

Noise Abatement Alternatives

FLIGHT TRACK LOCATIONS			
Description	Benefits	Drawbacks	Evaluation
Modify departure flight tracks to reduce noise within the 65 DNL (e.g., immediate turns, hold runway heading longer, International Blvd. departure)	If possible, could reduce noise levels for the areas experiencing the most overflights.	Due to the lack of naturally occurring compatible corridors within the 65 DNL, modifying flight tracks close in to the runways would result in shifting noise from one area to another.	Due to the inability to identify flight track procedures that would not result in simply shifting noise from one area to another, no further evaluation is recommended.
Modify arrival flight tracks to reduce noise within the 65 DNL (e.g., follow interstates, visual approaches)	If possible, could reduce noise levels for the areas experiencing the most overflights.	Due to the lack of naturally occurring compatible corridors within the 65 DNL, modifying flight tracks close in to the runways would result in shifting noise from one area to another.	Due to the inability to identify flight track procedures that would not result in simply shifting noise from one area to another, no further evaluation is recommended.
Modify departure flight tracks to reduce noise outside the 65 DNL (e.g., use water corridors, utilize RNAV/RNP to improve track adherence)	n/a	n/a	Part 150 guidelines require that any approved air traffic measure must show benefits for non-compatible uses within the 65 DNL. By definition, this effort would not meet that requirement. Furthermore, because the evaluation of flight tracks within the 65 DNL found no options, this effort cannot be combined with other measures to result in a positive impact.
Modify arrival flight tracks to reduce noise outside the 65 DNL (e.g., visual approach procedures, RNAV/RNP to improve track adherence)	n/a	n/a	Part 150 guidelines require that any approved air traffic measure must show benefits for non-compatible uses within the 65 DNL. By definition, this effort would not meet that requirement. Furthermore, because the evaluation of flight tracks within the 65 DNL found no options, this effort cannot be combined with other measures to result in a positive impact. It should be noted that the Port of Seattle is a participant in the Greener Skies Initiatives that are looking at modifying procedures farther out from the Airport and those could result in noise reductions.
RUNWAY USE PROGRAMS			
Description	Benefits	Drawbacks	Evaluation
Implementation of the recently completed Runway Use Agreement between FAA and Port	Maintains the current procedures. Provides operational flexibility to FAA Air Traffic in operating the airport. Minimizes the use of the new runway when operating conditions allow.	None	Maintain/support the implementation of the runway use agreement through providing information about compliance to the procedures and why there are deviations from the established procedures.
Voluntary restrictions on one or more of the runways to daytime only flights.	Would result in localized noise reduction at night for areas immediately north/south of the runway not being used.	Would result in nighttime flights being shifted from one area to another. Reduces operational flexibility of FAA Air Traffic, potentially increasing delays.	Due to the outcome being a shifting of noise from one area to another and potential operational impacts, no further evaluation is recommended.
Voluntary restrictions on one or more of the runways to only arrival operations.	Would reduce noise from departures for areas immediately north/south of the runway not being used for departures.	Would result in departures being shifted from one area to another. Reduces operational flexibility of FAA Air Traffic, potentially increasing delays.	Due to the outcome being a shifting of noise from one area to another and potential operational impacts, no further evaluation is recommended.
HUSH HOUSE AND NOISE BERM/WALL			
Description	Benefits	Drawbacks	Evaluation
Construct a hush house on the airport to minimize run-up noise.	Would reduce run-up noise by up to 20 dB. Standardizes procedures for run-ups.	Expensive facility (\$4-\$6 million). Requires a large land envelope, which is in demand at SEA-TAC. Increases time needed for run-up due to aircraft positioning	Due to the benefits, continue to explore the feasibility and specific plans for a hush house on the airport.
Construct noise berms/walls to minimize ground noise.	Could reduce noise from taxiing, engine run-ups, reverse thrust, and engine idling.	The placement of a noise berm/wall at SEA-TAC would need to be on the west side of the airport to be effective. The terrain on that side of the airport and the FAA height restrictions make it impossible to site a berm/wall that would effectively reduce noise.	Due to the inability to site a berm/wall that would be effective, no further evaluation is recommended.

Potential Noise Abatement Measures

- **Flight Location**
 - Preferred flight tracks
 - Instrumented approaches
 - Departure procedures

- **Flight Frequency**
 - Preferred runway use programs
 - Track usage by type of operation
 - Track usage by type of aircraft

- **Flight Times**
 - Preferential operations by time of day

- **Flight Management** (Use of preferred flight procedures)
 - Reduced Thrust
 - Modification of intercept altitudes
 - On-board instrumentation

- **Ground Activity Restrictions**
 - Local restrictions on run-ups (time, location, orientation, power)
 - Power backs

- **Facility Modifications**
 - New runways or extensions for flight relocation
 - Terminal area improvements
 - Taxiway relocations
 - High speed exits
 - Hush houses
 - Berms and barriers