Aviation Noise Working Group

Meeting Summary

October 10, 2022; 5:00 PM – 7:00 PM
VIA ZOOM VIDEOCONFERENCE

Meeting Objectives:

- Updates on the 3rd quarter results for the Aviation Near-term Noise Action Agenda
- Overview of reverse thrust and SEA's proposed language change
- Update on the rolling takeoff noise monitoring efforts
- Announcement of the Part 150 Noise Study.

Meeting Summary:

I. Facilitator welcome, introduction, and meeting agenda, Brian Scott, BDS Planning & Urban Design

II. Aviation Near-term Noise Action Agenda: 3rd Quarter Results, Tom Fagerstrom, Noise Programs Coordinator, Port of Seattle (POS)
   - Late Night Noise Limitation Program
     - This is a voluntary program to track noise levels between the hours of 12 AM and 5 AM and was established in 2019.
     - Most noise exceedances in the 3rd quarter were by FedEx with China Airlines Cargo a close second, followed by Amazon/ATI. Of the197 exceedances, 92% was Cargo, and 6% of total late night operations had exceedances - this lower number reflects an increase in passenger flights during late night hours.
   - Third Runway Agreement
     - Through October 15, 2022, an average of 4.2 third runway landings per late night compared to 1.2 in 2021. The east runway was closed five nights a week for construction this past summer, which caused the increase over 2021. The Port is closely monitoring usage patterns and communicating with the FAA.
     - Boeing 747 and MD11 aircraft have the highest noise impact.
     - The Port met with Korean Air Cargo to talk about their nighttime operations. The conversation included the possibility of the carrier making schedule or aircraft changes. It was a very productive conversation. Korean Air Cargo said that a schedule change would be very challenging. They were much more optimistic about aircraft change, and while they do not have concrete plans to phase out their older 747s, they will inquire about the possibility of using the quieter 777 aircraft at SEA.
   - Noise Comment Update
     - Received a total of 15,321 comments in August, which is a slight decrease from July. Increased north-flow operations in August led to fewer complaints from Seattle and Vashon.
     - In 2022, received a total of 159,675 complaints through August. The complaints are down this year compared to same time last year. The reason for this is unclear.

III. Reverse Thrust 101, Steve Osterdahl, Air Traffic/Airspace Operations Director, Alaska Air Group
   - Why Reverse Thrust is Used
     - To improve the deceleration as the aircraft is touching down. At around 145 knots, the brakes are not that effective so, the pilot deploys reverse thrust to help slow the airplane.

- During wet/icy conditions, using reverse thrust stabilizes the aircraft just after touchdown.
- It also reduces stress on the brakes. All airplanes are certified to land without reverse thrust but when they do, there is the possibility that the brakes could get very hot, increasing the risk of fire.

o How Reverse Thrust is Used
- Pilots apply it immediately after touchdown then modulate it manually using one of three settings: 1. Idle reverse; 2. A 65% thrust level, which is typical position to use after landing and 3. full reverse thrust when the aircraft needs to stop fast.
- Pilots use their judgement on how much they need to use. On a short runway they will use it more, while on a long runway, they will use less. ATC might ask pilots to exit the runway quickly which would lead to a pilot using more.

o When Reverse Thrust is Used
- Pilots will modulate reverse thrust as required for runway conditions, runway exit plan and passenger comfort.
- By the time the aircraft slows to 80 knots (about 20 seconds), reverse thrust is reversed to idle. Between 10 pm and 7am at SEA, pilots attempt to use idle reverse thrust if possible. Carriers rely heavily on the pilot's discretion.

IV. Proposed SEA Reverse Thrust Language Change, Marco Milanese, Community Engagement Manager, POS & Tom Fagerstrom, Noise Programs Coordinator, POS

o This spring the Port of Seattle identified noise sources during the Ground Noise Study, commissioned for StART, and came up with some recommendations, one of them regarding voluntarily limiting the use of reverse thrust.
- The recommendation was to update the airport's language to encourage the voluntary reduction of reverse thrust. To increase awareness, the Port would conduct further outreach to carriers educating them about the language change and asking them to use less reverse thrust when possible.
- Alaska Airlines, Delta Air Lines and the FAA worked closely with the Port of Seattle regarding a language change removing the '2200-0700' timeline and replacing it with 'all times.'
- This language change is the first step and will be followed by outreach to air carriers.
- This is voluntary language; full discretion is with the pilot.

o StART members generally agreed to move forward with the language change.

V. Rolling Takeoffs: An Update, Vince Mestre, Consultant & Tom Fagerstrom, POS

o Rolling takeoffs replace a full stop at runway ends. The taxiing continues and thrust is applied as the aircraft moves down the runway. The aircraft never comes to a full stop. Full thrust is reached farther down the runway than with a full stop, in which full takeoff thrust is applied immediately. This option is only available during very low traffic hours.

o Rolling takeoffs apply the takeoff thrust farther down the runway than compared to a full stop takeoff.

o Rolling takeoffs will typically have a lower noise level than traditional takeoffs for areas close to the runway ends.

o The value of rolling takeoffs depend on the demographic and topography around the area but no one is experiencing new noise or more noise with the use of rolling takeoffs.

o Oakland Airport implemented language promoting their use 20 years ago from 10 pm to 5am and their noise measurement data shows that it reduces time on the runway, fuel burn, and the aircraft are quieter.

o The duration of the noise is also shorter as a result of implementing the rolling takeoff language.

o Noise monitoring of rolling takeoffs for now was not successful at SEA because it is challenging for the monitors to measure and correlate noise for aircraft while on the ground.

VI. Noise Insulation Status Report, Stan Shepherd, Noise Programs Senior Manager, POS

- The Port continued its outreach to single family residences. This year the Port completed nine homes so far and have one starting now and five next year.
- The Port completed 16 condo units and working on completing an additional 12 by 2023
- Of the 18 eligible apartment complexes: 14 applied, one failed a noise audit, and two declined to participate. Work will begin on one of the apartment complexes in early 2023.
- Five of the seven eligible places of worship applied. One did not pass the noise audit and one will start late 2023.

VII. Part 150 Noise Study Announcement, Stan Shepherd, Noise Programs Senior Manager, POS

- Through FAA's regulation, a noise and land use compatibility study need to be completed approximately every five years, or when an airport has significant operational changes, to evaluate past noise programs and recommend new programs, including noise abatement, sound insulation and acquisition efforts.
- The original SEA study was completed in 1985, and this will be the 5th update to that plan.
- The Part 150 Noise Study provides a strategic plan to address noise abatement and insulation with a heavy focus on mitigation within the 65 DNL contour.
- Most noise mitigation programs are funded by the FAA, and the agency requires the Port to use the 65 DNL contour for program eligibility.
- The Port is in its initial stages of planning the study. On October 25, 2022, the Port will seek commission approval to procure a consultant to develop the full study. The study includes public outreach with an equity focus, and the Port anticipates that most of next year will be used for data collection and mapping.
- Public outreach will most likely start at the end of 2023 or early 2024.
- This study will take several years to finish but the Port will continually update StART on every step along the way.

VIII. Next Steps

- Tom Fagerstrom will reach out to the FAA regarding recent late night runway usage to learn what factors may influence these decisions.
- Those communities that want a temporary noise monitor should get in touch with Marco Milanese.

Member	Interest Represented	Present
Amy Arrington	Normandy Park – City	✓
Bill Vadino	Federal Way – City	✓
Bob Leonard	Des Moines – Community Representative	-
Bryan Tomich	Normandy Park – Community Representative	✓
Garmon Newsom II	Burien – City	✓
Carl Cole	SeaTac – City	-
Chris Hall	Federal Way – Community Representative	-
Dave Berger	Federal Way – Community Representative	✓
Denise Lathrop	Des Moines - City	✓
Jenn Kester	SeaTac – City	✓
Jeff Harbaugh	Burien – Community Representative	✓
Lance Lyttle	Port of Seattle	✓
Lynae Craig	Alaska Airlines	-
Michael Matthias	Des Moines – City	-
Peter Phillips	Des Moines – Community Representative	-
Robert Akhtar	SeaTac – Community Representative	-

Scott Ingham	Delta Air Lines	-
Scott Kennedy	Alaska Airlines	✓
Steven Osterdahl	Alaska Airlines	✓
Guest		
Adolfo Bailon	Burien - City	✓
Resources	Title	
Marco Milanese	Port of Seattle	✓
Robert Giacopetti	Port of Seattle	✓
Sarah Cox	Port of Seattle	✓
Stan Shepherd	Port of Seattle	✓
Steve Vittner	Port of Seattle	✓
Tom Fagerstrom	Port of Seattle	✓
Consultant		
Brian Scott	BDS Planning & Urban Design	✓
Dori Krupanics	BDS Planning & Urban Design	✓
Vince Mestre	Consultant	✓

Next Meeting: December 12, 2022- 5:00 pm - 7:00 pm
Location: Zoom Videoconference