



Ted Stevens  
**Anchorage**  
International Airport

P.O. Box 196960  
Anchorage, Alaska 99519-6960

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

Study Input Committee Summary Notes  
February 29, 2012 1:30 p.m. Airfield Maintenance Facility

<i>NAME</i>	<i>AFFILIATION</i>
<b>Staff and Consultants Present</b>	
John Parrott	ANC
John Johansen	ANC
Scott Lytle	ANC
Teri Lindseth	ANC
Ryk Dunkelberg	Barnard Dunkelberg & Company
Kate Andrus	Barnard Dunkelberg & Company
Vince Mestre	Landrum and Brown
Wende Wilber	CRW Engineering Group
Eva Welch	AECOM
<b>Committee Members Present</b>	
Merle Akers (alternate)	Turnagain Community Council
Don Brugman	Desert Air Transport
Judy Chapman	Citizen Representative
David Chilson	FAA
Rebecca Cronkhite	ADOT&PF, Statewide Aviation
Amy Culhane	Anchorage Economic Development Corporation (rep. Bill Popp)
Mary Lee	Citizen Representative
Blythe Marston	Citizen Representative
Jim Seeley	LHD Pilot Association
Patricia Sullivan	FAA Airports Division
Thede Tobish	Municipality of Anchorage, Community Development
Breck Tostevin (alternate)	Turnagain Community Council
Jerry Weaver	Municipality of Anchorage, Community Development
Bill Wortman (primary)	Turnagain Community Council

**Hand – Outs:** Meeting Agenda and Project Notebooks



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## Summary Notes

Mr. Dunkelberg began the first meeting of the FAR Part 150 Noise Compatibility Study Update Input Committee by presenting the meeting agenda as follows:

- **Introductions**
  - Airport Staff
  - Study Team
  - Committee Members
- **Role and Function of the Committee**
  - Committee Role
  - Proposed Meeting Protocol
- **Explanation of FAR Part 150 and this Study**
  - What is a Part 150 Study?
  - Why Update Study?
  - Relationship to FAR Part 161
  - Study Process
- **Description of Noise Metrics – DNL, SEL, Ldn, Time Above, etc.**
- **Potential Noise Monitoring Sites**
- **Public Meeting Invitation**
- **Questions/Comments**
  - Study Committee Members
  - Members of the Public

### *Introductions*

John Parrott welcomed Committee members to the first meeting of the Ted Stevens Anchorage International Airport (FAR) Part 150 Noise Compatibility Study Update. He thanked members of the Part 150 Study Input Committee (SIC) for agreeing to participate in this important study. He then introduced Ryk Dunkelberg of Barnard Dunkelberg & Company, who is the prime consultant of the Study. Mr. Dunkelberg introduced the Part 150 Study team and gave a brief overview of all the other entities involved in the noise study.

### *Committee Role and Meeting Protocol*

Mr. Dunkelberg stated that the Study Input Committee (SIC) is expected to act as a major resource for the Airport staff and Consultant team in developing alternatives for the Part 150 Noise Study. The group will attempt to reach consensus on issues, but will not vote on issues, as all views, not just the majority will be considered. The decision making body is the Airport, who by law is the only entity that can submit an action for inclusion in a Part 150 Noise Compatibility



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Study. Members of the public who attend Study Input Committee meetings will be allowed to speak at the close of Committee business.

### ***Study Details***

Mr. Dunkelberg stated that the purpose of the Part 150 Noise Compatibility Study Update is to identify existing noise exposure surrounding the Airport, identify potential future noise exposure, evaluate various alternatives to reduce the number of people affected by noise, and to make recommendations as to viable abatement/mitigation measures to reduce the number of people affected by noise living near the Airport. The noise study generally has a five year planning horizon and identifies and evaluates both current and future aircraft noise and land use. There are two distinct parts of a Part 150 Noise Compatibility Study; Noise Exposure Maps (NEMs) and a Noise Compatibility Program (NCP). After a complete analysis of noise and land use conditions at the Airport, both the NEMs and the NCP will be submitted for approval or disapproval by the Federal Aviation Administration (FAA). If approved, the measures and recommendations contained in the NCP are eligible for implementation and federal funding.

### ***Background***

Mr. Dunkelberg discussed the background on the previous Part 150 Study. The NEMs were accepted and the NCP was approved in 2000. The NCP allowed the Airport to receive federal funding to implement a Residential Sound Insulation Program and other measures. The Airport also conducted a Ground Noise Study to respond to comments.

### ***Airport Sponsor Constraints/Opportunities***

Mr. Dunkelberg discussed the constraints of the Airport with respect to its limited ability to implement noise controls. An Airport can't control aircraft in flight, it has limited control over what federal noise mitigation funds can be used for, it can't control the noise emissions at the source, and it is significantly limited in the potential use of noise restrictions. A public use airport cannot discriminate against any user, but can pass reasonable noise rules/regulations that do NOT affect access to the Airport. FAR Part 161 sets the limits on this authority.

### ***Why Update Study?***

Mr. Dunkelberg explained the primary reasons the Airport is updating the existing Part 150 Study. For the Airport to continue to receive federal funding for noise mitigation it must have current noise exposure maps and the current NEMs are over 10 years old. Additionally there have been changes in aircraft fleet mix, aircraft noise levels, change in aircraft activity levels, changes in airfield development, and the release of an updated Integrated Noise Model (INM).



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### ***Part 150 Elements***

Mr. Dunkelberg discussed the elements and process of a Part 150 Noise Compatibility Study. The Part 150 Study process is as follows:

- Conduct an Inventory of Existing Conditions at the Airport
- Conduct Noise Monitoring at Various Locations
- Generate Existing and Future Noise Contours
- Analyze Noise and Land Use Effects to Develop Feasible Alternatives
- Combine and Narrow Feasible Alternatives
- Recommend Alternatives for Implementation
- Prioritize Recommendations
- Develop Noise Exposure Maps
- Develop Noise Compatibility Study Program
- Hold a Public Hearing and Adopt Recommendations
- Submit Noise Compatibility Program to Federal Aviation Administration
- Federal Aviation Administration Accepts Noise Exposure Maps
- Federal Aviation Administration Approves Noise Compatibility Study Program

### ***Unique Elements***

Mr. Dunkelberg discussed the unique elements included in this Part 150 Study. These include the use of supplementary metrics (other than the required Day-Night Noise Level (DNL)), evaluation of ground run up noise, summer and winter noise measurements, and extensive community involvement. Mr. Dunkelberg discussed the purpose of identifying Noise Monitoring Sites in the community to measure aircraft noise levels to compare with the outputs in the Integrated Noise Model to ensure that the model matches the conditions. Mr. Dunkelberg explained the methodology and purpose of noise measurement. He stated that 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 will be taken during two seasons, summer and winter, for several weeks each. At the public meeting people can sign up to have a noise monitor at their homes.

### ***Noise Metrics***

Mr. Dunkelberg described the various noise metrics that will be used for evaluation and analysis purposes throughout the Part 150 Noise Study.



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- DNL – Day-Night Average Sound Level represents noise as it occurs over a 24 hour period that accounts for the number of events per day, the time of day in which they occur, and the loudness of the event. Noise events occurring between 10:00 p.m. and 7:00 a.m. incur a 10 dB penalty. This means that one nighttime sound event is equivalent to ten daytime events of the same level. The DNL is the accepted metric to measure changes in noise for federal noise studies and is used to create noise contours depicted on the Noise Exposure Maps.
- SEL - Sound Exposure Level provides a comprehensive way to describe noise events for use in modeling and comparing noise environments. Computer noise models base their computations on SEL values.
- Single Event Metrics include the Maximum Noise Level (Lmax) that identifies the maximum sound level produced by one event such as an aircraft operation, and the Sound Exposure Level (SEL) that measures all of the sound energy from the duration of an aircraft operation to produce the sound level that a person is exposed to from that event.

A DNL Noise Contour is created by inputting a year's worth of aircraft operations into an Integrated Noise Model (INM) computer program to generate the noise contour. This model must be used per Federal Aviation Administration requirements. The INM is periodically updated by the Federal Aviation Administration to reflect changes to aircraft, quieter engines, new flight management technology, and quieter airframes, and in an effort to improve model outputs such as noise metrics and audibility.

### ***Public Involvement and Comments.***

Mr. Dunkelberg explained that the public involvement process will include more than just the public hearing required under Part 150. There will be several public workshops throughout the process and members of the public may sign up to be on the informational mailing list either at meetings (providing a legible email/address) or through the website. Additionally, public comments can be submitted at any time during the Study, either at the meetings or on the website. These comments will be considered during the process and included in the draft document, but not responded to. Any comments received during the official public comment period (when the draft NCP is made available for public review and comment) will be included in the Study and any substantive comments will be responded to in the document. He also invited members of the SIC to attend the first Part 150 Noise Study Public Information Meeting to be held tonight at 6:00 p.m.

### **Questions and Comments**

*Question: Will you be using parks in addition to homes for monitoring?*

*Answer: If you have a park that you are interested in having monitored, please add it to the list of potential noise monitoring sites.*



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*Question: Will minutes be taken of these meetings?*

*Answer:* Notes will be taken, not minutes and these will be distributed to the committee for review. We can make any changes based on your comments.

*Question: Will the FAA representatives on this committee be out of Anchorage/Who will they be?*

*Answer:* Yes. One representative is Patricia Sullivan from the Airports Division.

*Question: Do regulations script how this study is completed?*

*Answer:* Yes. The Study must follow Federal Aviation Regulation (FAR) Part 150.

*Question: If this study is voluntary, why do the recommendations fall under the National Environmental Policy Act (NEPA)?*

*Answer:* Any time there is a federal action, an environmental documentation must be completed. The implementation of various alternatives therefore could trigger NEPA.

*Question: Does the Study take into account non-aircraft operations (e.g. snow plows, etc.)?*

*Answer:* The Study includes aircraft in the air, on the ground and aircraft-related point sources such as auxiliary power units (APUs) and ground-power units (GPUs). It does not include sources such as airfield equipment, cars or other non-aviation related noise sources.

*Question: What are the other measures that were completed as part of the previously approved Noise Compatibility Program (NCP)?*

*Answer:* We are not sure yet, because the Study is starting and an inventory of the existing conditions and background has not yet been completed.

*Question: In terms of flight areas over Cook Inlet, does the FAA establish those flight areas and how does the FAA establish that.*

*Answer:* Yes, the FAA establishes those flight tracks. The FAA would have to describe how exactly they are developed. (FAA briefly described that a NEPA document of some kind needs to be completed and change in noise is looked at if there are any substantial changes in flight tracks).

*Question: Are you going to be able to make recommendations on departure/arrival procedures? And when do the recommendations get implemented?*

*Answer:* Yes, flight tracks will be examined as part of the Study. However it is important to note that the Study may find that there are no feasible changes to the flight tracks. This Study's purpose is to reduce the number of people affected by noise and not to take noise from one area and impact another noise sensitive area. Additionally, although the Study might make recommendations on flight tracks, only the FAA can choose whether or not to implement them based on a number of factors, including safety.



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*Question: The Airport has access to funding that is not federally sourced. Is their own, non-federal money limited for use in noise mitigation?*

*Answer:* Yes, they have limited options with non-federal funds they receive. This is due to grant assurances and other limitations since ANC is a public airport.

*Question: Are you sure there are no Stage 2 aircraft here?*

*Answer:* Alaska is one of the states that have a waiver for allowing Stage 2 aircraft to fly, and that waiver does not expire. However, based on cursory knowledge, no known operators are using that waiver. The aircraft fleet mix will be examined during the Study process. The older Stage 2 aircraft require a lot of fuel to run, so the incentive to get them out of the operational aircraft fleet is large. (Additional discussion indicated that the Airport occasionally gets requests from Soviet carriers, and that this issue will be looked at in more detail in determining the fleet mix for the Study).

*Question: Could you please clarify the limits on restricting aircraft? Is it correct that no new access restrictions were allowed after 2000?*

*Answer:* Yes, only those restrictions that were approved prior to 2000 are grandfathered. So far, the only new restrictions were passed in Naples, Florida, subsequent to the FAA accepting their Part 161 Study.

*Question: Who is completing the forecasts? What is it based on?*

*Answer:* The forecasts used in this Study are being developed by the ongoing Alaska International Airport Systems Plan. Their data and process will be outlined in subsequent meetings after further discussion with the forecasters.

*Question: Why is the existing condition map labeled as 2009?*

*Answer:* For the purposes of the Study, existing conditions need to look at the last full year that the Airport was operating normally. For the past few years, due to projects and maintenance, the Airport has been operating with different runway utilization, etc. Therefore, the data from 2009 will be important to create a baseline for how the Airport is operated under existing conditions.

*Question: What does the monitoring do? Noise is definitely different in the winter versus the summer.*

*Answer:* The monitoring measures how loud individual aircraft are at certain points. This is then compared to the prediction based on the model and helps to determine if any adjustments need to be made to the model to accurately portray the noise environment. Seasonal changes can affect noise and therefore there will be two periods of monitoring (one the summer and one in the winter), each for several weeks.



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*Question: Two periods of time is not enough, there needs to be monitoring done for at least a full year.*

*Answer:* The monitoring measures how loud individual aircraft are at certain points. This is then compared to the prediction based on the model and helps to determine if any adjustments need to be made to the model to accurately portray the noise environment. Generally the modeling and the measurements are very close. Additionally, since monitoring is outside of the required parts of the Study, it is not financially feasible to collect data for an entire year as part of this Study.

*Question: Does what gets submitted to the FAA change as a result of the monitoring?*

*Answer:* If the monitoring shows that the aircraft noise profiles are different than those predicted in the model, then the model will be adjusted to account for those differences.

*Question: What if the forecasts over-predict or under-predict operations?*

*Answer:* If the operations change by 15 percent (+/-) from those predicted, then the operations would be reevaluated and the noise contours would need to be re-run.

*Question: There has been decreasing activity, is 2009 the correct year to use?*

*Answer:* Yes, at most airports across the nation, operations have generally been declining. Additionally, engine technology has improved over time and the engines have generally become quieter. Over time, older, louder aircraft are being phased out of the fleet mix. Therefore, it is possible to have a smaller 65 DNL noise contour than occurred in the previous Study. 2009 is the correct year to use for a baseline conditions because it was the last full year that the Airport was operating normally without significant maintenance or construction projects that could affect important aspects such as runway utilization, etc. It is important to note that 2009 is the base case, but the 2020 contour will be contour that determines any eligibility for federal funding. So 2009 is the base case for existing operations, but the recommendations will be compared to the 2020 contour to determine any potential reduction in noise.

*Question: Is tonight a public hearing?*

*Answer:* Tonight's meeting is a public meeting, not a public hearing. A public hearing refers to a specific regulatory requirement and will occur after the full Draft Study is released and will be associated with an official public comment period.

*Question: Will there be minutes at the official public hearing?*

*Answer:* Yes, the public hearing will have a court reporter to take verbatim comments for inclusion in the document. The Study will include any substantive comments given at the public hearing or during the official public comment period with a response.

*Question: Will members of the committee have access to the comments?*

*Answer:* The comments will either be placed on the website or given to the committee via another format so that they can review all comments received.





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*Question: How is the public notified if a flight procedure is changed?*

*Answer:* Any time a flight procedure is substantially changed, it must undergo an environmental document. However, most of the time, it is done through a Categorical Exclusion, which does not require much public notice. If the changes are major and have the potential to result in significant impacts based on NEPA, then it might require an Environmental Assessment which has more opportunity for public involvement.

*Question: There is a 500 acre state park where changes in flight tracks can affect it. How are impacts to parks examined?*

*Answer:* Only those noise sensitive areas within the 65 DNL and greater contours are considered to be non-compatible with aircraft noise at that level. Generally, while a park is considered a noise sensitive area, if the change in flight tracks doesn't result in a change to the area in the park affected by the 65 DNL, then there are no non-compatibility issues associated with that change. There are some additional park considerations and this will be examined in the document.

*Question: Do you look at neighborhoods at higher elevations?*

*Answer:* Yes, higher elevations will be considered, but the 65 DNL threshold still applies.

*Question: What about military aircraft*

*Answer:* Military aircraft are exempt from the regulatory mechanism. However, it is considered in the fleet mix if the aircraft are based at the airport. But if noise is related to aircraft doing flyovers, these are not accounted for in the modeling.

*Question: What can happen in the Part 150 Study relative to ground run-ups and what can the Airport do outside of the federal funding?*

*Answer:* Land use compatibility planning and ground run-ups are two areas where the Airport has some opportunity to do something without FAA funding. If ground run-ups are a big issue, the construction of a Ground Run-Up Enclosure (GRE) could be one of the recommendations of the study. The Study could recommend where a GRE could be located but the Airport cannot regulate when (time of day) that ground run-ups occur. Additionally, land use compatibility measures (that are generally under the jurisdiction of the local governments) could be recommendations that are included in the Study but not necessarily linked directly to the FAA.

*Question: Who pays for a GRE?*

*Answer:* If a GRE is a recommendation of the Study, it will be eligible for federal funding. Once it is a recommendation, generally a GRE site selection study is completed to find the best locations operationally and an environmental document would have to be completed as well to satisfy NEPA requirements.



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*Question: It seems like the in the past study, the recommendations were just sound proofing/off-airport residential units. Can the study recommend operation of aircraft on the airport?*

*Answer:* The Study will look at changes to flight tracks, use of reverse thrust, or other operational alternatives that could help reduce noise. However, the Airport cannot restrict flights, time of day of flights, etc. For flight tracks, it can make recommendations, but cannot mandate that the FAA change them.

*Question: So on the ground, there are some things that can be done, but in the air it is very limited, is that correct?*

*Answer:* Yes.

*Question: What is involved in volunteering a house for noise monitoring?*

*Answer:* For noise monitoring locations, we need a secure location, and a location of interest/concern.

*Question: If we have a noise app on our phone, saying what the noise event is, can we submit that data?*

*Answer:* No. Those are not accurate enough, they are not calibrated properly, and the microphones are not sensitive enough to provide good data.

*Question: It would be important to look at the flight pattern at Lyn Ary Park. The Public will be good at identifying important noise areas. Are the locations of your monitors going to be the same as those out there already?*

*Answer:* Noted. We will add Lyn Ary Park to the list of potential noise monitoring locations. The locations of the monitors will not necessarily be the same as previous studies. The locations will depend a lot on who volunteers their homes for monitoring, but generally people who are most interested do tend to fall within a certain area around the flight tracks.

*Question: Is this meeting representative of the size of the Study Input Committee Group?*

*Answer:* No. More were invited and we will likely do additional outreach to ensure we have stakeholders from a wide range of interests.

*Question: Do you have any idea how often the group will meet and the next time it will meet?*

*Answer:* The group will likely meet every couple of months, with a greater concentration of meetings when we are working through alternatives. The next meeting will likely be around June and then the following meeting would be in early fall.

*Question: Temperature plays a role in the noise, as does the weather. By taking it now, you may not get it as accurate. The Study should go a full year for monitoring.*

*Answer:* While it would be ideal to get a full year of data, the Study can't get funding for collection of a full year of noise monitoring data. Therefore, we will have to take two



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representative samples (one in the winter and one in the summer) and supplement it with historical information for a larger period for weather, snow cover, etc. The DNL metric is logarithmically based, which means that it greatly favors the highest value.

*Question: More GA flight occurring around the Iditarod.*

*Answer:* Noted.

*Question: Are you calculating noise for ground equipment, like snow plows? If not, can you take it up with the Airport?*

*Answer:* No. That is not allowed under the Part 150 regulations. However, we can create a list of other issues that may be examined outside of the Study, but we need to focus on those aspects that can be addressed in the Study.

*Question: Past studies have included a type of “Good Neighbor” policy recommendation. Will this be included?*

*Answer:* Yes. Almost all the Studies we have done include a type of “Fly Quiet Program” which helps identify those voluntary actions that a pilot can do to voluntarily help reduce noise around the Airport. This type of educational/informational program has been quiet successful at many airports.

*Question: With the extension of the east/west runway, why wouldn't you take that into account?*

*Answer:* It will not be taken into account for the existing base case contours (2009) because we would have to wait an entire year to collect data to model that as the base case (the base case uses a full year of existing data). However, we will use that configuration to model the future year, so that extension will be included in the future contours. Anything else that is on the Capital Improvement Program (CIP) that has environmental approval will be included in the future year.

*Question: How will you know the impact of the extension without data collection?*

*Answer:* We will allocate aircraft operations to that runway based on the way the Airport plans to use that runway in the future. This information will go into the model to help develop the future contours. This can be modeled and will be included in the future contours.

*Question: Does the model for 2020 take into account the increased activity?*

*Answer:* Yes. Additionally, if operations increase or decrease by 15 percent compared to the 2020 forecast numbers, the contours would have to be updated.

*Question: Is the new runway going to be included in the future year contours?*

*Answer:* No. The new runway's environmental approval has not been initiated or approved. We can only include those projects that are included in the CIP and have environmental approval, because those are the projects that are considered to be reasonably foreseeable.



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*Clarification:* To clarify, the noise monitoring does not create the contours. They are spot checks to make sure that the assumptions in the modeling are correct.

*Question:* Is tonight's meeting the only time to volunteer for noise monitoring? How do people know of the monitoring sign-up?

*Answer:* No, you can sign up now, at the meeting tonight, and you can also forward us your information for another two weeks. We will be announcing the sign-up at the public meeting.

*Question:* There is a drug treatment center over on the north side of the Airport that might be good for monitoring.

*Answer:* Noted.

*Question:* What were the previous recommendations and were they successful?

*Answer:* In gathering background information, we will look at the previous record of approval and look to see what recommendations were implemented, how successful they were and if they were not implemented, why they were not implemented. This will help us better identify a range of potential alternatives and see if there are any barriers to recommendations.

*Question:* Can we introduce ourselves?

*Answer:* Yes. Introductions were completed. A list of the committee members (once finalized) will be sent out to the committee. We will discuss whether or not to include contact information on this list.