior noise level $\geq$ 45 dB

Sound Insulation Program



Legend

- Previously Completed
- Airport Boundaries

2031 NEM Noise Contours

- 65 DNL

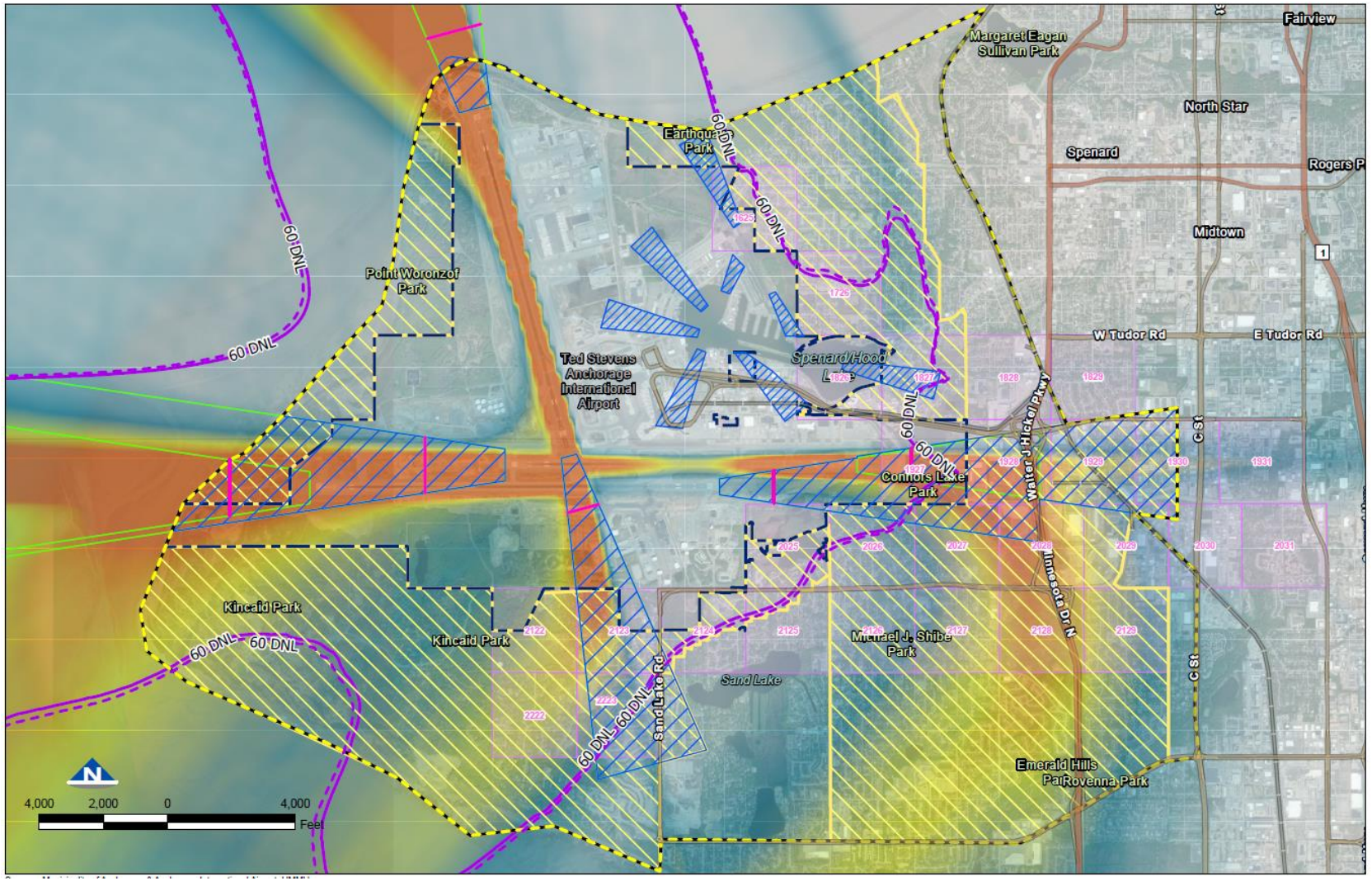
Potentially Eligible

- Residential
- Residential Plus ADU

Airport Influence Area Overlay Development

- **The Draft Airport Influence Area Factors Map shows the technical elements that were used delineate two zones for the Draft Airport Influence Area Overlay: Airport Influence Area (yellow and black dotted line) and Restricted Development Area (yellow hatch).**
  - 2031 60 DNL contour (solid purple line)
  - 2036 60 DNL contour (dotted purple line)
  - Approach zones and Runway protection zones for both ANC and Lake Hood based on federal standards for where airspace needs to be protected (hatched blue areas)
  - Flight track density combined for all approaches and departures shows the concentration of aircraft operations for all primary traffic patterns (graduated color scale with highest in orange and lower in yellow and blue
  - Municipality grid maps where development projects are currently referred to the airport for review (light pink numbered squares)
- **The draft zones and criteria are preliminary.**
- **Overlay would only apply to future development and redevelopment. Implementation would be up to the Municipality, as the local land use authority.**

Draft Airport Influence Area – Considerations



Legend

- Airport Influence Area
- Restricted Development Area
- ANC RPZ & Approach Zones
- Lake Hood RPZ & Approach Zones
- Airport Property Boundaries
- FAR Part 77 Approach Surface
- 50ft Above Runway End along Approach Surface Slope
- Airport Referral

2031 NEM Noise Contours

- 60 DNL

2036 Noise Contour

- 60 DNL

Flight Track Density

- high
- low

ANC PART 150 Noise Compatibility Study

Draft Airport Influence Area



Legend

- Airport Influence Area
- Restricted Development Area
- Airport Property Boundaries

Comprised of two zones:

- **Airport Influence Area (AIA) - larger and less restrictive**
- **Restricted Development Area (RDA) – smaller and more restrictive**

Purpose: Guide compatible development near the airport AND prevent new non-compatible development from occurring

Airport Influence Area Overlay

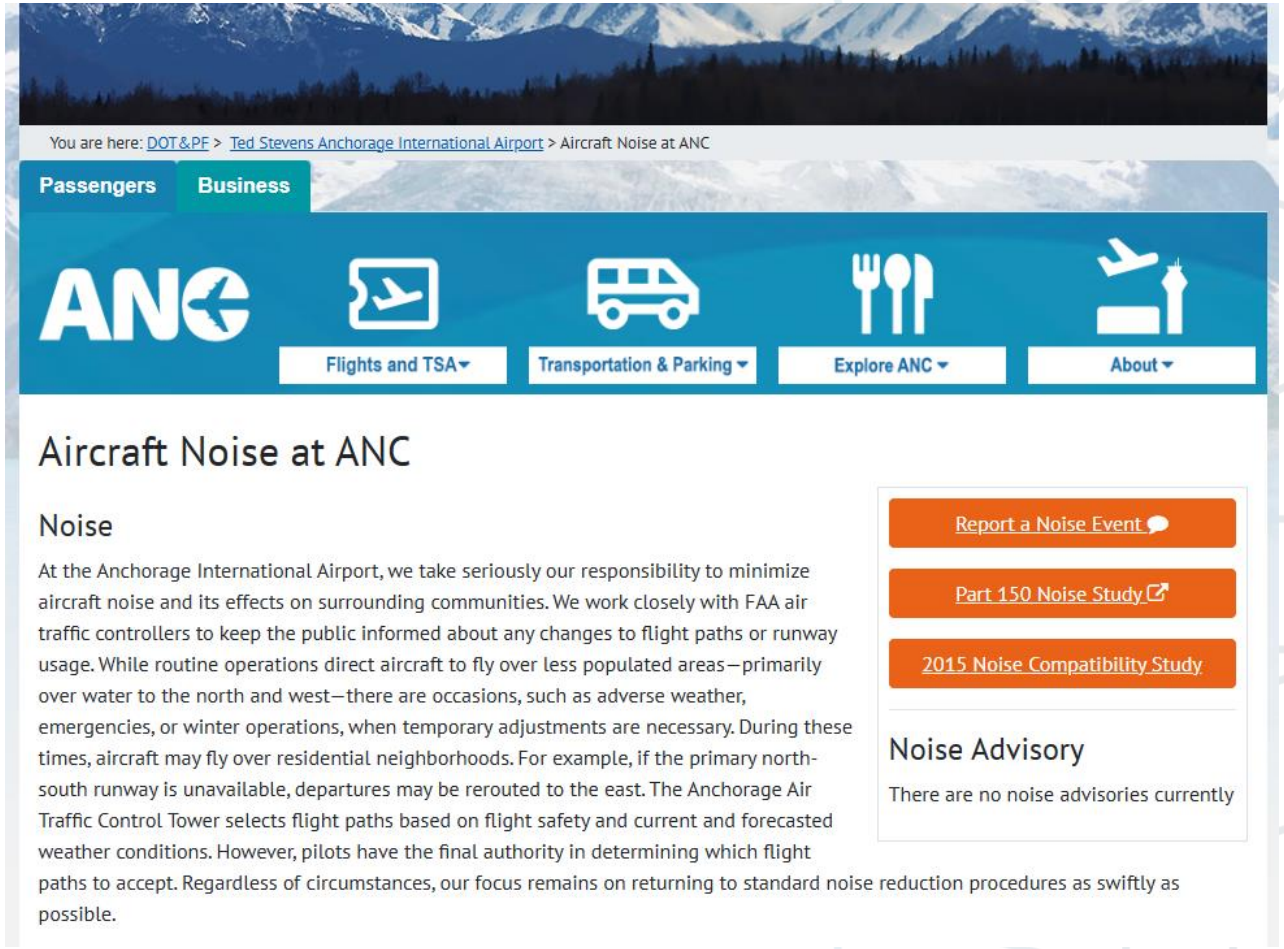
- **Airport Influence Area (AIA)**
  - Development referral to ANC
  - Disclosure Statements/Buyer Notification (Plat Notes and through recorded notification)
  - Comply with 14 CFR Part 77 surface criteria, existing or future, whichever is more restrictive
  - Residential development is prohibited in areas of 65 DNL or greater
  - Outside of 65 DNL, new residential development is discouraged, but if allowed, must include noise insulation (which requires interior noise reduction of 45 dB or greater proven through testing)
  - Redevelopment should not increase density, with the exception of ADUs with required sound insulation
- **Restricted Development Area (RDA)**
  - No new noise sensitive development (residential, educational facilities, healthcare facilities, places of worship)
  - Prohibit new ADUs
  - Comply with 14 CFR Part 77 surface criteria, existing or future, whichever is more restrictive
  - Avigation easements for new development

Prior Program Management Measures and Implementation Status

- **Install Electrification and Preconditioned Air at All Jet Bridges and Areas**
  - Was disapproved because it is funded as a terminal development project
- **Development of Fly Quiet Report Card and Pilot Awareness Program**
  - Continued/Revised
- **Continuation of Public Information Program & Noise Information Website**
  - Completed – Reevaluated under Noise Office Measure for updated conditions
- **Public Comment Submittal Form**
  - Completed – Reevaluated under Noise Office Measure for updated conditions
- **Addressing of Noise Comments**
  - Completed – Reevaluated under Noise Office Measure for updated conditions
- **Flight Tracking**
  - Approved – Not Completed
- **Update the NEM/NCP as needed**
  - Approved – Required Measure
  - NEM updates on a regular basis for federal grant applications or triggered by substantial changes in operations, fleet mix, etc. that may lead to a 1.5 dB change in areas of noise-sensitive land uses
  - NCP updates as needed by the Airport to adequately address non-compatible land uses as defined through Part 150 process

Potential Noise Office Enhancements

- Assess current noise comment and response program
- Evaluate refinements to enhance community collaboration
- Consider website refresh
- Discuss needs for community to right size any program changes



Voluntary Fly Friendly at Lake Hood and ANC

Do Your PART!

Power

Keep prop noise down. Props are a major noise source. Reducing prop speed is one of the simplest and most effective noise-reduction measures. **Please adjust power/rpm/pitch for quieter flight whenever safely possible.**

Make power changes smoothly to reduce attention-getting sound. Engine/prop changes attract attention. **Smooth power control is quieter.**

Altitude

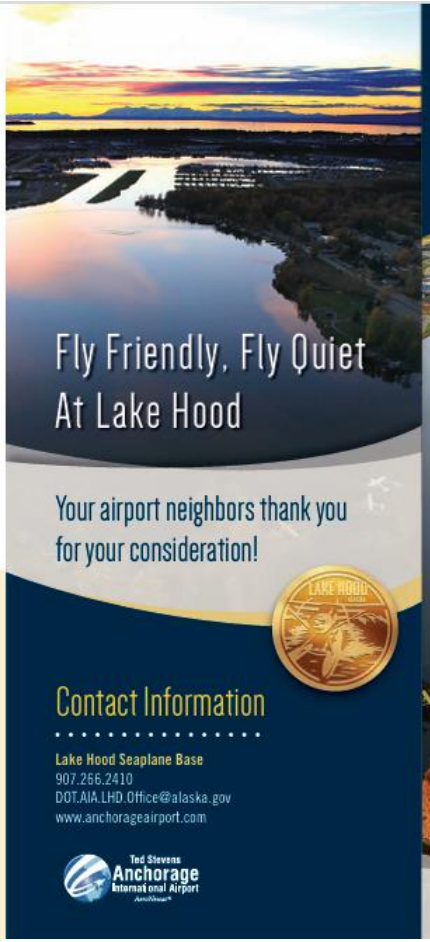
Get & preserve altitude. Use the best climb angle/rate on departure. Preserve altitude on arrival until safely maneuvering for landing. **Altitude cuts noise reaching neighbors while preserving flight options.**

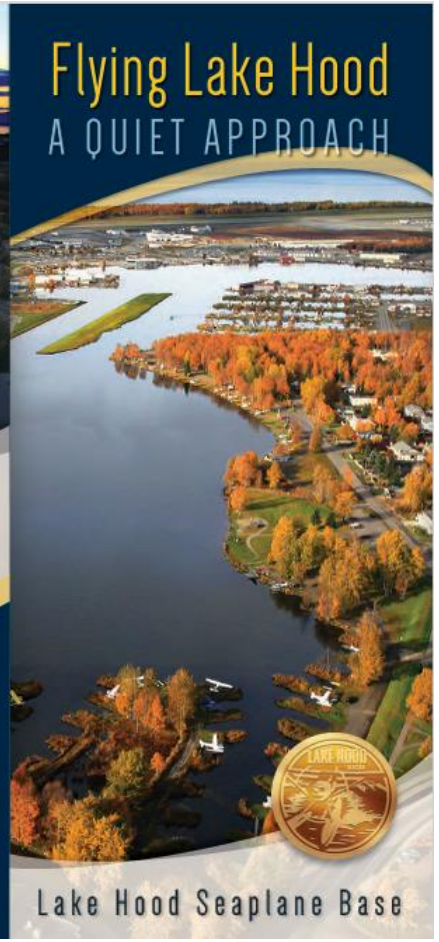
Route

Minimize overflying dwellings. Your route of travel is important. Select departure & arrival routes that minimize overflying dwellings. Please avoid multiple traffic patterns. **Departures to the west, north, or south are preferred to reduce noise footprint. Please minimize easterly departures and pattern work.**

Time

Minimize flight between 10 pm & 7 am.
Neighbors might be sleeping, and noise is perceived as louder when the community is quieter.
Late night or early morning aircraft noise draws negative attention.





Fly Friendly, Fly Quiet

Noise from the largest and most active seaplane base in the world affects our community.

Following these simple, effective, voluntary noise-reduction measures, whenever safe and practical, helps us all be good neighbors.







These voluntary noise abatement measures neither preempt nor diminish pilot responsibilities for safe aircraft operation and compliance with applicable authorities & guidance, such as FARs, FAA, flight manual, operational requirements, etc., or in exercising sound judgment addressing flight factors, such as emergencies, hazards, weather, traffic, etc.

August 2016

Ted Stevens Anchorage International Airport

ANC PART 150 Noise Compatibility Study

Potential Ground Noise Study

As suggested by some community members throughout the Part 150 Noise Compatibility Program update, this measure would recommend a ground noise study to evaluate the effect of noise from ANC ground operations in the adjacent communities

- **Ground operations include but not limited to the following:**
  - Aircraft engine run-ups (aircraft maintenance)
  - Aircraft idling and taxiing
  - Operation of auxiliary power units (APUs) and ground power units (GPUs)
  - Airport maintenance and snow-clearing operations

Comments & Additional Information

- **Comments or questions can be submitted via the comment form in person or online at:**

  https://anc150noisestudy.com/#contact

- **Please visit our website for additional study events, news, and information here:**

  https://anc150noisestudy.com/

- **Next meetings: Study Meeting Series #6 and Public Hearing – Winter 2027**
  - Draft NCP Recommendations
  - Public Information Meeting
  - Public Hearing