

# StART Noise Working Group Year End Recap



# StART Noise Working Group

- Formed to work on achievable noise reduction efforts



# Noise Working Group Members

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- Robert Akhtar
- Joe Scorcio
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- Robert Tykoski
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- Randy Fiertz
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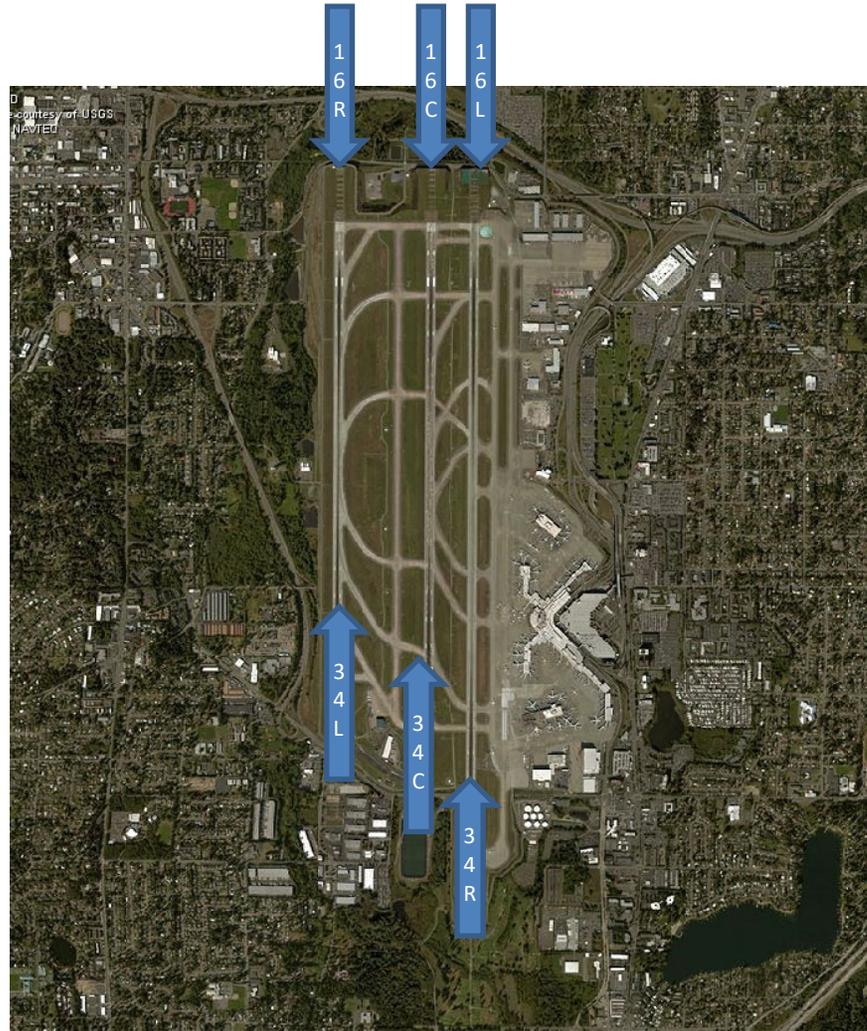
# Near Term Aviation Noise Action Agenda

- Runway Use Agreement
- Fly Quiet Voluntary Late Night Noise Limitation Program
- Glide Slope Analysis
- Ground Noise Analysis
- A320 Arrival Noise Retrofit

# Runway Use Agreement

- **Revise / update the previous Runway Use Plan.**
- **Purpose of the plan is to establish a clear understanding of the preferred way in which all of the runways will be used in various operating conditions.**

# Sea-Tac Runways



# Runway Use

## Daytime and Evening Hours

- The third runway (16R/34L) will be used primarily as an arrival runway.
- The east runway (16L/34R) and center runway (16C/34C) will be used as arrival and departure runways.

# Runway Use

## Late Night Usage

- During regular late night operations **between the hours of 12:00 a.m. and 5:00 a.m.** in normal weather patterns, the FAA plans to reduce its use of the third runway (16R/34L).
- Departures and/or arrivals will use 16L/34R and 16C/34C
- 16R/34L will only be used when required for safety or efficiency reasons.

# North Flow Preferential Use Nighttime Hours

- This implements a preferential runway system during the nighttime hours, for operations through the North Flow Noise Abatement Corridor. This would be operational when traffic and other conditions permit as determined by the FAA.
- When conditions permit, during nighttime hours from 10 p.m. to 6 a.m., departures can be shifted from south to north, thus utilizing the established noise abatement corridor over the Duwamish industrial area and Elliott Bay.
- **This measure was approved by the FAA as Sea-Tac FAR Part 150 Noise Compatibility Program Measure A-11.**

# Fly Quiet Late Night Noise Limitation Program

- 12am to 5am
- Voluntary measure to reduce late night noise through incentivizing air carriers to fly at less sensitive hours or transition to quieter fleet

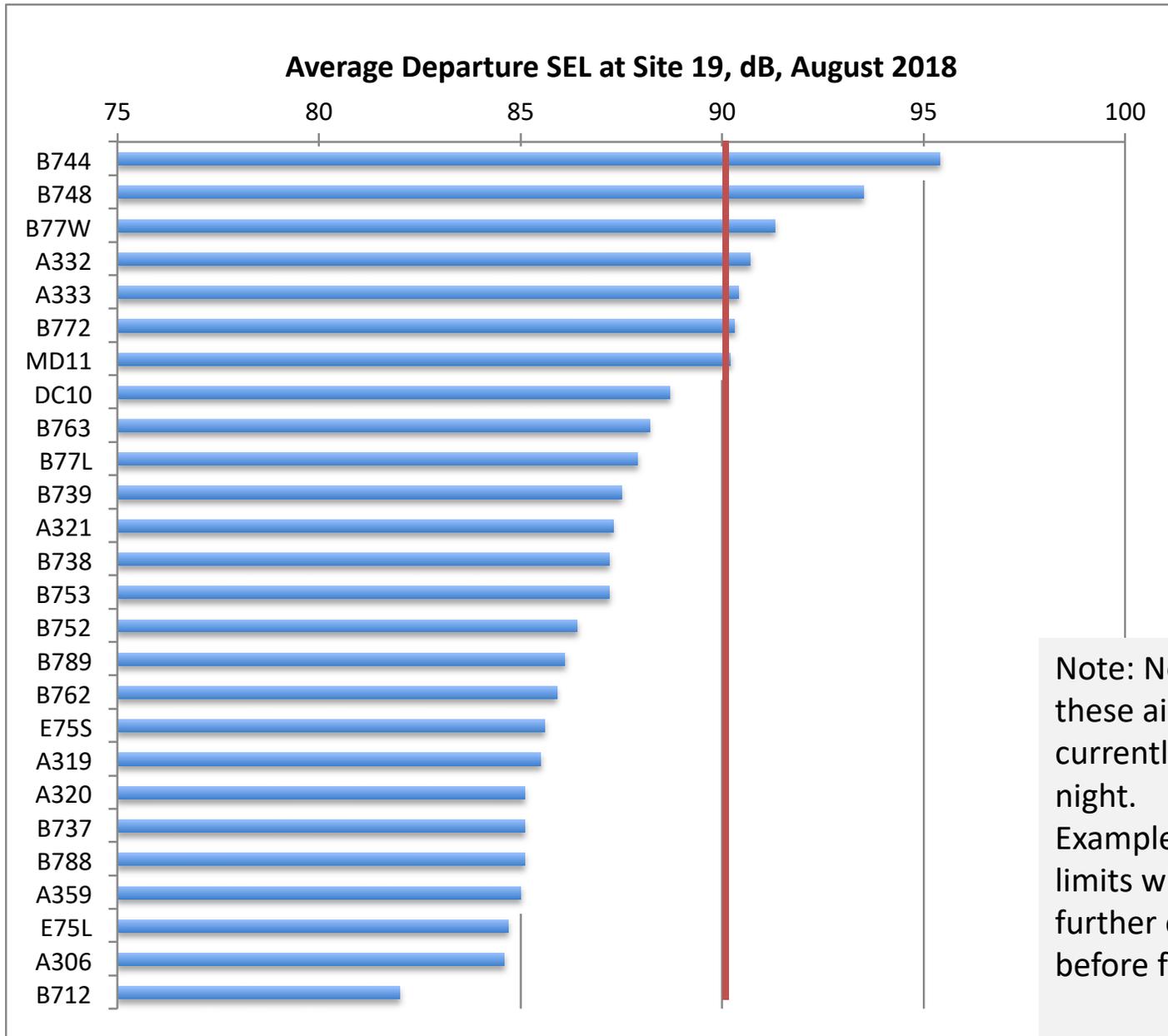
# Why not call it a voluntary curfew?

- The program doesn't change, only the name to better align with the intended outcomes
- Curfews are assumed to be “mandatory”

# Fly Quiet Late Night Noise Limitation Program

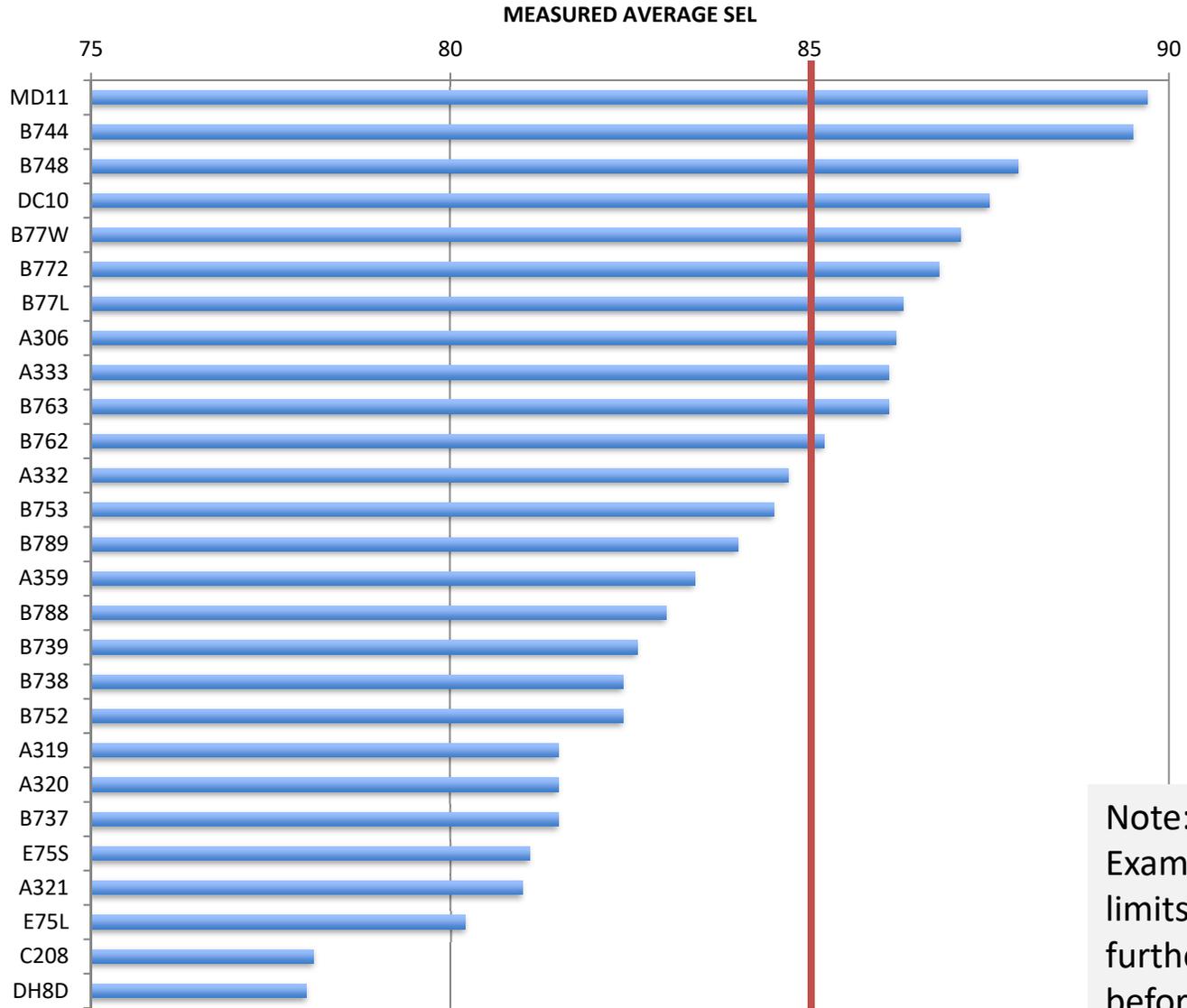
- 12am to 5am
- Utilize the Fly Quiet Program to add additional category
- Aircraft flying above an average single event noise threshold will receive a Fly Quiet Program penalty score
- Based on 4 nearby noise monitors

# Site 19 Departure Noise Comparison



Note: Not all of these aircraft currently operate at night.  
Example only. Noise limits will need further evaluation before final.

# SITE 12 Arrival Noise Example



Note:  
Example only. Noise limits will need further evaluation before final.

# Fly Quiet Scoring

- Compliance with Noise Abatement Corridors
- Noise score based on all hours
- Compliance with nighttime engine testing rules and regulations
- **NEW – penalty for late night flights that exceed the noise limit thresholds**

# Monitoring and Reporting

- Monthly monitoring of all flights
- Reporting to the FAA
- Compliance letters to airlines exceeding the late night noise thresholds
- Publication of reports, letters and information on the web
- Reporting to StART

# Late Night Noise Limitation Program

## Additional Efforts

- Encouraging airlines to replace noisier aircraft with quieter aircraft
- Encouraging all airlines to consider rescheduling of late night flights

# Glide Slope Analysis

- Raising Runway 34R's Glideslope to lessen aircraft approach noise
- Currently at 2.75 degrees
- Options to raise it to 3 degrees or 3.1 degrees

# Ground Noise Analysis

- Analyzing airfield ground noise sources to reduce impacts
  - Taxiing Aircraft
  - Thrust Reverse
  - Other
- On work plan for 2019

# A320 Whistle Noise on Approach

- Noise occurs between 7 to 30 miles from landing
- Caused by a circular vent hole under the wing (similar to blowing over a bottle)
- Includes A320, A319 and A321 Aircraft

# Solution

“Vortex Generator”  
5mm device mounted  
upstream of the hole



Aircraft must be taken out of service and fuel tanks & systems drained of all fuel before retrofit.  
Airlines that are completing the fix are typically doing it during downtime with other major maintenance.



Device is  
factory  
installed on  
newer A320s  
Post 2014



# A320 Retrofit

- Find ways to encourage airlines to complete the retrofit
  - Discuss with airline staff
  - Send letters to airlines requesting timeline for implementation