



Ted Stevens Anchorage International Airport (FAR) Part 150 Noise Compatibility Study Update

Study Input Committee Summary Notes
June 4, 2013 1:30 p.m. Airfield Maintenance Facility

<i>NAME</i>	<i>AFFILIATION</i>	<i>PRESENT</i> ✓
Staff and Consultants		
John Parrott	ANC	✓
John Johansen	ANC	✓
Scott Lytle	ANC	✓
Katie Gage	ANC	✓
Teri Lindseth	ANC	✓
Tonia Winkler	ANC	✓
Mike Lee	ANC	✓
Ryk Dunkelberg	Barnard Dunkelberg & Company	✓
Kate Andrus	Barnard Dunkelberg & Company	✓
Vince Mestre	Landrum and Brown	✓
Mike Webber	Webber Air Cargo	✓
Eva Welch	AECOM	✓
 Committee Members		
Merle Akers	Turnagain Community Council	✓
Bob Auth	Spensard Community Council	✓
Mary Lee	Citizen Representative	✓
Jim Seeley	LHD Pilot Association	✓
Patricia Sullivan	FAA Airports Division	✓
Breck Tostevin	Turnagain Community Council	✓
Thede Tobish	MOA	✓
Susan Hoshaw	Representative	✓
 Other		
Evan Pfahler		
Katherine Wood		
Pat Oien		

Summary Notes

Mr. Dunkelberg began the fifth meeting of the Federal Aviation Regulations (FAR) Part 150 Noise Compatibility Study Update Input Committee by presenting the meeting agenda as follows:

- ▶ **Introduction**
- ▶ **Updates to Draft Contours based on comments**
- ▶ **Updated Draft Land Use based on new contours**
- ▶ **Background to Measures**
- ▶ **Analysis of Measures - Policies**
- ▶ **Brainstorming Session on Measures**
- ▶ **Questions/Comments**

Introductions

Mr. Dunkelberg welcomed the committee back and gave a brief overview of the agenda for this meeting. He then updated the committee on the steps of the Part 150 Study process.

Updates to Draft Contours

Mr. Dunkelberg then turned the presentation over to Mr. Mestre to explain the changes to the noise contours. The noise contours were updated based on comments received from committee members on flight tracks and some of the types of unique aircraft that operate at Lake Hood Seaplane Base.

Updates to Land Use Compatibility Calculations

Mr. Dunkelberg then described the changes in the land use calculations associated with the updated noise contours. As a result of the changes in the noise contours, there was an increase in the number of residences and people within the 65 DNL contour (the threshold for non-compatibility with that level of noise without sound attenuation).

Background to Noise Measures

Mr. Dunkelberg then gave a background on the goals and types of measures that need to be examined in a Part 150 Study, as well as any inherent limitations to these measures.

- ▶ **Part 150 requires the airport evaluate alternatives that:**
 - Reduce existing non-compatible uses and prevent or reduce the probability of the establishment of additional non-compatible uses;



- Do not impose undue burden on interstate and foreign commerce;
- Provide for revision in accordance with the regulation.
- Are not unjustly discriminatory.
- Do not derogate safety or adversely affect the safe and efficient use of airspace.
- 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 impact.
- Can be implemented in a manner consistent with all of the powers and duties of the Administrator of FAA.

He then highlighted some questions for the committee to consider when thinking about potential measures. Questions to consider include:

- ▶ **Does the measure shift noise without meaningful overall noise reduction?**
- ▶ **Does the measure affect safety?**
- ▶ **Does the measure reduce airport capacity?**
- ▶ **Can the FAA approve?**
- ▶ **Can the measure be implemented?**
- ▶ **Does the measure violate any existing statutes, rules or regulations?**
- ▶ **How effectively does the measure reduce noise impacts?**

Mr. Dunkelberg then described the types of measures that a Part 150 Study will look at. These include:

- ▶ **Acquisition of Land and Interests (air rights, easements, and development rights)**
- ▶ **Noise Barriers and Acoustical Shielding**
- ▶ **Preferential Runway System**
- ▶ **Flight Procedures (Modifications of flight tracks)**
- ▶ **Use Restrictions**
 - **Dueling Regulations Discussion**
- ▶ **Other actions based on FAA/Public Input**

He also described the importance of how alternatives will be examined and compared. The FAR Part 150 specifies the use of the 65 DNL noise contour as the threshold contour for land use compatibility. This means that residential land uses within the 65 DNL or greater noise contours are not compatible unless the residence has sound attenuation features. Each of the noise abatement alternatives will be evaluated by comparing land use impacts. The alternatives must improve the overall noise environment, not shift noise from one area to another and the programs that benefit a community without unduly adversely affecting another community and reducing the highest noise levels will be given highest priority. Additionally, the measures must be non-



discriminatory. Any alternatives that would require a Part 161 Study will not be recommendations because based on regulation, all other alternatives must be examined first.

Brainstorming Session

Mr. Dunkelberg then went around the room to each committee member and requested ideas for potential measures to examine in the Study or potential concerns with types of noise that could facilitate additional ideas for measures to reduce noise.

The following list was generated during this discussion.

Operational and Facility Measures

- Airport infrastructure or airport facilities
 - o Noise Barriers (sp. North Air Park), Previous ground use study looked at East Air Park – Reserved area for potential berm Noise Barrier by dirt strip?
 - o Generic planning on Airport (Hangar door placement etc.)
- Airport and airspace use
 - o Continue Pref. Runway Use
 - o Flight tracks/turning point to the north
 - o Flight tracks south over unpopulated areas – away from Eagle River
 - o Fanning/Dispersion? – esp. LHD
- Aircraft operations
 - o Engine Run Up Reduction – high priority for Turnagain
 - o Reverse thrust Cutback – issue for Sand Lake
 - o APU use: Look at what we did in last study, and see if there are any alternatives for reduction
- Noise program management
 - o Look at “voluntary enforcement/education”
 - o Complaint Management System
 - o Pilot Education/Fly Quiet Program
 - o LHD Specific pilot program/handout (currently everyone with a tie-down gets a pamphlet)
 - Upkeep/enhancement of current program
- Other
 - o Examine existing measures, success, implementation or non-implementation of each measure in the previous NCP.

Note that Breck Tostevin from Turnagain also submitted a list of alternatives. An additional meeting will be conducted on land use measures.

Next Steps

Mr. Dunkelberg explained the next steps, which include narrowing a group of alternatives to model. The next Study Input Committee Meeting will likely be in September, and topics discussed will include alternatives analysis.



The following questions and comments occurred during the meeting:

Questions and Comments

Question: There are several types of blades used for the 206 and all at LHD are three bladed. Additionally, almost all float planes use full power to get up.

Answer: There are many different types of aircraft. We are somewhat limited in terms of the types of seaplane aircraft that are in the Integrated Noise Model (INM). However, because in general, the 206 tends to be a louder aircraft under many operating conditions compared to the other aircraft types modeled before, we believe that the changes we made to the fleet mix represent a conservative approach for the noise for these types of aircraft.

Question: Why is the contour not extending to the north if you added flight tracks to the north?

Answer: It is important to remember that the contours are based on the Integrated Noise Model, which calculated an annual average noise (DNL) based on many different inputs, including flight tracks, operations, time of day, fleet mix etc. Because it is an annual average, there is a difference between the sound you hear (a single event level – i.e. when an aircraft flies over) and the annual average contours. Therefore, a change in some flight tracks for a portion of aircraft might not have a substantial change in the contour. In this case, you can see a change in the DNL in the 60 DNL contour where the aircraft turn to the north off of Lake Hood, there is a slight bubble in the contour.

Comment: On Memorial Day weekend, it was way higher than 65.

Answer: While the sound you hear may be higher than 65 dBA, that corresponds to a single event level. The DNL contours are an annual average. So while you will hear levels higher than 65 dBA, the 65 DNL (annual average) is the contour which defines the threshold of non-compatibility for Part 150 Noise Studies.

Comment: There are more flights heading north than to the east? Questioned the methods used for creating the contours.

Answer: Radar data was examined for the flight tracks and was further examined after comments were received that there were additional flight tracks turning north. Adjustments have been made based on these comments and additional research. While the data will never be perfect due to a multitude of variables, the data we have supports the latest contours and is a reasonable representation of the noise following the methods for modeling in the Integrated Noise Model (as required for use in this Part 150 Noise Study).

Question: Why did we not monitor for noise? You can't know what the noise is unless you have monitors out there.



Answer: Noise measurements were taken for a period of time during both winter and summer. These measurements are used to validate the FAA Integrated Noise Model (INM). Measurements are taken of the actual noise levels an aircraft makes at a particular airport under particular conditions to compare them to predicted noise levels from the FAA INM using the exact same conditions. Although not required for a Part 150 Noise Study, these actual measurements increase confidence in the Study results and account for special conditions at particular airports. Noise measurements were taken during two seasons, summer and winter at 30 different sites. Noise data from the Airport's permanent noise monitors were taken for the base case year of 2009. The data from these monitors support the contours as they stand now.

Question: What are the 2030 numbers based off of?

Answer: The forecast operation numbers for both 2020 and 2030 were based off of the Alaska International Airport System Forecasts.

Question: Will we get these updated land use tables?

Answer: Yes, we just completed the updated analysis. A draft replacement land use chapter will be handed out at the next meeting.

Question: Why is the Preferential Runway Use allowed?

Answer: The Preferential Runway Use is allowed through an agreement between the Airport and the tower. Ultimately, it is a voluntary measure, which is implemented by the tower as long as the safe and efficient use of the Airport is not compromised.

Question: The Airport Master Plan is looking at getting rid of the Preferential Runway Use System? How can that be providing compatible land use?

Answer: This is where the regulatory provisions come into play. While measures in a Part 150 should not increase non-compatible land uses, measures also cannot affect capacity at the Airport. So while the Preferential Runway Use system does not affect capacity, it can be implemented to the extent possible. However, the Master Plan is looking at ways to meet capacity in the future and balance the runway use with the capacity, and one of these ways might include the reduced use of the Preferential Runway Use System during daylight hours.

Question: So the residents would pay all the costs of this trade off?

Answer: Yes. Because the Preferential Runway Use is technically voluntary and contingent upon the safe and efficient operation of the Airport, if capacity is affected, there could be a reduction in the Preferential Runway Use.

Question: Can a noise management/monitoring program have an enforcement part?



Answer: These types of measures are voluntary, since most use restrictions generally cannot be put into place. Therefore, it is difficult to have a method to enforce it because you cannot put any official restriction on it (and cannot punish those who do not meet a voluntary program, because it is voluntary).

Question: How will ground noise be accounted for?

Answer: Ground noise (ground run-ups will be examined in terms of Lmax (single event noise). Specifically in terms of ground run-ups, since they are stationary sources when a noise event occurs, a single event level can be more descriptive than a DNL. It is important to remember that other ground noise on the Airport (such as snow removal trucks etc.) will not be considered in this study, because the study is specific to aircraft operations.

Question: Do all these potential mitigation measures apply to LHD?

Answer: All these measures can be considered for LHD. Depending on specific conditions, not all measures might be applicable due to various reasons, but they are all available for consideration.

Question: In terms of cost benefit analysis though, some of these measures might not be as applicable to LHD because GA would not meet a cost benefit analysis?

Answer: Measures involving a Part 161 Study that looks at cost benefits relative to restrictions will not be part of this study because all other measures need to be considered first. Because of this, there is no cost-benefit analysis relative to this study. The only real economic portion of this study includes a generalized cost estimate for noise reduction measures. All the measures can be considered for LHD (not requiring a Part 161 Study). These measures could be eligible for federal funding and would not need to meet a cost/benefit analysis to be eligible, but would need to meet other Part 150 requirements (decreasing noise, not being unjustly discriminatory, etc.).

Question: So you cannot restrict operations at Lake Hood even though they are mostly recreational?

Answer: Correct. It is a public use airport so even a recreational user has a right to use the Airport, and restricting that use would be unjustly discriminatory. Additionally, LHD (and all public use airports that receive FAA funding) are operating under certain Grant Assurances, which means that they must follow certain rules of public use airports because they have accepted grants from the FAA. One of these rules involves being available for public use. In that way, ANC and LHD are no different.

Question: What is the general cost of a Ground Run-Up Enclosure?

Answer: It depends on several factors, including where it is sited and if additional pavement (taxiways or other) is required for its construction. Generally, for the size required for a 747 aircraft, it could cost between \$3-6 Million.



Question: Does the siting of the Ground Run-Up Enclosure need to be coordinated with the Master Plan? There is not currently a site on the Master Plan for a GRE.

Answer: We are coordinating with the Master Plan team on this. They are currently doing a layout for all the primary facilities, and a GRE would be considered a secondary facility. If a GRE ends up being a recommendation of the Part 150 Study, we would work with the Master Plan to coordinate potential locations. Prior to building a GRE, a full site selection study would likely be needed to determine the best location in terms of noise, operations, and airspace issues.

Question: Who covers the cost of the GRE?

Answer: Recommendations approved in the Noise Compatibility Study are eligible for federal funding.

Question: Is it a given that a GRE would be a recommendation?

Answer: No. Currently, we are in the first phase of looking at alternatives. The final recommendations will be based on coordination and comments in the next several months. All recommendation in the Noise Compatibility Program will also have to be approved by the FAA prior to them being eligible for federal funding.

Question: Is it typical for an airport to have just one?

Answer: Yes. Even airports that are larger than ANC have just one GRE.

Comment: It would be helpful to go over the list of recommendations from the last Part 150 to see what was done last time, what was implemented, what has not been implemented, etc.

Answer: Noted. This list is included in the updated Inventory chapter, but can be updated with more detailed information and the most current information and sent out to everyone.

Question: Are noise barriers an option?

Answer: Yes, they are an option, but generally, they are not very effective because they either need to be very close to the source, or very close to the receiver, and it can be difficult for folks to agree to location.

Question: Can land be set aside on the Airport as a buffer?

Answer: Not really. The airport property is set aside for aviation uses, and barring setting land aside for other noise mitigation uses (such as a GRE or other type of noise barrier), it is not generally feasible.



Comment: Even though certain measures may not provide a big difference in noise, several measures together can create a cumulative effect.