



SEA-TAC STAKEHOLDER ADVISORY ROUND TABLE

StART FACILITATOR'S MEETING SUMMARY

AVIATION NOISE WORKING GROUP

Monday, January 14 2019

5:30-7:30PM, Conference Center, Sea-Tac Airport

Member	Interest Represented
John Resing	Federal Way
Terry Plumb	Burien
Yarden Weidenfeld	Federal Way
Chris Hall	Federal Way
Earnest Thompson	Normandy Park
Mark Hoppen	Normandy Park
Eric Zimmerman	Normandy Park
Joe Scorcio	SeaTac
Jennifer Kester	SeaTac
Robert Akhtar	SeaTac
Shelia Brush	Des Moines
Tom Fagerstrom	Port of Seattle
Robert Tykoski	Port of Seattle
Tim Toerber	Port of Seattle
Scott Kennedy	Alaska Airlines
Marco Milanese	Port of Seattle
Stan Shepherd	Port of Seattle
Scott Ingham	Delta Airlines
Steve Osterdahl	Alaska Airlines
Jason Ritchie	FAA
Vince Mestre	L&B

Facilitator: Phyllis Shulman, Civic Alchemy;

Note Taker: Megan King, Floyd Snider

Other Attendees: Tom Eckert, Delta Airlines; Lance Lyttle, Port of Seattle

Meeting Objectives:

To continue discussions on the Glide Slope Analysis and to identify and begin discussions on ground noise assessment actions.

Meeting Summary:

Update on the Implementation of the Draft Rolling Work Plan

The updates included:

- Runway Use Agreement: The draft agreement has been forwarded to the FAA on 12/17. Likely review is delayed by the partial federal government shutdown. The next step will be a response from the FAA.
- Late Night Noise Limitation Program: Port staff and the noise consultant are just completing the analysis with a recommendation for noise thresholds. The noise consultant and Port staff are proposing six noise thresholds to capture departure and arrival levels at four noise monitor locations. Staff expects to have updated noise thresholds ready to share with the Working Group by the next meeting. It was stated that communication with the airlines about the program is expected to commence in March 2019. The Port intends to communicate individually with each airline and update the airlines at a number of venues before the program's official launch.
- A320 Arrival Noise Retrofit: Port staff shared a first draft of a letter that, once finalized, will be sent to airlines that operate the A320 series aircraft at Sea-Tac. The letter asks for a response from airlines on their schedule and plans for retrofitting their fleets. Port staff will continue to revise the letter including strengthening language as to the Port's goal and preferred outcomes related to the retrofit.

Review of Possible Action Steps for Glide Slope Changes

Port staff presented alternatives for Runway 34R glide slope adjustments and put forth a recommendation. The recommendation (Alternative One) was stated as:

- Runway 34R (south end, north flow) are Cat1/2
- Runway 34R (the 1st/inboard runway) is currently at 2.75 (other runways are at 3.0), and Port will attempt to increase to 3.1

Staff stated that currently, only two airports (Cleveland and Newark) have a glide slope greater than 3 degrees that are Cat 1/2. (SEA is a Cat1/2 on 34 RWY ends). The FAA prioritization process for the project is outside of the Port's control and its potential implementation could also be impacted by the partial federal government shutdown.

Questions included:

- For glide slope changes in height at certain distances, what is the resulting impact on noise levels?
 - *Response: Adjusting the glide slope would not be expected to result in a significant reduction in noise levels, but some reduction could be noticeable in certain locations.*

- Why is the relocation of the glide slope antenna occurring as part of SAMP?
 - *Response: The glide slope antennas are being moved to allow for construction of taxiways associated with SAMP. Two new parallel taxiways will be constructed. The path of one of the taxiways will be over the location of the current antenna. SAMP also assumes changing the 2.75-degree angle to a standard 3.00-degree angle. Flight change procedures typically require a two-year schedule for FAA approval.*
- How would the Port describe the benefit to the community members of the recommended glide slope changes?
- *Response: Only two other airports in the US currently have a CAT 1/2 approach at 3.1 degrees. Alternative One aligns with the desire of StART members to implement action as soon as possible. Other glide slope options put forward could end up being impeded by possible factors that are outside of the Port's control. What is the goal of the change? Would this be an anomaly to have some glide slopes at 3.1 degrees and some at 3 degrees?*
 - *Response: The goal would be to have all glide slopes aligned with one standard, but variation is allowed. Antenna could be sited in a location that allows for future adjustments to glide slope angles.*
- How does the design process work? What are the next steps?
 - *Response: First, there would be a request to the Port Commission for funding and to expedite the process, permission to design "at risk". This would allow the FAA to do a feasibility assessment, if requested.*
- Could this project be conducted outside the scope of the SAMP?
 - *Response: The schedule of the SAMP is underway. If there were to be delays in SAMP, the port could look for means to potentially pull the project outside of that process.*

During the discussion, Working Group members noted that taking action on glide slope is an example of a success, even if it has only incremental benefit. Alaska Airlines lent their support to Alternative One. The FAA must approve any changes to the glide slope.

Next Steps: The Working Group will bring forward a recommendation to StART that a request be made to the Port Commission to expedite the process of changing the glide slope and begin a design "at risk".

Utilization of Reverse Thrust Presentation

The noise consultant presented information defining what reverse thrust is, the purpose of using reverse thrust, how it is utilized in flight operations, and runway and weather conditions that affect its use.

Highlights of this information include:

- Reverse thrust is a misnomer – engines do not run in reverse. With newer aircraft, air instead of being directed out the back of the engine, is directed out towards the sides of the engine.

- Weather affects usage. Reverse thrust provides an improved margin of safety and is less optional in wet conditions. Reverse thrust is just as effective in wet conditions as in dry conditions.
- Short runways are also a reason for the use of reverse thrust.
- In Europe, airports have requests for the reduced use of reverse thrust, but no hard requirements.
- O'Hare Airport in Chicago 'requests' airline pilots to use reverse thrust to the least degree possible. Seattle also requests pilots to use reverse thrust no more than necessary during the nighttime hours. Current language could be more effective if changed to say 'use no more than necessary for safety'.

Alaska Airlines' Director, ATC & Airspace Operations reviewed Alaska Airline's utilization of reverse thrust during normal runway operations. These operations included:

- Reverse Thrust Slide: Max Reverse: (70-100%) is used in emergency situations only.
- Delta Air Lines and Alaska Airlines have policies that encourage use of idle reverse thrust during evening/night hours (10PM-7AM). Use of idle thrust is based on length of runway, weather conditions, load, and whether the auto braking system is operational.

Alaska Airlines and Delta Air Lines are exploring with the FAA if there is a way to change taxi procedures during south-flow operations to increase efficiency and reduce the number of times airplanes have to stop to wait to cross an active runway. This stopping and starting could be a significant contributor to airfield ground noise. For example, going from idle thrust to breakaway thrust is approximately a 10 times increase in noise. It was also acknowledged that an increase in noise could occur when multiple aircraft start their engines at the same time. It was stated that what community members might think is noise from reverse thrust may actually be the stopping and starting of taxing engines. StART participants noted that this confirms the experiences of community members, particularly in Normandy Park. Changing taxi procedures has the potential to significantly decrease ground noise, reduce fuel consumption, increase safety, and reduce the time it takes to get to the gates. The airlines are working with the FAA and have designated a 60-day test plan to implement new taxi procedures beginning in March. This plan could also reduce the number of aircraft staged on the SW side of the airport waiting to cross runways.

The decision process for a permanent procedure change includes running a test of the new procedures for 60 days, review of the data by the FAA Safety Board and FAA authorization. FAA has stated that they are supportive of the 60-day test. A StART member stated that the psychological impact of thinking that nothing is being done makes issues worse, or more painful. It is important to communicate the changes that StART is initiating as well as important safety considerations that may constrain choices.

Next steps: Working Group members agreed that it could be useful to create less ambiguous language to pilots to use reverse thrust no more than necessary for safety. The Port will prepare modified language to share with the group during an upcoming meeting. Both, Alaska Airlines and Delta Air Lines representatives stated that their flight manuals direct the use of idle thrust unless needed for safety, and agreed that updated language from the Port of Seattle could be helpful. The Working Group collectively expressed support for the test plan.

Airfield Noise Assessment Options and Considerations

The noise consultant reviewed some of the potential topics to consider in an airfield noise assessment.

- FAA has a program they are putting in place that reduces queuing on taxiways, called TDFM (flow management program) that optimizes the release of aircraft from the gates all the way to the next gate at the next airport. The goal is to minimize queuing and to eliminate conflict or delays. Sea-Tac is on list to be included in deployment test, but relatively low on the list because Sea-Tac has limited space to hold aircraft.
- Takeoff Roll: Use of de-rated thrust during takeoff is already being utilized so is not recommended for further analysis.

The Working Group added sound barriers as a potential topic to consider in an airfield noise assessment.

Working Group members commented that it could be helpful to learn more about a ground run-up enclosure (GRE) for aircraft maintenance and communicate this knowledge to the community at large. It was stated that there is confusion in the community about the use of a GRE and whether they contribute to the reduction of maintenance noise. This was recommended as a possible presentation and discussion at a Working Group or StART meeting. It was requested that additional ideas for topics be emailed to the facilitator.